

ADHD and EFL Teaching in Dutch Secondary Education

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Abstract

This study investigated the ways in which students with ADHD in learning EFL in Dutch secondary schools are taken into account. Publishers were interviewed on how their teaching materials accommodate for students with ADHD. Furthermore, sixteen teachers participated in a survey in order to determine the level of knowledge of ADHD and in what ways they adapt their teaching methods for students with ADHD. This survey indicated that most teachers have a basic understanding of how to recognize ADHD, but that their teacher training did not adequately prepare them for teaching students with ADHD. Any knowledge they had of it came from experience or rarely from initiatives of the school they work at. Teaching materials also do not specifically keep students with ADHD in mind, though they are designed to be adaptable. The Dutch Government also does not mandate adaptations for students with ADHD as it does for students with Dyslexia. In other words, there are no formal adaptations. Several suggestions of adaptations are discussed, such as encouraging teacher training institutes properly instruct teachers on ADHD, encouraging publishers to include sections on learning strategies, and making sure schools offer the student the support they need.

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Introduction

In the current global environment, learning English is not only valuable but necessary. Without it, communication beyond the borders of the country a person is born in becomes difficult unless the traveler either happens to be able to communicate in the language of that country or the people of that country speak the language of the traveler's homeland. Many major European countries, such as Germany and France, have their languages taught in schools all over the world, making communication with foreigners somewhat less difficult. The Dutch, however, have no such luxury. The Dutch language has approximately 24.4 million speakers worldwide, 16 million of which live in the Netherlands themselves, with another 7.6 million in Belgium where it is one of two national languages (Eberhard, 2020). In other words, Dutch is not very widely spoken, and thus it falls to other languages, primarily English, to fill that communicative gap.

Learning English, however, can be a challenge. This challenge becomes even greater if a child suffers from learning disorders such as Attention Deficit-/Hyperactivity Disorder, or ADHD. Even though ADHD has been linked to linguistic difficulties and has been noted as “the most frequently reported psychiatric diagnosis for children with a language disorder” (Kim & Kaiser, 2000, p. 154), very few obvious accommodations have been made in the Dutch educational system to support ADHD students, if any, as far as the untrained eye can tell. When it comes to English as a Foreign Language (EFL) teaching, this is especially noteworthy considering the current global environment where speaking, or at the very least understanding, English is necessary to make full use of the Internet and its academic and social resources. Children with

ADHD already have problems communicating with others (American Psychiatric Association, 2013), and in the current digital era, not speaking English will only exacerbate this problem.

The Dutch government's Department of Health (Volksgezondheid) tentatively estimated around 2.9% of children were suffering from ADHD in 2009 (Gijssen, 2020). However, the definition of ADHD has since been updated to the definition set in the *Diagnosics and Statistics Manual of Mental Disorders, Fifth Edition* (DSM-5, American Psychiatric Association) in 2013 and Volksgezondheid mentions that under the new definition, prevalence of ADHD is likely higher. The American Center for Disease Control (CDC) notes a prevalence of 9.4% of children diagnosed with ADHD in 2016, a percentage which has only seen growth leading up to 2016 and is likely growing still. With the American percentages being what they are, recent movements to make mental disorders less stigmatized and thus parents being more likely to get their child diagnosed, and Volksgezondheid's own admission of outdated information, it is likely that the Dutch percentages are similar to the American ones. Such a high and growing diagnosis of ADHD in secondary school-aged children makes it remarkable that the Dutch government has issued no guidelines to schools on how to properly support children with ADHD. Assuming the average 25 students per class and a prevalence of up to 9,4%, teachers can expect to have at least one or two students per class with ADHD, even though since Dyslexia, which has a lower estimated prevalence of 7.7%, does enjoy a governmentally arranged support structure (Centraal Bureau van de Statistiek, 2016). Instead, such decisions on how to support children with ADHD are left to the schools themselves and parents are advised to have their children switch schools if the school in question cannot adequately support the child (Ministerie van Algemene Zaken, 2018).

This thesis intends to research which adaptations and considerations have been made to EFL teaching methods in Dutch secondary schools, students aged 12 through 18, at each level of Dutch secondary education in order to accommodate to students with ADHD. If no or few of such adaptations and considerations are found, possible adaptations and considerations for the future will be suggested. Though including English in the curriculum in primary schools (eight years in length, children aged 5 through 12) in at least year 7 and 8 has been mandatory since 1986, there is no set standard in primary schools for the level of English that must be mastered or even how much time must be spent on EFL teaching per day, week, or month (Corda et al., 2012). However, in secondary schools, English is a mandatory subject from start to finish, has countrywide examination at each respective level, and is considered one of three core subjects next to mathematics and Dutch at all levels, thus mandating a certain level of mastery in order to graduate.

The research question formulated for this paper is: “What methods are currently employed in Dutch secondary education to assist EFL learning in students with ADHD?”. Over the course of the paper, several aspects of ADHD and language learning, as well as the interactions between the two will be explored. This includes what common symptoms of ADHD may cause difficulties in EFL learning as well as language learning in general, what considerations have been made when developing textbooks for EFL learning in schools, and commonly employed learning strategies for children with ADHD. Moreover, field research in the form of surveys will be done in order to determine how teachers individually take students with ADHD into account in the EFL classroom, what methods are currently in place, and how well-prepared they feel their own teacher training has prepared them for teaching children

with learning disabilities. Ultimately, the goal of this paper is to analyze these methods and discuss how teaching methods could be improved to take students with ADHD into account when teaching EFL.

Educational Context

The Dutch educational system, when it comes to teaching students EFL, is straightforward. Currently, it is mandatory for elementary schools to teach children English starting in year eight, when they are usually eleven to twelve years old. Starting from secondary school, English is mandatory every year at every level of secondary school, until graduation. Depending on the level the student attends, secondary school takes four years for VMBO, five years for HAVO, and six years for VWO, when students are respectively usually sixteen, seventeen, and eighteen years of age when they graduate. Additionally, English is considered a core subject, along with Dutch and Mathematics. Since 2011, regardless of any other grades the student may have, in order to graduate HAVO or VWO students may only fail one of these three core subjects and only with a grade of 5/10 after final examinations are completed in their last year of secondary school. Lastly, the total of all final examination scores of all subjects must average a 5.5/10. This rule counts for all levels (College voor Toetsing en Examen, 2019).

Language learning and the symptoms of ADHD

To determine in what ways the current Dutch educational system takes ADHD into account and how to ultimately improve upon methods to aid ADHD students, it is first necessary to explore in what ways the symptoms of ADHD impair foreign language learning in general. It is important to use as recent sources on ADHD research as possible, as the definition

of what ADHD is as well as some of the symptoms have changed drastically with the publication of the fifth edition of the DSM in 2013. For instance, in the fourth edition of the DSM, a patient was not considered to have ADHD if their symptoms did not cause impairment, regardless of whether the symptoms were present (DSM-IV-TR, 2000). Furthermore, the maximum required age of onset was raised to twelve years of age from seven: before this, a person was not considered to have ADHD if symptoms started after the age of 7. While these changes do not invalidate results from studies done before the publication of the DSM-5 and adoption of the new definitions, it does mean additional scrutiny is required and percentages of affected persons may not be accurate to the current definition.

The most obvious symptom is the inability to pay attention for extended periods of time to something the student has no interest in. Sabet et al. (2015) claim that maintaining the attention of ADHD students is the main challenge for teachers and argue that the simple act of teachers adopting teaching strategies specifically made to keep the attention of students with ADHD would greatly improve the quality of life of these students. Comparing results from non-ADHD students to ADHD students found that mean scores were significantly lower for ADHD students when learning English vocabulary through methods commonly employed in Iranian public girls' schools, whereas employing focus strategies boosted performance of these students, though results varied between focus strategy used (Sabet et al., 2015). Interestingly, the score improvement between the ADHD students in and not in the control group, respectively, was much greater than the non-ADHD students in and not in the control group, meaning that while both types of students benefitted from focus strategies, ADHD-students may benefit more than non-ADHD students.

A second cause of learning problems may lie with the Working Memory (WM). Students with ADHD often also seem to have difficulties due to information not being stored properly into the WM, manifesting mostly as problems with reading comprehension (in both native and foreign language) and vocabulary learning as WM is essential in both manipulating new information in real-time and feeding information into the long-term memory (LTM) for later use (Akbaşlı et al., 2017).

Another cause for learning problems in any classroom when it comes to younger children with ADHD might simply be their behavior. "In EFL classes, young adults may also seem restless, talkative but they may also seem very silent and lost. As a learner with ADHD tends to be mobile, active and annoyingly talkative, [...] they can be categorized easily as mischievous, naughty or spoiled by teachers," (Akbaşlı et al., 2017, p. 205). Teachers do not recognize when such behavior might be a sign of ADHD and thus do not know how to instruct and support the child. They might even be prejudiced against the child and feel an aversion towards offering them the additional support they need due to their behavior. Additionally, learners with ADHD may have trouble waiting for their turn when speaking, and tend to dominate conversations, leading to additional problems with classroom management and frustrations for the teacher.

Akbaşlı et al. (2017), however, argue the biggest problem for both child and adult learners with ADHD lies with motivation. Motivating a learner with ADHD to start a task, let alone keeping them motivated until they finish, is a challenge in and of itself. Akbaşlı and colleagues argue the cause of this problem is twofold. Firstly, attention is an issue. Keeping any student focused on the task at hand, such as reading or text comprehension, when it is required to be done individually and in silence is difficult. Secondly, "learners with ADHD also may not

have study skills and may not know the necessary strategies to adopt during a demanding task such as a close reading for deducing meaning from context” (Akbaşlı et al., 2017, p. 205). This leads to problems with connecting new information to the information already present in the LTM as they have difficulty planning for learning. This, especially, is a problem in language learning due to its constructive nature. As opposed to school subjects such as mathematics, which is more modular in nature and thus allows for a learner to recover on one module if their comprehension of another was lacking, languages continually build upon the information that came before. Simply put, if a student is bad at trigonometry but good at algebra, they can still pass the algebra exams and save their grade, but if a child cannot learn vocabulary, it is irrelevant whether they would be able to learn grammar, since both these aspects of a language are necessary to achieve high scores.

Unfortunately, these causes of low scores only serve to perpetuate each other, as “[a]nxiety over task achievement and negative past experiences such as failure might reduce their motivation even more,” (Akbaşlı et al., 2017, p. 205). Failure to achieve, even if the learner is aware of their disorder, might lead to a mindset of inability, causing the learner to simply give up when running into difficulties with a task, causing grades to drop even further, thus continuing this vicious cycle.

ADHD and learning strategies

Besides medication, several other types of treatments for ADHD have been found effective in increasing the learner's attention span, focusing on brain, cognitive, and physical training. Specifically, Santrock (2017, pp. 188-89) mentions neurofeedback and mindfulness in order to make the child “aware of their own physiological responses” and teaching “focus on

moment-to-moment experiences”, respectively. Additionally, regular exercise has been found effective and has been linked to better executive function as an adult (Santrock, 2017, pp. 188-89). However, none of those treatments focus on the child's ability to learn, only on increasing their attention span. Though this increase is obviously beneficial to the child's ability to learn, paying attention to class alone is not enough.

As stated earlier, learning difficulties experienced by students with ADHD are commonly ascribed to dysfunction of the WM. Thus, teaching students learning strategies that focus on proper use and stimulation of the WM can greatly improve the student's performance. In an interview, educationalist Mariëlle Gerrits explains that the main function of the WM is storing different types of information for a short amount of time, while simultaneously working on manipulating said information (Gerrits, Appendix B). Effectively, the WM allows for “doing two things at the same time” (Gerrits, 2021). Experiments using MRI and fMRI show overlap between proper function of the WM and what Gerrits calls “Controlled Attention” or CA (in Dutch: “gecontroleerde aandacht”)(Awh et al., 2006). Rezazadeh et. al. speak of “sustained attention” and “attentional control” (2011, p. 198), the ability to “remain alert for prolonged periods in an otherwise unchanging situation [...] or to maintain focus on a given task and to ignore irrelevant distracting stimuli” and the ability to “inhibit prepotent responses, to switch attention from one focus to another, and to complete a planned sequence of responding”, respectively (2011, p.198). What Gerrits calls Controlled Attention seems to be sustained attention as defined by Rezazadeh et al.

As Gerrits explains and is supported by Rezazadeh et. al.’s definition of sustained attention, CA is the type of attention required when paying attention in classes and for most

common learning environments. She also defines another type of attention as Stimulated Attention or SA (Dutch: "Gestimuleerde aandacht"), where the subject's brain is constantly stimulated by external impulses, requiring no effort and far less attentional control from the person themselves to maintain. Typically, those with ADHD have very little trouble with SA, which can be seen with activities such as video games or sports, where those with ADHD tend to have no issue staying focused as they are constantly stimulated.

Current teaching methods rely mostly on a student's ability to maintain CA, while providing very little opportunity for SA and thus making it far more difficult for a student with ADHD to learn. Learning strategies for students with ADHD should, according to Gerrits, therefore focus on using SA to induce CA by teaching in a way that provides constant stimulus.

Reaser et al. (2007) found several methods that could be successfully incorporated into learning strategies in college-aged students in order to facilitate improvement, based on the premise that "the student lacks the self-regulation and time management skills necessary to engage in and complete the study process" (p. 634). They suggest keeping weekly planners and lists of daily and weekly study goals, as well as keeping written track of reminders and proactively seating themselves towards the front of the classrooms increased concentration. However, they find that the issue of motivation is the strongest predictor of academic achievement. Contrary to non-ADHD students, ADHD students tend to be not intrinsically motivated, but rather extrinsically. For example, rather than going to college in order to pursue academic knowledge, ADHD students "often enter higher education as a means to a better job or self-improvement, and this extrinsic motivation is often not sufficient to help them succeed"

(p.634). They suggest coaching these students to learn to internalize these extrinsic motivations in order to improve academic performance.

However, there is very little to no literature on what learning strategies are employed by secondary school-aged children with ADHD. This is noteworthy, since these younger ages are when students develop the learning habits that they will then go on to take with them when they go to college, and there is little reason to wait until college to start with assisting these younger students' learning habits, such as with the methods suggested by Reaser et al. (2007). Providing teachers with suggestions and guidelines on how to most effectively teach students with ADHD will, by extension, also teach students the most effective learning habits, improving academic performance later in life.

However, to effectively apply these techniques, teachers are required to have knowledge and an understanding of ADHD and its symptoms and expressions. According to Anderson et al., "teachers have reasonable knowledge of characteristics and causes of ADHD but have limited knowledge of treatments for ADHD", though most of this knowledge had come from experience rather than training or education (2012, p. 524). They concluded that, at least within the environment studied, "teacher-training institutes need to provide accurate and comprehensive information about ADHD and its treatments" (Anderson et al., 2012, p. 524).

Adaptations and considerations in textbooks for learning English

Besides the teacher and student, publishers of EFL learning materials also play a role in EFL learning. Publishers provide textbooks, exercise books, online learning environments and other teaching and learning materials (henceforth collectively referred to as "learning materials") for teachers to use in instruction and examination. It is, therefore, important to

study these learning materials for whether and how these publishers take ADHD students into consideration if one is to determine what adaptations exist in the Dutch educational system as a whole. For this part of the study, two major publishers were contacted to discuss adaptations in their respective learning materials, specifically Noordhoff and Malmberg, who provide the majority of Dutch secondary schools with learning materials. Transcripts for interviews with representatives of each publisher can be found in Appendices A1 (Nederlof, Malmberg) and A2 (Spanink, Noordhoff), respectively.

Currently, neither publisher's respective learning materials offer adaptations or considerations that were made with ADHD specifically in mind. Exercises are designed in such a way that they do not take too much of a learner's attention span, however "authors [of learning materials] aren't instructed to delve into ADHD in order to use that in the material" (Nederlof). However, that does not mean these textbooks were written without adaptations that could be used to support ADHD students. Some publishers' learning materials, such as Noordhoff's *Slim Stampen* method, use adaptive learning, a method for learning vocabulary through repetition and part of their *Stepping Stones* materials, which stops quizzing students on words when the algorithm understands the student already knows them, thus keeping study sessions as short as possible.

Publishers also try to provide "differentiation and variation" (Spanink) in order to offer students multiple methods of practicing and learning English, providing teachers with a library of exercises and exercise types which the teacher can use to tailor to each student individually according to their needs. Variation in exercise also helps with keeping a student's attention and thus at least partially mitigating one of the major issues ADHD learners are faced with: how

quickly an ADHD student loses focus. Even when medicated, ADHD learners still lose focus more quickly than their non-ADHD peers (Santrock, 2017, p. 188). Were the exercises more monotonous, it becomes increasingly more difficult to keep students focused, especially if a student has ADHD (Morsink et al., 2017).

That does not mean no important improvements could be made to the learning materials currently on offer. Currently, *Stepping Stones* (VMBO 7th Edition, Bleumers et al., 2019) does not include sections in either the textbook or exercise book that provide a student aid with learning strategies, leaving students to develop their own learning strategies.

In summary: though no adaptations in the most commonly used learning materials are made with ADHD in mind, publishers of learning materials do attempt to include variation in exercise and instruction in order to cater to students' individual learning preferences, though they offer very little in regards to teaching learning strategies.

Method

Though many aspects of ADHD and its role in education and language learning have been explored, to get an accurate view of the methods employed in the Dutch educational system to support students with ADHD, some field research is required. Through a survey (Appendix B) targeting English teachers at secondary schools in the Netherlands, information was gathered from EFL teachers of all levels, being VMBO, HAVO and VWO as well as their sub-levels if any. Questions polled the teacher's knowledge of the symptoms of ADHD in children, their experiences teaching children with ADHD, and how well they feel they were prepared during their own teacher training.

In preparation for this survey, three interviews were conducted with experts in the educational field. First, a representative each of two major publishers of educational materials in the Netherlands were interviewed on their methods of developing these materials and the ways in which they take LD and ADHD into account. Second, an educationalist was interviewed with the goal of gaining a better understanding of how different teaching and learning methods affect students with ADHD. The results of these interviews were included in the sections “Adaptations and considerations in textbooks for learning English” and “ADHD and learning strategies” sections above, respectively.

The survey was created in Qualtrics and spread to recipients via e-mail and social media, specifically LinkedIn and Facebook. Conforming to the Global Data Protection Regulation, consent of gathering and analysis of personal data was assured through the use of a checkbox informing the respondent of this requirement and asking for explicit consent. If the checkbox was not checked, the survey prevented the respondent from completing the survey and the results could not be recorded. Due to it being digital, collection of results happened automatically. In total, sixteen teachers responded to the survey, of which nine have been contacted after the fact for more clarification or further questions based on their answers in the survey. Of those nine, three responded with an answer.

The survey itself is split into several sections. The first section aims to establish some statistically significant information, such as the teacher’s year of finishing teacher training, what grades and levels they teach, and how long they have been teaching English for.

The second section of the survey deals with the symptoms and other characteristics of ADHD and the subjects’ knowledge of ADHD. This will be done by serving a list of true/false

statements to the subject listing both fake and real behavioral symptoms in order to establish what preconceived notions of ADHD the teacher may have, as well as how well they know what is and is not a symptom of ADHD. To ensure questions are relevant and academically proven to be useful in determining knowledge of ADHD, this section was based on the ADHD-School-Expectation Questionnaire, or ASE, by Dort et al. (2020), specifically the 'knowledge' section of their survey. This test was chosen as it is new, whereas other similar tests are from before the publication of *DSM-5*, thus ensuring this questionnaire was developed with the most recent definition of ADHD in mind. Additionally, this questionnaire focuses on clear language that can be understood by laypeople. From the version provided by Dort herself (Appendix C), it is clear the questionnaire was originally written in German and spread among German teachers. As such, several items in the questionnaire were translated incorrectly or with an incorrect nuance in the provided English translation. These items were retranslated from German to English and the translation proofread by a native German speaker with a high level of English proficiency. Items 1 and 10 proved highly difficult to translate with the correct nuance and were thus scrapped. Additionally, item 23 relied on statistics of German schools. As the Dutch statistics are outdated and current statistics are unclear, this item was scrapped as well instead of being adapted to the Dutch statistics.

The third section goes deeply into ADHD in the classroom. The subjects were asked whether they have taught anyone in the last four years that was either at the time or, to their knowledge, afterwards diagnosed with ADHD. They were also asked whether they believe they have had students that they suspect have ADHD, but of whom they do not know if they were ever diagnosed. Furthermore, this section features several open questions on in what ways

they have accommodated to (suspected) ADHD students. Lastly, the subjects were asked whether they were taught about learning difficulties (LD) and ADHD in their teacher training, and whether they feel they were adequately prepared to teach children with LD and/or ADHD using a score matrix of 1 through 6, with 1 being “unprepared”. 1 through 6 was chosen over the traditional 1 through 5 in order to eliminate neutral answers.

After the survey was completed, follow-up questions were required to gather more detailed information on the questionnaire in the third section. Respondents that had marked to be available for further questioning and had answered in agreement with a specific statement in this questionnaire were contacted by e-mail.

The purpose of this combination of questions is to establish whether teachers (believe they) have accurate knowledge of ADHD, how they deal with these children, and how well Dutch teacher training prepares the future English teacher for them. Furthermore, by asking what age group the teacher is, some patterns may be established such as newer/younger teachers being better at recognizing children with ADHD or feeling more prepared than their older colleagues which would signify more recent teacher training has started preparing teachers for ADHD. This way, it is possible to get a rough image of how teacher training and teacher attitude and methods have progressed over several ‘generations’ of teachers.

Analysis Procedure

The results are all reported under three filters. Firstly, a baseline score is established by viewing the results of all respondents combined in order to have data that can be compared against. Next, both the ASE and questionnaire are filtered for teachers with under 10 years of experience, over 10 years of experience and over 20 years of experience. This allows for finding

correlations between how long ago they were trained and how well they feel they were prepared, how experience affects how confident they are in their teaching styles, and their ability to recognize ADHD as they gain experience.

Results of the ASE section of the survey were analyzed on two criteria. First, the average percentage of correctly answered questions. The sum of how many times each item was answered correctly was divided by the total answers given. Second, a metric summarized simply as 'certainty'. This was the total amount of times "Unsure" was not given as an answer, divided by total amount of answers. This metric gives a surface-level understand of how sure a person was of their knowledge of ADHD and eliminates a certain level of inaccuracy in the results that otherwise might have appeared due to respondents accidentally guessing the answer correctly when they do not actually know it. These two metrics were filtered as described above and compared in order to determine the major differences between different groups of respondents.

In the third section, the questionnaire, the same method of analysis was used as was used in the ASE-section, though rather comparing averages scores and standard deviations for each question. Comparing averages between filters for each question shows how answers for each filter deviate from the average and thus allows observation of a change in mindset over several 'generations' of teachers, and standard deviation shows how much respondents in a certain filter agree with each other.

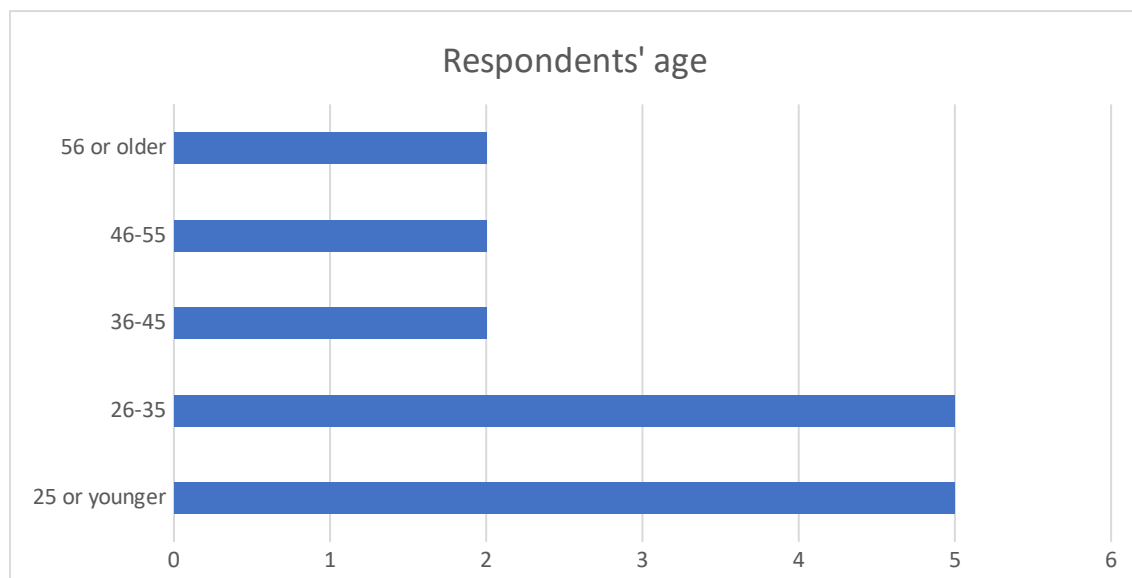
The answers of to the follow-up questions were summarized and compared to one another. This way, patterns and similarities could be established and discussed, providing a more detailed answer to the research question.

Results

This section will discuss the results of the survey formulated above. Each subsection will focus on a specific section of the survey, in order of appearance in the survey: Demographics, ADHD-School-Expectation questionnaire, and the statements questionnaire. The fourth and final subsection will report on the results of follow-up questions.

Survey section 1: Demographics

In total the survey had sixteen respondents who all are teaching, or have within the past four years taught, students on Dutch secondary education. Ten respondents were thirty-five years of age, putting the average age of respondents between, but likely towards the older end of, 36 and 45 years old (Figure 1).



Exactly half of the respondents have been teaching for under ten years, with an estimated average experience of between 6 to 10 years (Figure 2). Only two respondents answered to teaching at a school with an alternative teaching philosophy.

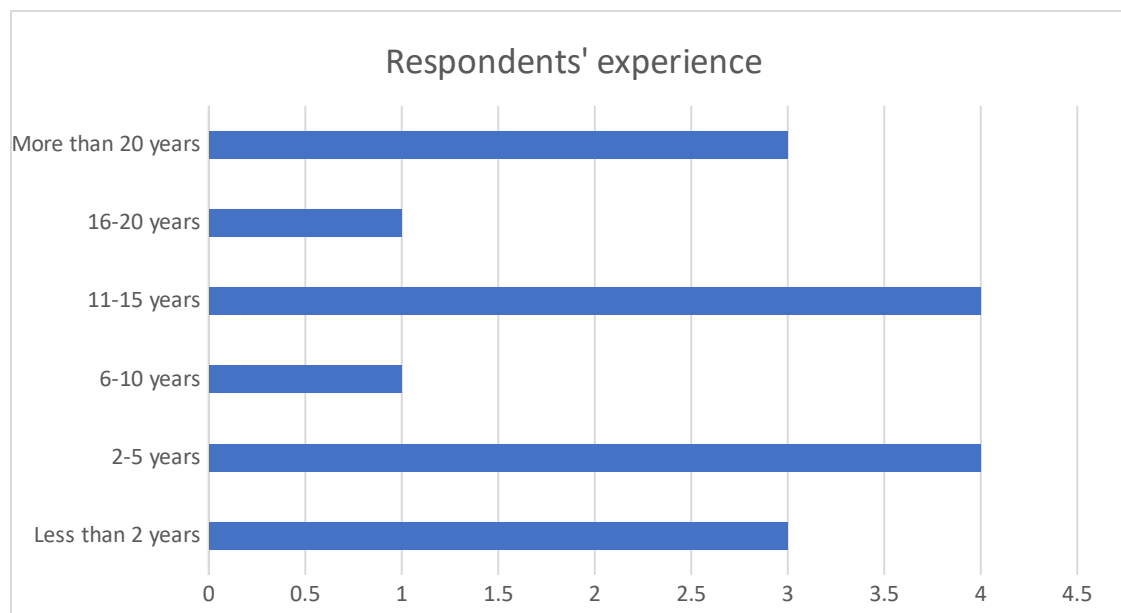


Figure 2: Respondents' experience

Survey section 2: ADHD-School-Expectation Questionnaire

Item 13, “The symptoms of a student with ADHD change as they get older”, was decided to not be included in the analysis of the results of this survey. In the original ASE, this item was marked with “False” being the correct answer. However, according to several studies including that of Michielsen et. al. (2012), expression of symptoms for ADHD does change and, in some cases, lessens in severity with age. Though the symptoms themselves do not change, the way they are expressed does, leading to the author's belief that item 13 was worded in a way that the layperson could not answer with full understanding of the question. This belief is further strengthened by the fact that not one respondent answered this item with “False”. Therefore, in all further analysis, item 13 is disregarded, leading to a total of 20 items in the ASE section of

the survey. Numbering of items was not changed. The full survey, including ASE questions and questionnaire, can be found in Appendix D.

With 16 participants, a total of 320 answers given (16 participants \times 20 items). Out of these 320 answers, 217 were correct, leading to a score of 67.81% correctly answered items overall. “Unsure” was given as the answer 84 out of 336 times. This leads to a certainty of 75.63% for all respondents combined.

When comparing results between teachers with less than 10 years of experience to teachers with more experience than that, the less experienced teachers have a slightly above average score on correctly answered items, at 73.13% correct with a certainty of 81.25%. Teachers with over 10 years of experience score even lower on the ASE section than average, with 62.50% of answers correct, certainty likewise dropping to 70.00%. This relative uncertainty and drop in knowledge originates mostly from those with between 10 and 20 years of experience, as when filtering for over 20 years of experience both correct answers and certainty go back to close to the average scores, at 68.33% and 78.33% respectively.

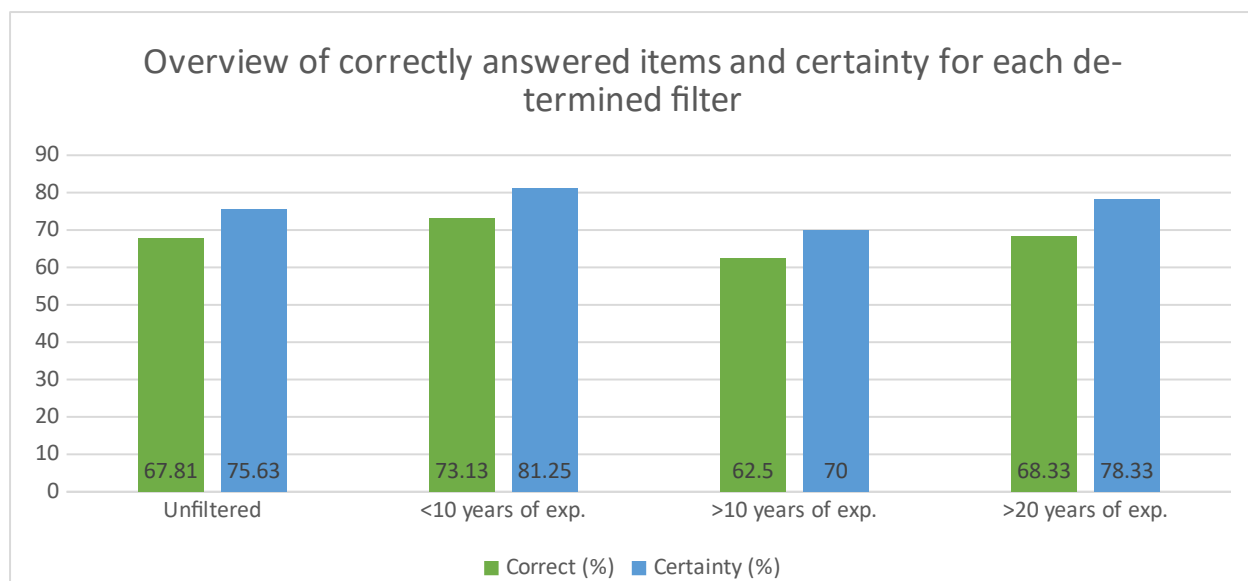


Figure 3: Overview of correctly answered items and certainty for each determined filter

Survey section 3: Questionnaire

In the following scores, respondents' answers correlate directly with a numbered scale in which 1 is "Strongly Disagree" and 6 is "Strongly Agree". An overview of all given answers including averages and standard deviation can be found in Table 1 below.

Q	Strongly disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree		Average	Std. Dev.
	%	#	%	#	%	#	%	#	%	#	%	#		
1	0.00%	0	0.00%	0	0.00%	0	12.50%	2	75.00%	12	12.50%	2	5.00	0.50
2	0.00%	0	0.00%	0	0.00%	0	43.75%	7	50.00%	8	6.25%	1	4.63	0.60
3	6.25%	1	62.50%	10	12.50%	2	6.25%	1	6.25%	1	6.25%	1	2.63	1.27
4	6.25%	1	68.75%	11	18.75%	3	0.00%	0	0.00%	0	6.25%	1	2.38	1.05
5	0.00%	0	6.25%	1	6.25%	1	37.50%	6	37.50%	6	12.50%	2	4.44	1.00
6	0.00%	0	0.00%	0	18.75%	3	25.00%	4	50.00%	8	6.25%	1	4.44	0.86
7	6.25%	1	18.75%	3	18.75%	3	18.75%	3	31.25%	5	6.25%	1	3.69	1.40
8	18.75%	3	37.50%	6	12.50%	2	18.75%	3	12.50%	2	0.00%	0	2.69	1.31
9	43.75%	7	31.25%	5	12.50%	2	12.50%	2	0.00%	0	0.00%	0	1.94	1.03
10	0.00%	0	0.00%	0	12.50%	2	18.75%	3	50.00%	8	18.75%	3	4.75	0.90

Table 1: Questionnaire answers. Each column has percentage of total given answers on that question on the left, amount of times that answer was given on the right.

Out of 16 respondents, no one answered to not know about common learning difficulties (question 1), nor did anyone answer to be unfamiliar with ADHD (question 2). The average score for the former was higher than that of the latter, with an average of 5.00 and standard deviation of 0.50 and 4.63 with a standard deviation of 0.60, respectively, indicating the respondents' strong confidence in their ability to recognize ADHD. All but two respondents answered in agreement when asked if their teaching methods are engaging for ADHD students and non-ADHD students alike (question 5). Three respondents answered not to know how to change their teaching methods in order to accommodate to students with ADHD (question 6).

Those that answered in the “agree” range were contacted for further questions, the answers to which can be found in the next subsection. Average scores for questions 3, 4, 7, and 8, arguably the most important questions of the questionnaire, are low: Average score and standard deviation is respectively 2.63 and 1.27, 2.38 and 1.05, 3.69 and 1.40, and 2.69 and 1.31, all but question 4 scoring in the “Disagree” range.

Teachers with under ten years of experience, 8 out of 16 respondents, show very little significant difference from the baseline as well, with questions 1 and 2 scoring identically to the baseline and with only a small difference in standard deviation in question 2, from 0.70 to 0.60. Questions 7 and 8 show a slight difference, though not enough to be significant at averages of 3.63 and 3.00 and standard deviations of 1.32 for both, respectively. Averages and standard deviations went up for both questions 3 and 4, for question 3 significantly so, scoring averages of 3.38 and 2.88 and standard deviations of 1.41 and 1.27. In fact, the only answers in the “Agree” range for both questions, three respondents in total, came from respondents who stated to only have less than five years of experience of teaching, while no respondents outside this filter have answered in the “Agree” range at all.

Q	Strongly disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree		Average	Std. Dev.
	%	#	%	#	%	#	%	#	%	#	%	#		
1	0.00%	0	0.00%	0	0.00%	0	12.50%	1	75.00%	6	12.50%	1	5.00	0.50
2	0.00%	0	0.00%	0	0.00%	0	50.00%	4	37.50%	3	12.50%	1	4.63	0.70
3	0.00%	0	37.50%	3	25.00%	2	12.50%	1	12.50%	1	12.50%	1	3.38	1.41
4	0.00%	0	50.00%	4	37.50%	3	0.00%	0	0.00%	0	12.50%	1	2.88	1.27
5	0.00%	0	0.00%	0	0.00%	0	62.50%	5	12.50%	1	25.00%	2	4.63	0.86
6	0.00%	0	0.00%	0	25.00%	2	12.50%	1	50.00%	4	12.50%	1	4.50	1.00
7	0.00%	0	25.00%	2	25.00%	2	25.00%	2	12.50%	1	12.50%	1	3.63	1.32
8	12.50%	1	37.50%	3	0.00%	0	37.50%	3	12.50%	1	0.00%	0	3.00	1.32
9	37.50%	3	50.00%	4	12.50%	1	0.00%	0	0.00%	0	0.00%	0	1.75	0.66
10	0.00%	0	0.00%	0	12.50%	1	25.00%	2	50.00%	4	12.50%	1	4.63	0.86

Table 2: Questionnaire answers filtered for respondents with less than 10 years of experience

Filtering for teachers with more than 10 years of experience (8 respondents) also shows very little change, with questions 1, 2, 5, 6, 7, and 10 showing no significant increase or decrease in average scores, differing from the baseline by 0.19 at most, with standard deviations being near-identical as well. However, changes are more significant in questions 3 and 4, where scores fell by 0.50 and 0.75 to 1.88 and 2.63 respectively, both with standard deviations of 0.33, indicating that experienced teachers agree that they feel far less prepared to teach children with LD and ADHD than their less experienced peers do.

Q	Strongly disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree		Average	Std. Dev.
	%	#	%	#	%	#	%	#	%	#	%	#		
1	0.00%	0	0.00%	0	0.00%	0	12.50%	1	75.00%	6	12.50%	1	5.00	0.50
2	0.00%	0	0.00%	0	0.00%	0	37.50%	3	62.50%	5	0.00%	0	4.63	0.48
3	12.50%	1	87.50%	7	0.00%	0	0.00%	0	0.00%	0	0.00%	0	1.88	0.33
4	12.50%	1	87.50%	7	0.00%	0	0.00%	0	0.00%	0	0.00%	0	1.88	0.33
5	0.00%	0	12.50%	1	12.50%	1	12.50%	1	62.50%	5	0.00%	0	4.25	1.09
6	0.00%	0	0.00%	0	12.50%	1	37.50%	3	50.00%	4	0.00%	0	4.38	0.70
7	12.50%	1	12.50%	1	12.50%	1	12.50%	1	50.00%	4	0.00%	0	3.75	1.48
8	25.00%	2	37.50%	3	25.00%	2	0.00%	0	12.50%	1	0.00%	0	2.38	1.22
9	50.00%	4	12.50%	1	12.50%	1	25.00%	2	0.00%	0	0.00%	0	2.13	1.27
10	0.00%	0	0.00%	0	12.50%	1	12.50%	1	50.00%	4	25.00%	2	4.88	0.93

Table 3: Questionnaire answers filtered for respondents with over ten years of experience

Expectedly, when further filtering the 10+ years of experience-category for those that have been teaching for over 20 years (3 respondents), the gaps between baseline averages and standard deviations and the average and standard deviations of this group widen, with specifically question 5 having a significantly lower average score at 3.33, down from 4.44, with a slight increase in standard deviation from 1 to 1.25. Interestingly, except for question 9, all averages are lower when compared to the baseline, with not a single question answered with a 6. While these teachers all report to be familiar with LDs on question 1 –all answered 5– and somewhat familiar with ADHD at an average of 4.33 on question 2, all respondents in this filter

answered a 2 on questions 3 and 4, indicating their familiarity might come from experience rather than training.

Q	Strongly disagree		Disagree		Slightly Disagree		Slightly Agree		Agree		Strongly Agree		Average	Std. Dev.
	%	#	%	#	%	#	%	#	%	#	%	#		
1	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100.00%	3	0.00%	0	5.00	0.00
2	0.00%	0	0.00%	0	0.00%	0	66.67%	2	33.33%	1	0.00%	0	4.33	0.47
3	0.00%	0	100.00%	3	0.00%	0	0.00%	0	0.00%	0	0.00%	0	2.00	0.00
4	0.00%	0	100.00%	3	0.00%	0	0.00%	0	0.00%	0	0.00%	0	2.00	0.00
5	0.00%	0	33.33%	1	33.33%	1	0.00%	0	33.33%	1	0.00%	0	3.33	1.25
6	0.00%	0	0.00%	0	0.00%	0	66.67%	2	33.33%	1	0.00%	0	4.33	0.47
7	0.00%	0	33.33%	1	33.33%	1	0.00%	0	33.33%	1	0.00%	0	3.33	1.25
8	0.00%	0	66.67%	2	33.33%	1	0.00%	0	0.00%	0	0.00%	0	2.33	0.47
9	33.33%	1	33.33%	1	0.00%	0	33.33%	1	0.00%	0	0.00%	0	2.33	1.25
10	0.00%	0	0.00%	0	33.33%	1	0.00%	0	66.67%	2	0.00%	0	4.33	0.94

Table 4: Questionnaire answers filtered for respondents with over twenty years of experience

A full overview of all the averages and standard deviations for each filter can be found in

Table 5 below.

Q	Unfiltered		Less than 10 years		More than 10 years		More than 20 years	
	Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.	Average	Std. Dev.
1	5.00	0.50	5.00	0.50	5.00	0.50	5.00	0.50
2	4.63	0.60	4.63	0.70	4.63	0.60	4.63	0.60
3	2.63	1.27	3.38	1.41	2.63	1.27	2.63	1.27
4	2.38	1.05	2.88	1.27	2.38	1.05	2.38	1.05
5	4.44	1.00	4.63	0.86	4.44	1.00	4.44	1.00
6	4.44	0.86	4.50	1.00	4.44	0.86	4.44	0.86
7	3.69	1.40	3.63	1.32	3.69	1.40	3.69	1.40
8	2.69	1.31	3.00	1.32	2.69	1.31	2.69	1.31
9	1.94	1.03	1.75	0.66	1.94	1.03	1.94	1.03
10	4.75	0.90	4.63	0.86	4.75	0.90	4.75	0.90

Table 5: Average and standard deviation of each given answer per filter

Results of follow-up questions to respondents

Respondents that had answered in the “agree” range for question 6 and were available for further questions were contacted and asked what methods they employed; whether they

employed these methods classroom-wide, one-on-one, or both; and how and where they had learned to make these changes to their methods. Three teachers responded.

Two teachers responded simply to be paying extra attention to these students in the classroom while instructing, making sure that the material that was being handled was understood and attention to class was being kept using follow-up questions. Additionally, one teacher answered to make sure to have class-wide 'downtime' after a session of instruction or exercises and to allow for students to walk around the classroom every once in a while, in order to provide time for all students in their classroom, ADHD and non-ADHD alike, to relax and continue after a few minutes with a somewhat restored attention span. One teacher responded to provide more structural support, helping students with ADHD with planning and spreading out their required work in smaller 'chunks' over a certain period of time.

In only one case did one of the teachers respond to have learned their methods of teaching students with ADHD from something other than their own experience, explaining that their school employed a support team of remedial teachers and/or orthopedagogues to provide teachers with a resource to use when dealing with students with ADHD. This support team was also tasked with supporting the students themselves more directly through weekly meetings and scheduling help. The two other teachers had learned their methods of teaching from a combination of experience and/or in consultation with their ADHD-students themselves. These teachers mentioned no active presence of such an aforementioned support team in their respective schools.

Discussion

This section will first discuss the results of the survey in the context of the established academic sources used earlier in this paper. Next, improvements will be suggested and discussed in the context of these results as well as the academic sources.

Analysis of the results

Results of the ASE section of the survey indicate most teachers have enough basic knowledge of ADHD in order to recognize it in their students. This is consistent with Anderson (2012). Interestingly, however, Anderson et. al. found that most teachers gained their experience of ADHD with experience, something that this study's results do not wholly agree with. Indeed, the highest percentage of correctly answered ASE questions is found in the category of teachers that have less than ten years of experience, rather than more. However, experience does seem to be at least a factor in knowledge, as both certainty and correctly answered questions rise to slightly above average when excluding the teachers that have less than 20 years of experience.

The higher percentage of correctly answered questions could have one or both of two reasons. Firstly, it is possible these teachers who more recently graduated from their teacher training have seen training that took more time to consider students with ADHD in the prospective classrooms. This reason has also found other evidence in this study in the questionnaire, where all teachers who had answered positively about how well they had been prepared for teaching students with LD and/or ADHD had been teaching for less than five years.

This is hopeful, as this means changes in teacher training have already started to take place in the Netherlands over the last ten to fifteen years.

Secondly, diagnosis of and attitudes towards ADHD have seen great improvements over the past decade. Though this is speculation, these improvements may have seen subsequent improvements in how and how much knowledge about ADHD is shared outside of teacher training, leading to greater knowledge for those that were trained when this improvement was taking place simply through more positive passive exposure. This reason also finds some evidence in the survey: Two thirds of the teachers that responded in the “disagree” range on whether they knew how to adapt their teaching methods to students with ADHD have been teaching for between two and five years, suggesting this demographic has the knowledge of what ADHD is and how to recognize it, but not how to deal with it since this is also the demographic with the highest scores in the ASE. In an open form question on how the respondents have taken action after suspecting ADHD, a majority of 66% of those that took action did not engage with the students themselves, though they did report with either parents, a health counselor, the school board, or a combination of those. 30% of those that suspected ADHD with one of their non-diagnosed students did not take action at all. The reasons for this inaction are subject to speculation, however it is not unreasonable to think that a lack of knowledge on how to take proper action in order to support these students is a factor.

What is cause for concern is the possibility that those teachers of between 10 to 20 years of experience are unaware of their relative lower knowledge of ADHD, as the answers to questions regarding their knowledge had identical answer percentages across the employed filters.

Additionally, even though publishers do claim to provide the flexibility in order to adequately teach students with ADHD using their materials, the respondents seem to only mildly agree with the publishers: the relevant question only barely broke into the “agree” range in all employed filters.

From the results of the survey as well as from other secondary sources, it can be determined that methods currently employed in Dutch secondary education to assist EFL learning in students with ADHD are lacking at best and grossly inadequate at worst. Teachers learn to adapt over time, but generally feel unprepared by their teacher training, find the learning materials they use only barely provide enough tools to work with for students with ADHD, and receive no help from the government and rarely from schools themselves. A support structure for both student and teacher as one detailed when answering the follow-up e-mail on question 6 is rare. To simply answer the research question, one could say “there are none”.

Proposed considerations

ADHD affects language learning in several ways. Firstly and most obviously, a student with ADHD has relatively short attention span, finding great difficulty in keeping focus when working on tasks they do not consider interesting or challenging. As mentioned, this stems from an ADHD student’s difficulty in maintaining controlled attention (CA) (Gerrits, 2021). Children with ADHD, however, have no trouble at all maintaining stimulated attention (SA). Using teaching methods that provide challenge and active engagement over plenary lectures and presentations are vital for those teaching students with ADHD, as this will greatly improve their ability to keep focused on the task at hand, which in turn ensures proper function of the WM and thus knowledge retention (Gerrits, 2021). This approach also seemingly has no downsides,

as research shows using properly engaging methods shows improvement in both students with and without ADHD (Sabet et al., 2015). The author proposes that a combination of interactivity and especially visual interestingness of assignments and instruction are the easiest way to achieve this; however, further study is necessary in order to determine the exact way this must be implemented by publishers of teaching materials as well as teachers. 'Visual interestingness' refers to how visually stimulating said assignment or instruction is.

Secondly, as mentioned, the constructive nature of language learning versus the modular nature of many other subjects works against the ADHD learner, especially if until then they did not learn strategies to help themselves learn said language. If such a deficit is allowed to be built up over time, it can be difficult for a student's grade to recover later on. Current commonly used teaching materials for EFL such as *Stepping Stones* (7th ed., Bleumers et. al., 2019) provide very little support to students in terms of learning strategies even for non-ADHD students, lacking pages or inserts with tips for study. This puts the burden of teaching learning strategies solely on the teachers. This is not an issue when teaching non-ADHD students as teacher training does provide teachers with methods for those students, but when teaching ADHD students this can be problematic. As mentioned, teachers themselves consider their teacher training inadequate when it comes to providing them with methods and strategies for teaching students with LD, and even more so for ADHD, and thus the assumption can be made that they do not know what learning strategies they could teach their ADHD students to help themselves.

Of course, this problem can be resolved by encouraging if not mandating teacher training institutes to include instruction on teaching children with ADHD in their programs in

order to provide them with the tools to help students help themselves. However, this does not resolve this lack of knowledge in teachers that have already completed their training and have been teaching for many years. These teachers could be provided for by including learning strategies in either or both teacher's handbooks for their materials and in the students' hand- and exercise books. As Sabet et. al. (2015) has shown, though somewhat with slightly diminished returns, providing learning strategies for students with ADHD also shows improvements in students without ADHD. Including pages, inserts or small sections on how to practice the material at hand with each section could provide students with the foundations to create their own learning methods.

Lastly, though prejudice against those with mental health and/or LD issues has been changing for the better over recent years, struggles with mental health for students with ADHD are still far too common. A student might be inclined to refrain from carrying out an assigned task mainly due to the fact that they do not want to fail, since "[...] a major feature of the mindset of any individuals with ADHD is their belief that they are not very competent, that they are destined to fail, and they do not control their own destiny," (Brooks, 2002). In an interview, Nederlof mentions that this is an issue of both time and ability. Many teachers simply do not have or do not take the time to adequately provide extra support to students with LD. Remedial teachers, whose tasks include supporting these students, are not always present in every school, nor do these always have the time to support multiple LD students in one-on-one sessions or even small groups (Nederlof, 2020). Very rarely do schools have an entire team dedicated to supporting students with LD and/or ADHD like the one mentioned by one of the

respondents. As such, support in school is often left to the classroom teachers or parents, who simply are not equipped to provide this support.

A possible solution to this issue is mandating schools have a certain support structure in place, either internally or externally. This can provide students and parents with a point of contact or even regularly scheduled contact that can offer support in the field of mental health for the child, and advice for the parents or even teachers that wish it. However, this is difficult to achieve, especially for smaller schools.

Conclusion

This paper identified three major problems with EFL learning for students with ADHD in Dutch secondary schools, and then proposed solutions for each. First, teachers should be encouraged to use visually interesting and mentally engaging and challenging forms of instruction and exercise in order to play into the fact that students with ADHD find these forms of stimulus far easier to keep focused on. Second, publishers of learning materials for English should be encouraged to include blocks, inserts, sections or chapters on learning strategies and studying methods in order to provide a foundation for the teacher to help the student develop the methods that work best for them, as well as provide the student with material that can be used to help themselves. In the case for either of the above suggested solutions, catering more to ADHD is not a problem, as methods that work best for students with ADHD have proven to also prove beneficial for non-ADHD students, while the opposite is not the case. Lastly and on a more general scale, schools themselves should be encouraged if not mandated to provide a mental health support structure for (parents of) students with ADHD and other forms of LD in order to assist these students when it comes to the problems of mental health, self-confidence,

and motivation that ADHD has shown to bring, which many teachers and parents simply do not have the skills to support the students with themselves.

Limitations

An obvious limitation to this study was its relatively small pool of respondents. More response would have led to more accurate statistics as well as to more response to follow-up questions. With the currently only three responses to follow-up questions, some assumptions must be made in regards to how schools besides those the three responding to the follow-up questions handle teaching children with ADHD.

Secondly, the ASE questionnaire used to determine knowledge of ADHD, while adequate, did have its problems. Firstly, the need to exclude questions due to the inability to translate them accurately without losing nuance, as well as having to exclude one question for being misleading means out of twenty-four items, nearly a fifth ended up not being used. Initially, the ASE was chosen because it is relatively new and because its questions were formulated to be easily understood by the layperson, thus it being sure to use the newest definition of ADHD as well as not requiring the teacher to know anything about ADHD besides knowing it exists. In hindsight, this novelty meant that it was not thoroughly tested by reputable sources.

Suggestions for further study

Further areas of study related to this research paper might include a replication study using older, more established knowledge tests of ADHD and a more extensive questionnaire on the teacher's experiences with teaching students with ADHD.

Research concerning beneficial learning strategies for high school children is also lacking. Future research could focus on testing and establishing exactly what methods of teaching and/or self-study would be beneficial for both teacher and student in order to improve the performance of both.

Lastly, a thorough investigation on the attitudes towards ADHD and possibly other LDs at teacher-training institutes could establish in what areas their training might be lacking, rather than simply stating that it is, as this paper does. Such investigation could also be used in order to establish how these institutes' attitudes have changed over time and whether they might already be heading in the right direction.

Research question

To conclude, this paper has found methods currently employed in Dutch secondary education to assist EFL learning in students with ADHD to be lacking. Teacher training especially is considered by most teachers to be inadequate when it comes to preparing them for teaching students with ADHD. While some basic attention does seem to be given to common LDs and there seems to be an upward trend in how much, this paper's survey shows that barely any time is spent on ADHD. With a prevalence in of up to 9.4%, this is unacceptable, especially since common LDs with lower prevalence, such as Dyslexia, do have governmentally set support measures in place as well as have time spent on them in teacher training.

The author hopes that this thesis might inspire those that have influence in the Dutch educational system to advocate for beneficial changes in the system, so that all students, including those with ADHD, may learn English to the best degree possible.

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Appendices

Appendix A1

Discussion with Corinne Nederlof, Publisher at Malmberg Uitgevers

Interview on December 9, 2020, approximately 11:00 AM

Interview was conducted in Dutch. English translation can be found immediately after the original Dutch.

I = Interviewer

N = Nederlof

[Transcript starts at 0:22]

I: Ehm, Ja, ik ben dus voor- om het nog even wat duidelijker te- Ik ben- Mijn scriptieonderzoek gaat over specifiek hoe er in Engels taalonderwijs, want Engels is mijn Major, dus ik moet me op Engels richten, hoe er rekening wordt gehouden met ADHD en ik ben dat van zo veel mogelijk kanten aan het bekijken, dus ik- Dit gesprek, dus, om de uitgeverskant zeg maar, de ontwikkelaars van de methode's kant te be- Ik ga ook een- de docenten ga ik hier een enquête onder verspreiden.

N: Mhm

I: Nou zei jij in de e-mail zei je van nou, ADHD wordt niet per se specifiek- wordt niet echt rekening mee gehouden.

N: Nou ja, wat ik schreef, weet je wel, wij zien het niet als een leerstoornis, maar als een gedragsstoornis of een aandachtsstoornis, en zo zijn er wel- Heel veel leerlingen hebben sowieso moeite met hun concentratieboog. Die wordt misschien iets korter dan dat ze gewend zijn, en dat zul je misschien ook uit het onderzoek kunnen halen, omdat ze toch een soort *instant gratification*-gewenning hebben, he? Je bekijkt een filmpje en je weet gelijk wat er speelt en lezen en puzzelen, dat duurt allemaal wat langer, dat kost wat meer inspanning, dus daarom hou je op die manier hou je er wel rekening mee met die korte aandachtsspanne. Maar het is niet zo dat onze auteurs een opdracht krijgen om zich echt te verdiepen in ADHD en om daar dan vervolgens iets mee te doen in het materiaal,

I: Okee

- N: daar kan ik heel duidelijk over zijn, maar wel met de gevolgen, he?
Dus zoiets als aandachtsspanne omdat dat ook voor veel leerlingen geldt.
Dyslexie houden we rekening mee omdat dat ook- een aantal dingen die je daarvoor doet, voor dyslexie,
die geldt ook voor slechtzienenden of sowieso voor leerlingen met leerproblemen. Soms is dyslexie niet gediagnosticeerd maar speelt er wel iets... wat er op lijkt. Woordbeelden maken is voor sommige leerlingen moeilijk, zeker bij de moderne vreemde talen, zeker bij Engels, dus daar zijn wel dingen waar je rekening mee houdt.
- I: Okee. Dan wilde ik het inderdaad nog even, want daar dacht ik van, okee, als er dan in de methode geen inherente of in ieder geval geen expliciete...
hoe zal ik het noemen... *consideration*, ja, *consideration* zit voor ADHD. Hoe is- wat zijn- wat zijn voorbeelden die je zou kunnen geven voor bijvoorbeeld hoe er met dyslexie mee rekening wordt gehouden? Wat voor-
Hoe moet ik dan [unintelligable]
- N: Ja je- We hebben heel expliciet hebben we een aparte klank-
beeldcursus, specifiek voor Engels, voor leerlingen met dyslexie. Dat is een cursus die is opgezet door Ans van Berkel, toevallig die mevrouw waar ik je gisteren nog een mailtje van doorstuurde.
Dat ging dan specifiek over Frans, maar we hebben jarenlang samengewerkt met Ans van Berkel en
die heeft voor ons voor Engels een soort instapcursus gemaakt voor leerlingen met dyslexie in de brugklas, maar
die kan ook nog in latere klassen ook gebruikt worden en eigenlijk wat ze doet is heel strak de klank-tekenkoppeling intraineren dus ook met een fonetisch schrift erbij wat het ook nog wel eens extra moeilijk maakt, vind ik, hoor.
Ik vind dat nog niet evident dat dat nou altijd de beste oplossing is, maar die zou je ook nog over kunnen slaan. Maar ik zou je dat nog wel kunnen sturen, dat bestand, als je dat wil zien, want dan moet je een licentie hebben en die zit- die zit op zich niet in de boeken, en in die docentenlicentie zit dan die cursus in een PDF, en dan kan die docent dat samen met die leerling doen.
Wij zeggen daar ook echt expliciet bij "laat de leerling daar niet alleen,".
Je moet dat begeleiden, dus je moet een intern begeleider hebben of een *remedial teacher* om dat samen -of van mijn part een oudere leerling- met ervaring die zelf ook dyslexie heeft. Dat je dat samen met iemand doet.
Je moet altijd- leerlingen met problemen moet je niet alleen laten met extra werk. Dat moet je samen doen.
- I: Ja. Okee.
- N: Dus dat is een vrij uitgebreid ding, en, ja, ik je dat- Het is eigenlijk ook een discipline die ze moeten aanleren want ze moeten ook een woordschrift erbij aanleggen waar ze dus eigenlijk vanaf het begin af aan eigenlijk bezig zijn met die klank-tekenkoppeling in het Engels.

- I: Ja. Dat is heel uitgebreid, eigenlijk. Dat is veel uitgebreider dan dat ik dacht dat het- dacht dat het zou gaan.
- N: Ja, nou, het is er, en ik weet niet of- Ik weet eigenlijk niet hoe veel- Want, en daarom zeg ik dat verhaal er ook gelijk bij over die begeleiding, het probleem is dat we- dat weinig docenten de tijd hebben of de tijd nemen, of dat niet op elke school de *remedial teacher* altijd tijd heeft om dit ook echt op te pakken met leerlingen, want je moet dan in kleine groepjes dat doen. Je zou met twee of drie leerlingen dat samen moeten doen. En je moet echt één op één regelmatig erbij zitten.
- Ook niet alle ouders kunnen dat. Het zou prima zijn als ouders dit doen met hun kinderen maar ten eerste moet je dan zelf moet je Engels, zeker met je uitspraak van Engels, moet redelijk goed zijn en je moet ook horen, eigenlijk leren horen, wat er misgaat bij jouw kind met die klank-tekenkoppeling, want het is niet zo simpel en de meeste docenten hebben er helemaal geen tijd voor. En wat er dan gebeurt is dat ze er een print van maken en dat ze dat aan die leerling geven en dan zeggen “ga dit maar doen want jij hebt dyslexie”. Maar dat is dodelijk. Ik- Ik- Ja, ik vind dat gewoon een soort van verwaarlozing, zeg maar. Een beetje- enigszins misschien wat gechargeerd, maar als je dyslexie hebt heb je meer tijd en meer aandacht nodig om sommige dingen te leren, maar dan kom je er ook wel.
- Beide mijn kinderen zijn dyslectisch, dus ik heb het van dichtbij gezien hoe dat gaat en ja, je komt er wel, alleen het duurt wat langer en misschien wordt je niet de beste speller maar *who cares*, weet je wel? Zo belangrijk is dat ook niet, als je leesvaardigheid maar wel- maar niet al te zeer eronder te lijden heeft dan komt het wel goed. Dat is het belangrijkste.
- I: Ja. Ik heb zelf ook ADHD, wat- wat- wat voor mij dus ook de reden is dat- om te kijken naar hoe er- hoe er met “mensen zoals ik” rekening zou kunnen worden gehouden in het onderwijs. Wat meer. Omdat ik nu het idee heb dat dat dus niet voldoende is, dus vandaar dat ik elke kant van het ontwikkelen van hoe- nou ja, het ontwikkelen van een lesmethode- maar het uitvoeren van een lesmethode, laat ik het zo zeggen, te bekijken. Vanaf welke kanten kan dat ondersteund worden? En vandaar dat ik ook kijk van, nou hoe zou dat dan in een boekmethode- En vandaar dat ik ook vraag naar dyslexie. Want als er dan misschien een –Wat is het woord dat ik zoek?- een aanpak die gebruikt wordt met dyslexie, misschien is die te vertalen naar een suggestie van hoe er met ADHD kan worden omgegaan. Kunnen dat soort methoden ook voor ADHD- Kunnen dat soort methoden worden gebruikt om leerlingen met ADHD aan te leren hoe ze hun aandacht kunnen houden bij opdrachten? Hoe ze leerstrategieën kunnen ontwikkelen
- N: Nou ja, mijn ervaring is, met ADHD, moet je eigenlijk ook weer heel individueel kijken, weet je wel, wat- wat- wat is dit voor ADHD, wat is dit voor’n leerling. Het heeft ook heel erg te maken met intelligentie, he? Intelligente kinderen of mensen met ADHD, daarvan zou ik eerder zeggen dat is bijna een talent. Dan zou je je ADHD in kunnen zetten als een soort versterking van je talenten. Daar- he, ik zou- dat zou ik al weer- Ik zou altijd die combinatie maken met intelligentie, met aanleg, met het soort ADHD,

met- met of een leer- een kind ook nieuwsgierig is of niet. Daar kun je namelijk heel goed gebruik van maken bij ADHDers. De nieuwsgierige ADHDer, daar maak ik me helemaal geen zorgen over, want die, op zijn eigen manier, knokt die zich er wel doorheen. Daarvan zeg ik altijd het onderwijs is niet geschikt voor mensen met ADHD. Het ligt niet aan die kinderen die, zeg maar, die bijzondere aandachtscurve- of het heeft vaak ook te maken met de manier van kijken, he? Je hebt ook beelddenkers natuurlijk. Het is ook, ADHDers zijn veel meer gericht op veel meer een holistische blik. Dat geldt eigenlijk ook wel voor mensen met dyslexie, daar zitten naar mijn idee wel overeenkomsten in. Ze kijken meer naar het geheel en gaan van het geheel van het probleem uit dalen ze af naar details, terwijl wij onderwijs geven door allerlei details op een rijtje te zetten en dan ergens te hopen dat iemand daar een soort synthese van weet te maken, want daar komen we vaak helemaal niet aan toe. En dat vind ik een wezelijk probleem. Dus als je zegt "hou je rekening met ADHD?", ik ben toevallig bezig alweer, de laatste jaren, met de focus te leggen op, in de teams- om de- om de teams ervan te laten doordringen, en dat kunnen ze zelf allemaal ook allemaal wel, hoor, daar werken allemaal hele slimme mensen, dat het gaat om- dat het in de leermiddelen gaat om leren, het leren, en niet om de stof, en uh-. Dus primair moet je kijken naar "hoe leer je en met welk doel?", en daarna ga je pas din- die leermiddelen volstoppen met leerdoelen.

Het is een andere benadering, en het gaat juist om die synthese. Het gaat juist om "wat kan ik er mee?", weet je wel? Hoe, als ik een klein stukje kennis krijg, hoe ga ik leren hoe ik dat altijd ga verbinden met wat ik al weet, met wat ik er van verwacht, hoe ik het eventueel zou kunnen gebruiken, waar ik het moet bewaren ergens in mijn hoofd, waar ik het bij op moet slaan. Dat is- Namelijk die hele synthese en die reflectie op nieuwe stof, daar ga ik helemaal niet aan toe komen en die leermiddelen ook niet. Er wordt veel te weinig gedaan met reflectie, en sowieso met strategieën, om kennissystemen op te bouwen in je hoofd, en het "waarom" is daar altijd heel belangrijk van.

En je ziet dat er nu wel een trend is om te werken vanuit leerdoelen. Docenten zetten allemaal leerdoelen op het bord, maar die leerdoelen zijn vaak zo gefragmenteerd dat als ik weet dat ik... een of andere descriptor uit het *Common European Framework* zeg maar, als ik dat moet gaan leren, en ik weet niet waarom ik dat leer, dan ga ik het nog niet leren, weet je wel? En zeker als ik ADHD heb ben ik op zoek naar het systeem, het "waarom?", het geheel. Dan kan ik het plaatsen in iets wat ik al weet, en eigenlijk zijn ADHDers daar in principe beter in dan kinderen met een meer gemiddelde aandachtsspanne of denkwijze, ik weet eigenlijk niet hoe ik het moet beschrijven.

I: Ja ik snap wat je bedoelt

N: Maar ze halen het niet uit de stof, omdat die stof zo gefragmenteerd is, omdat we doeltjes zitten af te werken.

(Lachend) Zo. Dit was even mijn preek

- I: Nee dat is helemaal geen probleem hoor. Dit is- Ik bedoel deze scriptie is ontstaan uit vergelijkbare frustraties dus eh.
- N: Want heb jij wel eens de theorie gehoord waarin mensen met ADHD worden vergeleken met jagers en mensen zonder ADHD, zeg maar, met boeren? Heb je die wel eens gehoord, die vergelijking tussen jagers en boeren?
- I: Misschien? Weet ik niet helemaal zeker
- N: Ik vind hem eigenlijk altijd wel aardig namelijk, zeker als je zelf ADHD hebt ben je waarschijnlijk zelf liever een jager dan een boer. Het gaat dus over een bepaald talent, en een ADHDer zou- want ik weet niet of je dat kent maar als ADHDer heb je niet alleen maar een aandachts- ja, je- het is niet zo dat je aandacht altijd kort is ofzo, je hebt misschien ook een hyperfocus
- I: (Lachend) Ja ik ben heel bekend met hyperfocus.
- N: Ja precies, nee. Maar dat is dus- dat is dus typisch-. Dat is een talent! Hyperfocus is een talent, het is geen probleem, het is een talent. En juist omdat je die hyperfocus hebt lijkt je minder goed te scoren op aandacht omdat je niet altijd die hyperfocus kunt hebben. Het is een- Het is- Het is een golfbeweging. Die hyperfocus die heb je-
- I: Die hyperfocus sturen is eigenlijk waar je uiteindelijk vanuit- wat je uiteindelijk probeert te doen. Die sturen naar iets dat het nuttig is, dat je in plaats van een half uur naar een muur zit te staren, bij wijze van spreken, dat je dat halve uur kunt steken in... leren. Dat is de uitdaging.
- N: Ja, of iets doen, iets schrijven.

[Irrelevant deel. Transcript gaat verder op 13:49]

- N: Ik hoop dat je wel... ook geleerd hebt dat je je ADHD moet zien als- wat mij betreft mag zien als een talent, als een vorm van talent, dat je dus op zoek gaat naar "hoe haal ik daar optimaal- Hoe heb ik daar optimaal profijt van?". En dus blijven zitten als er niks gebeurt in je hoofd, niet doen, weet je wel? Ga naar buiten, ga wat anders doen, ga op je hoofd staan. Raak niet gefrustreerd maar probeer authentiek te zijn en, zeg maar, jouw leven om jou heen te plooiën en jezelf te plooiën om hoe anderen mensen zien dat het moet zijn, want dat gaat je toch niet lukken.
- I: Nee dat klopt, dat ben ik helemaal met je eens.

[Rest van het gesprek is niet relevant. Transcript eindigt hier]

Appendix A1 – English version

Below translation was done using DeepL Translator, after which it was proofread by the author, a native speaker of Dutch.

- I: Um, Yeah, so I'm for- just to make it a little bit clearer- I'm- My thesis research is about specifically how in English language teaching, because English is my major, so I have to focus on English, how ADHD is taken into account and I'm looking at that from as many sides as possible, so I- This interview, so, to include the publisher's side so to speak, the developers of the method's side- I'm also going to distribute a- the teachers I'm going to distribute a survey to as well.
- N: Mhm
- I: Well, you said in the email, you said well, ADHD is not necessarily specifically- is not really taken into account.
- N: Well, what I wrote, you know, we don't see it as a learning disability, we see it as a behavioral disability or an attention disorder, and so there are- Very many students have trouble with their concentration span anyway. It might get a little bit shorter than they're used to, and you might be able to get that out of the research as well, because they do have a kind of instant gratification habit, right? You watch a movie and you immediately know what's going on, and reading and solving puzzles, that all takes a little longer, that takes a little more effort, so that's why you do take into account that short attention span in that way. But it's not like our authors are given an assignment to really delve into ADHD and then to do something with that in the material,
- I: Okay
- N: I can be very clear about that, but it does have consequences, right? So something like attention span because that also applies to a lot of students. Dyslexia we take into account because that also- some of the things you do for that, for dyslexia, that also applies to visually impaired or for students with learning disabilities. Sometimes dyslexia is undiagnosed but there's something at play resembling it. Making picturing words is difficult for some students, especially in modern foreign languages, especially in English, so there are things you do take into account.
- I: Okay. Then I did indeed want to mention it a little bit more, because there I was thinking, okay, if then in the method there is no inherent or at least no explicit... what shall I call it... *consideration*, yes, *consideration* is there for ADHD. How is- what are- what are examples you could give for, for example, how consideration is given for dyslexia? What what kind of- How should I [unintelligible] then.
- N: Yes you- We have very explicitly we have a separate sound-image course, specifically for English, for students with dyslexia. That's a course set up by Ans van Berkel, coincidentally the lady I forwarded you an email from yesterday. That was specifically about French, but for years we worked together with Ans van Berkel and she created a sort of introductory course for English for students with dyslexia in the first year, but it

can also be used in later classes and actually what she does is train the sound-sign link very rigorously, so also with a phonetic script which makes it extra difficult, I think. I don't think it's obvious that this is always the best solution, but you could also skip it. But I could still send you that file, if you want to see it, because then you need a license and that's not in the books, and in the teacher's license that course is in a PDF, and then the teacher can do that with the student.

We also really explicitly say with that "don't let the student do this alone,". You have to supervise that, so you have to have an internal supervisor or a remedial teacher to do that together –or an older student for all I care– with experience who has dyslexia themselves. That you do that together with somebody. You should always- students with problems should not be left alone with extra work. You have to do that together.

I: Yes.

N: So that's a pretty elaborate thing, and, yes, I you that- It's actually also a discipline that they have to learn because they also have to create a word notebook with which they're actually working on that sound-sign coupling in English from the very beginning.

I: Yes. That's very extensive, actually. That's much more extensive than I thought it- thought it would be.

N: Yes, well, it's there, and I don't know if- I don't know actually how much- Because, and that's why I told that story right there about that guidance, the problem is that we- that few teachers have the time or take the time, or that not in every school the remedial teacher always has the time to actually take this up with students, because you have to do that in small groups. You would have to have two or three students doing that together. And you really have to have one-on-one regular attendance.

Not all parents can do this either. It would be fine if parents did this with their children but first of all then your English, especially with your pronunciation of English, has to be reasonably good and you also have to hear, actually learn to hear, what goes wrong with your child with that sound-sign coupling, because it's not that simple and most teachers don't have time for it at all. And then what happens is they make a printout of it and they give it to that student and they say "go do this because you have dyslexia." But that's deadly. I- I- Yes, I think that's just kind of a neglect, so to speak. A little- somewhat maybe a little bit of an exaggeration, but when you have dyslexia you need more time and more attention to learn some things, but then you get there.

Both my kids are dyslexic so I've seen it up close and personal how that goes and yes, you do get there, just it takes a little longer and maybe you won't be the best speller but who cares, you know? It's not that important either, as long as your reading skills are- don't suffer too much then you'll be fine. That's the most important thing.

I: Yes. I have ADHD myself, which- what- so that's the reason that why- how "people like me" could be taken into account in education. What more. Because right now I get the idea that is's not enough, so that's why I'm looking at every side of developing how- well, developing a teaching method- implementing a teaching method, let's put it that

way. From what sides can that be supported? And hence I'm also looking at, well how would that be in a textbook- And so I'm also asking about dyslexia. Because if there is a - What is the word I'm looking for- an approach that is used with dyslexia, maybe it can be translated into a suggestion of how to deal with ADHD. Can those kinds of methods be used for ADHD- Can those kinds of methods be used to teach students with ADHD how to keep their attention on assignments? How they can develop learning strategies

N: Well, my experience is, with ADHD, you actually have to look very individually, you know, what- what- what kind of ADHD is this, what kind of student. It also has a lot to do with intelligence, right? Intelligent children or people with ADHD, I would rather say that's almost a talent. Then you could use your ADHD as a kind of reinforcement of your talents. I would always make that combination with intelligence, with disposition, with the type of ADHD, with whether a child is also curious or not. That's what you can use very well with ADHDers. The curious ADHDer, I'm not worried about that at all, because they, in their own way, they will fight through it. I always say that education is not suitable for people with ADHD. It's not because of those children who, say, have that special attention curve - or it often has to do with the way they look at something, right? You also have visual thinkers of course. It's also, ADHDers are much more focused on much more of a holistic view. That actually also applies to people with dyslexia, there are similarities in my opinion. They look more at the whole and from the whole of the problem they go down to details, while we teach by listing all kinds of details and then hoping somewhere that someone knows how to make a kind of synthesis out of it, because we often don't get around to that at all. And I think that's a substantial problem. So when you say "do you take ADHD into account?", I happen to have been working, again, for the last couple of years, with the focus on, in the teams- to get the- to get the teams to realize, and they can all do that themselves, you know, there are many very smart people working there, that it's about- that in the teaching tools it's about learning, the learning, and not about the material, and uh-. So primarily you have to look at "how do you learn and for what purpose?", and only then do you start stuffing things- those learning resources with learning objectives.

It's a different approach, and it's just about that synthesis. It's precisely about "what can I do with it?", you know? How, if I get a little piece of knowledge, how am I going to learn how to always connect that to what I already know, to what I expect from it, how I could possibly use it, where I should keep it somewhere in my head, where I should store it. That's- Namely that whole synthesis and that reflection on new material, I'm not going to get to that at all and neither are those teaching tools. There's far too little being done with reflection, and strategies in general, to build knowledge systems in your head, and the "why" is always very important of that.

And you do see that there is a trend now to work from learning objectives. Teachers all put learning objectives on the board, but those learning objectives are often so fragmented that... If I know I'm going to learn some descriptor from the Common European Framework for example, if I have to go learn that, and I don't know why I'm learning that, then I'm not going to learn it yet, you know? And especially when I have ADHD I'm looking for the logic, the "why?", the whole thing. Then I can put it into

something that I already know, and actually ADHDers are basically better at that than kids with more average attention spans or thinking, I don't really know how to describe it.

I: Yes I get what you mean

N: But they don't get it from the material, because the material is so fragmented, because we're sitting around finishing goals.

(Laughing) So. This was my sermon

I: No that's not a problem at all!. This is- I mean this thesis was born out of similar frustrations so uh.

N: Because- Have you ever heard the theory where people with ADHD are compared to hunters and people without ADHD to farmers? Have you ever heard that- that comparison between hunters and farmers?

I: Maybe? I am not quite sure

N: I actually like it because, especially if you have ADHD, you would probably rather be a hunter than a farmer. So it's about a certain talent, and an ADHDer should-because I don't know if you know that but as an ADHDer you don't just have an attention- Yes, you- It's not like your attention span is always short or anything, you might also have a hyperfocus.

I: (Laughing) Yes I am very familiar with hyperfocus.

N: Yeah exactly! But that's so- that's so typical-. That's a talent! Hyperfocus is a talent, it's not a problem, it's a talent. And precisely because you have that hyperfocus you seem to score less well on attention because you can't always have that hyperfocus. It's a- It's- It's a sine wave. That hyperfocus you have-

I: Directing that hyperfocus is actually what you end up from- what you end up trying to do. Steering that towards something that it's useful, that instead of sitting there staring at a wall for half an hour, so to speak, you can put that half an hour of into learning. That's the challenge.

N: Yeah, or doing something, writing something.

[Irrelevant part, Transcript continues at 13:49]

N: I hope you... also learned that you have to see your ADHD as- as far as I'm concerned, you can see it as a talent, as a form of talent, that you're therefore looking for "how do I get the most out of that- How do I get the most out of that?". And so staying put when nothing is happening in your head, don't do it, you know? Go outside, go do something else, stand on your head. Don't get frustrated but try to be authentic and, say, fold your life around you and fold yourself to how other people see it should be, because you're not going to be able to do that anyway.

I: No that's right, I totally agree with you.

[Rest of conversation is irrelevant; transcript ends here]

Appendix A2

Discussion with Emèl Spaninks, Publisher at Noordhoff Uitgevers

Interview on Januari 6, 2021, approximately 11:30 AM

Interview was conducted in Dutch. English translation can be found immediately after the original Dutch.

I = Interviewer

S= Spaninks

I: Om even helemaal bij het begin te beginnen dus, eh, ik ben student Engels aan de Universiteit Utrecht en ik ben nu bezig met het laatste beetje van mijn studie namelijk de scriptie. Laatste loodjes. Eh. En ik doe onderzoek naar hoe in het engels taalonderwijs op de middelbare school er eigenlijk rekening wordt gehouden specifiek met kinderen, leerlingen, met ADHD. [pauze] [Uh]. Nou bekijk ik dat van verschillende kanten en de [Stotter] het grootste gedeelte van het onderzoek gaat om hoe docenten hier gebruik van maken, hoe docenten hier aanpassingen in maken. [Uhm] Maar lesmethoden zijn hier ook geen algeheel onbelangrijk, uh, onderdeel van het hele leerproces

S: Ja

I: Dus leek het mij ook handig om met uitgevers, uh, te praten hierover.

S: Mhm

I: Uh, dus vandaar dit telefoontje. Ehm, dus ik- ik- gewoon om even het heel globaal zo even te vragen, uh uh, vroeg ik me af zijn er eigenlijk expliciete, specifieke aanpassingen, uh, *cosniderations*, ik kan niet echt op het woord komen, uh, die er worden gemaakt voor leerlingen met leerproblemen, met leerstoornissen zoals ADHD

S: Eh, nou in de lesstof die wij in onze boeken en onze online materialen opnemen niet specifiek gericht op ADHD. Wij proberen natuurlijk wel zo veel mogelijk, zeg maar, differentiatie en variatie aan te brengen zodat je, uh, op allerlei verschillende manieren omgaat met, uh- uh, het Engels, he? Het oefenen met het Engels. Uhm, dus daar zitten verschillende vormen in die ingezet worden bij verschillende leerlingen. Ze hebben ook eigen keuzes, uh, dus ze hebben bepaalde opdrachten die ze wel of niet hoeven te doen of waar ze een eigen keuze in kunnen maken, dus ik neem aan dat dat voor een ADHD- hè dat zou voor een ADHD leerling, uh, bepaalde opdrachtvormen wel goed passen en bepaalde opdrachtvormen niet. Maar het meeste ligt dan, eh, in die zin toch wel in de klassensituatie en in contact met de docent en in uitvoer van de opdrachten op locatie of misschien op deze manier, via online.

[Pauze. Interviewer sluit venster dat nog open stond]

- I: Sorry, er kwam even kort iets tussendoor. U heeft het misschien al geraden [pause, Interviewer points to self] ik heb zelf ADHD
- S: Uhu [glimlach]
- I: Wat onderdeel is- één van de redenen is dat ik dit onderzoek doe
- S: Ja
- I: Het is voor mij, uh, is Engels specifiek niet-, uh het is één van de weinige dingen waar ik dan wel weer goed in ben, maar het leren als ADHDer, als jonge ADHDer op de middelbare school was voor mij gewoon erg lastig en is voor mij een motivatie geweest om te kijken "hoe kan dit verbeterd worden?".
- S: Ja
- I: Ehm, dus als ik het goed begrepen heb is-, uh, er zijn geen in- in- in bijvoorbeeld *Stepping Stones*, uh zijn, *Stepping Stones* is van jullie toch?
- S: Ja, zeker
- I: Ja, daar zijn bijvoorbeeld geen- geen- niet ADHD-specifiek aanpassingen gemaakt maar wel gewoon in het algemeen, uh, wordt er, uh, gepoogd om een zo breed mogelijk aanbod aan verschillende type activiteiten, verschillende typen...
- S: Ja
- I: ...opdrachten, lesmet- lesvormen aan te bieden? Heb ik dat goed?
- S: Ja. Ja, als je het voorbeeld hebt over woordjes aanleren of zo dan hebben we opdrachten in het boek zitten waar leerlingen gewoon zelf invullen in het boek of waarin ze dat online kunnen doen, direct feedback kunnen krijgen, uh, waarin ze samen met leerlingen op zoek gaan naar betekenissen van woorden, oefenen in gesprekjes met het toepassen van woorden, achterin het boek zit een woordenlijst waarin je met die- uh, *Stepping Stones* heeft zo'n rode kaart, weet je wel, waar je op de woorden legt, valt het woord- Je kan uit het boek leren. Je hebt ook een online systeem waarin je woordjes kan leren, dus we hebben Slim Stampen in het online gedeelte zitten. Dat is een beetje WRTS-achtig maar dan een soort slimmer algoritme daar achter zodat die ook meedenkt.
- I: Ik heb zelf met, eh- Ik heb zelf met *Stepping Stones* gewerkt in mijn stages, dus ik ben er een beetje bekend mee. Dat is ook eigenlijk één van de redenen dat ik ook met jullie wilde spreken, want ik ken de methode een beetje.
- S: Ja. Dus er zitten allerlei manieren waarop je dan met de stof aan de- aan de slag kan gaan en eigenlijk voor elke leerling, dus niet specifiek gericht op ADHD, maar wel inderdaad om een zo breed mogelijk pallet, ehm, aan te bieden omdat elke leerling ook weer op een andere manier leert, uh, zou je daar wat ingrediënten moeten kunnen vinden die goed bij je passen.
- I: Ja. Ehm.

- S: Eh, als je specifieke info over ADHD hebt, zeg maar, wat je op basis van jouw onderzoek al hebt, eh, uitgevonden of ontdekt, dan eh...
- I: Eh, nog niks concreets. Ehm. Ik- Ik bedoel ik natuurlijk wel heel veel- Ik heb een hoop onderzoek gelezen over, uh, manieren van, uh, les aanbieden, uh, die er worden gesuggereerd door experts. Nou richten die experts zich op een heel algemeen iets of op de lesvormen in hun eigen land. Grote probleem is dat er voor het Nederlandse onderwijs specifiek er geen onderzoek bestaat. Eh, dus eh, ik kan [pauze] niet duidelijk genoeg zeggen- er is nog geen onderzoek naar gedaan naar specifiek methodes die in Nederland worden gebruikt, ehm. En- Dus daar heb ik geen naslag op. Ik kan niks bijvoorbeeld over hoe jullie specifiek zouden kunnen aanpassen. Maar wat, uh- Het is ook net Kerstvakantie geweest dus het zit me ook allemaal een beetje laag, momenteel, qua, uhm, makkelijk oproepen. Maar wat ik wel kan doen is ik kan nu even zo snel geen concreet antwoord geven omdat het nu ook gewoon even niet in mijn hoofd zit...
- S: Mhm
- I: ...maar wat ik wel kan doen is zodra het onderzoek klaar is gewoon een exemplaar naar jou sturen. Dat is natuurlijk altijd een mogelijkheid
- S: Ja, nee, maar ik bedoel eigenlijk ook meer als je zegt "ik heb onderzoek- Hè, ik heb gelezen over, eh, het gedrag, of- of wat bevordelijk zou zijn,". Ehm. Dan kan ik natuurlijk zeggen "Dat zit er in," of "dat bieden we op zo'n soort manier aan" of daar hebben we bepaalde keuzes in gemaakt
- I: Oh zo ja
- S: Dus als je al iets hebt over- Of misschien is je ontdekking juist heel erg dat het op menselijk niveau zit of op groeps, eh, processen of, eh, iets dergelijks?
- I: [pauze] ik ga heel even snel mijn boeltje er bij pakken. [onderbreking terwijl Interviewer bronnenlijst opzoekt] Dan kan ik misschien even snel kijken wat ik zelf al had gevonden.
- S: Wow, je bent helemaal groen!
- I: Ben ik groen?
- S: [lachend] Ja! Leuk. Ik weet niet wat er is
- I: Dat doet hij bij mij niet, dus dat ligt aan de verbinding [lachend]
- S: Wat grappig! Nou.
- I: Ehm... [pauze] Ze hebben... Ik hou niet van OneDrive [pauze] Hier.
Wat ik al wel een beetje gevonden heb is, eh, in een aantal heel recente onderzoeken- Ik gebruik zo recent mogelijke onderzoeken, uh, en dit heeft er mee te maken dat de definitie voor ADHD is zo recent als 2013 nog is veranderd. Uh. Daar is een nieuwe editie van de *DSM* uitgekomen. Ben je daar bekend mee?
- S: Van de? *DSM*?
- I: Ja?

S: Nee.

I: Dat is- Dat is de, uh, *Diano- Dagnostics and Statistics of Psychology and Psychiatry*¹, zeg ik volgens mij goed. Het is in ieder geval hèt handboek waarin staat “deze mentale stoornis bestaat, heeft deze symptomen, en wordt aangeraden-” nou ja, niet per se wordt aangeraden op zo’n manier mee om te gaan, maar “als je aan deze criteria voldoet heb je deze aandoening,”. En de definitie voor ADHD is in de- in 2013 dus veranderd. Uh. ADD, bijvoorbeeld, bestaat niet mee, dat is een uiting van ADHD. Er zijn drie- globaal gezien drie uitingen, uh, waar je het Inattentief type, uh, hebt, het Hyperactief Type -het hyperactief type is het meest herkenbaar vanaf de buitenkant- ik ben zelf meer het Inattentief Type. Maar het overgrote gedeelte van de mensen hebben Gecombineerd Type, wat zegt “je hebt zo veel van de ene en zoveel van de ander” en dan vaak neig je naar één van de twee. Dus er wordt bijna nooit gezegd dat je, uh, puur I- puut type 1 of puur type 2 bent maar bijna altijd wordt er gezegd je bent Gecombineerd Type, overwegend naar de ene of de andere.

S: Ja.

I: Omdat er gewoon zo veel verschillende uitingen zijn van ADHD.

Wat ik wel even snel nu al gevonden heb is dat, uh- had ik- heb ik- Ik heb niet het goede bestandje geopend [pauze]. Eh... [pauze] Nee ik kan zo even snel niet vinden wat ik- Ik zat gisteravond nog alles door te lezen van is er nog iets wat ik wil, uh, meenemen, uh [pauze]. Ja, maar dan moet ik echt mijn hele bronnen gaan openen en dat is gewoon echt niet te doen

S: Nee hoor dat is ook niet nodig. Maar je bent dus op zoek naar, uhm-. Bijvoorbeeld als het gaat over als er een kenmerk is, korte aandachtsspanne of zo, hè, of korte concentratieboog, dat je dan in de methode kijkt, “okee zitten er eindeloos lange opeenvolgende opdrachtreesen in of heb je juist korter afgerond zodat je met je aandacht erbij kan blijven” en dat het vervolgens naar een nieuwe vaardigheid gaat of naar een nieuwe opdracht.

I: Ja, dat soort dingen. Één van de meest voorkomende dingen die ik wel ben tegengekomen die er wordt gezegd voor ADHDers is dat het vaak wordt aangeraden om zo veel mogelijk te variëren. Dus, eh, eh, één van de grootste problemen met ADHD is niet zozeer dat leerlingen ergens hun aandacht niet bij kunnen houden maar dat ze hun aandacht bij het verkeerde houden en de theorie is dat omdat je, uh, constant te weinig dopamine hebt dat je altijd die dopaminekick ergens anders zoekt en dat je daarom dus je aandacht níet kan houden bij de dingen die je niet interesseren, zoals de les. Uhm. Dus op- om- om- om dat te voorkomen, om er voor te zorgen dat deze kinderen zich niet snel gaan vervelen is één van de dingen die wel echt constant terugkomt, is “blijf variëren. Blijf herhalen maar blijf variëren in de manier waarop dit gebracht wordt,”. Eh. Dezelfde stof op verschillende manieren. Ehm.

S: Ja.

I: En dat is-

- S: Ja kijk dat zou je bijvoorbeeld- dat zul je dus bijvoorbeeld terugvinden. We hebben nu ook een nieuwe editie, ik weet niet of je die ook erbij hebt voor je onderzoek, want, eh-
- I: Nee
- S: Ik weet niet wanneer je hebt gewerkt met *Stepping Stones*?
- I: Nee, eh, ik heb geen- Ik heb geen toegang meer tot *Stepping Stones* momenteel. Ik heb geprobeerd om de inlogcode te krijgen van een oud-stagebegeleidster maar die gebruiken geen *Stepping Stones* meer had ik begrepen, dus die kon ik niet, eh-
- S: Okee, okee.
- I: En dat was in [pauze] Het is nu 2021... Eh... [pauze] 2017. Nee, 2018. 2018 liep ik stage.
- S: Oh.
- I: Toen is- Ik weet niet of-
- S: Nee dat is een oude editie. We hebben nu een nieuwe editie, dus ehm. Eh. Ik weet niet of je ook concreet het materiaal gaat gebruiken in je, eh, je onderzoek, want dan kan ik je een boek toe laten sturen. Daar zit dan ook een inlogcode voor online bij, dus dan zou je daar even in kunnen rondkijken. Ehm, maar, dit soort dingen- Zeg maar als je dit soort hele concrete voorbeelden wil dan kan je dat natuurlijk er wel uithalen, want dat is inderdaad ook- Hè? Dus dan niet per se vanuit, ehm, het bedienen van, eh [laughing], ADHD, eh, leerlingen of zo, maar meer gewoon algemeen in het onderwijs zie je natuurlijk ook vaak dat je probeert gevarieerd materiaal- Iedereen leert op een andere mo- eh, manier, dus we bieden korte stukjes stof op verschillen- in verschillende werkvormen, eh. Dan weer samenwerken, dan weer alleen werken. Dan kun je zelfs ook de opdrachten- eh, weet je zoals elkaar opvormen [opvolgen] hebben ook een andere vorm. De ene keer is het multiple choice, dan is het een open opdracht. Maar ook de vaardigheid verandert telkens. Dus dat zul je in de nieuwe editie veel vaker zien. Zit ook veel meer praktische opdrachten, dus veel meer doe-dingetjes, veel doe-opdrachten, meer spelvormen worden ingezet, zodat het ook actiever is, zodat je ook de fysieke kant kunt gebruiken bij het leren, hè? Dus die variatie zul je daar veel meer in zien. Dus dan is het niet per se vanuit, eh, heel actief vanuit ADHD ingezet, maar wel gewoon vanuit het type leerling dat wij voor ons hebben als we schrijven voor VMBO-BK, of als we schrijven voor VWO, he? Dus in onze teams zitten natuurlijk allemaal docenten die de hele dag lesgeven aan de groep waar ze voor schrijven dus die houden gewoon het type leerling en hun leerlingen voor ogen en we laten materiaal meelesen door mensen die niet in ons team zitten. Dus zo proberen we een zo breed mogelijk beeld van de leerling te krijgen voor dat specifieke niveau, en daar variëren we- Ja, daar passen we gewoon allerlei verschillende opdrachten voor op toe.
- I: Okee.
- S: Dat zul je dan daar wel in herkennen, denk ik, dat dat ook geschikt zou kunnen zijn voor, bijvoorbeeld, leerlingen met ADHD.

- I: Ja, okee. Maar om- om- om dat gedeelte even af te ronden: ADHD specifiek wordt niet over nagedacht? *Like*, er wordt niet gezegd “Hee dit is misschien niet zo handig voor ADHDers want...”?
- S: Dat wordt dus per opdracht kunnen docenten- of, hè? De mensen- De auteurs in ons team, die zullen dat zeggen, van “Nou als ik die leerling in mijn klas gewoon voor ogen heb dan, ehm, dan moeten we dit niet doen want dit is onhandig,” ja? Maar we hebben niet een- We hebben niet een ADHD-lijn of zo er in zitten.
- I: Okee.
- S: Het is gewoon ingericht op de leerlingen die je tegenkomt, zitten ook ADHDers tussen, maar we hebben daar geen specifieke, ehm, gemarkeerde opdrachten of zo voor in het boek opgenomen.
- I: Okee, top. Dat, eh [pauze] Ja dat is ongeveer, eh, eh, het belangrijkste wat ik- wat ik wilde weten. De manier waarop jullie daar naar kijken.

[De rest van het gesprek is niet relevant. Transcript eindigt hier]

Appendix A2 – English version

Below translation was done using DeepL Translator, after which it was proofread by the author, a native speaker of Dutch.

- I: So to start at the beginning, um, I'm an English student at Utrecht University and I'm currently working on the last bit of my major which is the thesis. Last mile. Um. And I'm doing research on how in English language teaching in high what consideration specifically for children, students, with ADHD are made. [pause] [Uh]. Well I'm looking at that from different angles and the [Stutter] most of the research is about how teachers use this, how teachers make adjustments to this. [Uhm] But teaching methods here are also not an unimportant, uh, part of the whole learning process
- S: Yes
- I: So I also thought it would be helpful to, uh, talk to publishers about this.
- S: Mhm
- I: Uh, so hence this phone call. Um, so I- I- just to ask very broadly so, uh uh, I was wondering are there actually explicit, specific adaptations, uh, *considerations*, I can't really find the word, uh, that are made for students with learning problems, with learning disabilities like ADHD
- S: Um, well in the curriculum that we include in our books and our online materials are not specifically geared towards ADHD. We do, of course, try to include as much, say, differentiation and variety as possible so that you, uh, deal with, uh- uh, English in all kinds of different ways, right? Practicing with the English. Uhm, so there are different forms in there that are deployed with different students. They also have their own choices, uh, so they have certain assignments that they do or do not have to do or

where they can make their own choice, so I assume that for an ADHD- huh that would be for an ADHD student, uh, certain assignment types fit well and certain assignment types do not. But most of it, um, in that sense lies in the classroom situation and in contact with the teacher and in execution of the assignments on location or maybe in this way, via online.

[Interviewer closes messenger that was left open]

I: Sorry, something came up briefly. You may have guessed it already [pause, Interviewer points to self] I have ADHD

S: Uhu [smile]

I: Which is part of why-one of the reasons I'm doing this research.

S: Yes

I: It's for me, uh, is English specifically not, uh it's one of the few things that I am good at, but learning as an ADHDer, as a young ADHDer in high school was just very difficult for me and has been a motivation for me to look at "how can this be improved?"

S: Yes

I: Um, so if I understood correctly is-, uh, there are no in- in for example Stepping Stones, uh its, Stepping Stones is yours right?

S: Yes, certainly

I: Yes, there are no- no- no ADHD-specific adaptations made there, for example, but just in general, uh, there is, uh, an attempt to provide the widest possible range of different types of activities, different types of...

S: Yes

I: ...assignments, lesson-with-lesson forms to offer? Do I have that right?

S: Yes. Yes, if you're talking about, for example, learning words or something like that, we have assignments in the book where students just fill in in the book itself or where they can do that online, get immediate feedback, uh, where they work with students to find meanings of words, practice in conversations with applying words, in the back of the book there's a vocabulary list where you can use those- uh, Stepping Stones has one of those red cards, you know, where you put on the words, the word falls- You can learn from the book. You also have an online system where you can learn words, so we have *Slim Stampen* in the online section. That's kind of WRTS-like but kind of a smarter algorithm behind it so that it's also thinking along.

I: I myself have worked with, um- I myself have worked with Stepping Stones in my internships, so I'm kind of familiar with it. That's actually one of the reasons I wanted to talk to you too, because I know the method a little bit.

S: Yes. So there are all kinds of ways in which you can work with the material and actually for each student, so not specifically for ADHD, but indeed to offer as broad a pallet as

possible, because each student learns in a different way, uh, you should be able to find some ingredients that suit you.

I: Yes. Ehm.

S: Um, if you have specific info about ADHD, say, what you have already, um, concluded or discovered based on your research, then um....

I: Um, nothing concrete yet. Um. I- I mean of course I do have a lot- I've read a lot of research about, uh, ways of, uh, teaching, uh, that there are suggested by experts. Those experts focus on a very general thing or on the forms of teaching in their own country. The big problem is that for Dutch education specifically there is no research. Um, so um, I can [pause] not say it clearly enough- there's no research yet on specifically methods used in the Netherlands, um. And- So I have no reference on that. I can't do anything for example on how you could specifically adapt. But what, uh- It's also just been Christmas break so it's all sitting a little low for me, too, right now, in terms of, uhm, easy recall. But what I can do is I can't give a concrete answer right now because it's also just not in my head right now....

S: Mhm

I: ...but what I can do is once the research is done just send a copy to you. That's always a possibility of course

S: Yes, no, but I actually also mean more when you say "I have research- Hey, I have read about, um, the behavior, or-or what would be conducive,". Um. Then of course I can say "That's in there," or "We offer that in that kind of way" or we've made certain choices about that

I: Oh in that sense.

S: So if you already have something about-or maybe your discovery is just very much that it's on a human level or on group, um, processes or, um, something like that?

I: [pause] I'm going to get my stuff out real quick. [Pause as Interviewer pulls up source list] Then maybe I can take a quick look at what I had already found myself.

S: Wow, you went all green!

I: Am I green?

S: [laughs] Yes! Fun. I don't know what's happened

I: It doesn't do that with me, so that's because of the connection [chuckle].

S: How funny! Well.

I: [Um... pause] They have... I don't like OneDrive [pause] Here.

What I did find a little bit is, um, in a number of very recent studies-I use as recent as possible studies, uh, and this has to do with the fact that the definition for ADHD has changed as recently as 2013t. Uh. That's where a new edition of the DSM came out. Are you familiar with that?

S: Of the what? DSM?

I: Yes?

S: No.

I: That's- That's the, uh, Diano- Daignostics and Statistics of Psychology and Psychiatry, I think I'm saying that right. At any rate, it's the manual that says "this mental disorder exists, has these symptoms, and is recommended-" well, not necessarily recommended to be dealt with in such a way, but "if you meet these criteria you have this disorder,". And so the definition for ADHD has changed in the- in 2013. Uh. ADD, for example, doesn't exist with- that's a manifestation of ADHD. There are three- broadly speaking three manifestations, uh, where you have the Inattentive Type, uh, the Hyperactive Type-the hyperactive type is the most recognizable from the outside-I'm more of the Inattentive Type myself. But the vast majority of people have Combined Type, which says "you have so much of one and so much of the other" and then often you lean towards one of the two. So it's almost never said that you're, uh, pure I- pure Type 1 or pure Type 2 but almost always it's said you're Combined Type, predominantly towards one or the other.

S: Yes.

I: Because there are just so many different manifestations of ADHD.

What I did find just quickly right now is that, uh- had I- have I- I didn't open the right file [pause]. Um... [pause] No I can't find what I- I was just reading through everything last night of is there anything else I want to, uh, take, uh [pause]. Yes, but then I'd have to open up all my sources and that's just not feasible.

S: No, that's not necessary either. But you're looking for, uhm-. For example, when it comes to if there's a characteristic, short attention span or something, huh, or short arc of concentration, that you then look in the method, "okay are there endlessly long sequences of assignments in there or did you just complete shorter ones so you keep your attention" and then it goes to a new skill or to a new assignment.

I: Yes, things like that. One of the most common things that I did come across that is said for ADHDers is that it's often recommended to vary as much as possible. So, um, um, one of the biggest problems with ADHD is not so much that students can't keep their attention somewhere but that they keep their attention on the wrong thing and the theory is that because you're, uh, constantly low on dopamine that you're always looking for that dopamine rush somewhere else and so you can't keep your attention on the things that don't interest you, like class. Uhm. So to- to- to- to prevent that, to make sure that these kids don't get bored easily one of the things that does come back really constantly is "keep varying. Keep repeating but keep varying the way it's brought,". Um. The same material in different ways. Um.

S: Yes.

I: And that's-

- S: Yes see now that would be you for example- so you'll find that for example. We also have a new edition now, I don't know if you have that with it for your research because, um-
- I: No
- S: I don't know when you worked with Stepping Stones?
- I: No, um, I don't have- I don't have access to Stepping Stones anymore at the moment. I tried to get the login code from a former internship supervisor but they don't use Stepping Stones anymore I understood, so I couldn't, um-
- S: Okay, okay.
- I: And that was in [pause] It's now 2021.... Um... pause] 2017. No, 2018. 2018 I was doing an internship.
- S: Oh.
- I: Then is- I don't know if-
- S: No that's an old edition. We have a new edition now, so um. I don't know if you're also going to use the material concretely in your, um, your research, because then I can have a book sent to you. That would include a login code for online, so you could look around in that. Um, but, these kinds of things- If you want these kinds of very concrete examples then of course you can take that out, because that is also- Right? So not necessarily from the point of view of, um, serving, eh [laughing], ADHD, eh, students or so, but more simply in general in education you often see that you try to vary the material- Everyone learns in a different way, so we offer short pieces of material in different forms of work, eh. Then again working together, then working alone. Then you can even also have the assignments- um, you know like each other forms [follow up] also have a different form. One time it's multiple choice, then it's an open-ended assignment. But also the skill changes each time. So you'll see that a lot more often in the new edition. Also includes a lot more practical assignments, so a lot more do-things, a lot of hands-on assignments, more game forms are used, so it's also more active, so you can also use the physical side in learning, right? So you'll see that variation a lot more in there. So then it's not necessarily from, um, very actively used from ADHD, but simply from the type of student that we have in front of us when we write for VMBO-BK, or when we write for VWO, right? So in our teams, of course, there are all teachers who teach the group they are writing for all day long so they just keep the type of student and their students in mind and we have material read along by people who are not in our team. So that's how we try to get as broad a picture of the learner as possible for that particular level, and then we vary- Yes, we just apply all kinds of different assignments for that.
- I: Okay.
- S: You will recognize that in there, I think, that that could also be suitable for, for example, students with ADHD.

- I: Yes, okay. But to- to- to wrap up that part a little bit: ADHD specifically is not considered? Like, it's not said "Hey this might not be so useful for ADHDers because..."?
- S: So that can be- Per assignment teachers can- or, right? The people- The authors on our team, who will say that, of "Well if I just envision that student in my class then, um, we shouldn't do this because this is ," yeah? But we don't have an- We don't have an ADHD-line in there or anything.
- I: Okay.
- S: It's just set up for the students that you encounter, there are also ADHDers among them, but we didn't include specific, um, marked assignments or anything for that in the book.
- I: Okay, great. That, um [pause] Yeah that's about, um, um, the main thing I- what I wanted to know. The way you guys look at that.

[The rest of the call bears no relevance as a source for this Thesis. Transcript ends here]

Appendix B

Discussion with Corinne Nederlof, Publisher at Malmberg Uitgevers

Interview on January 8, 2021, approximately 1:30 PM

Interview was conducted in Dutch. English translation can be found immediately after the original Dutch.

I = Interviewer

G= Gerrits

Transcripts starts at 00:00. Due to technical difficulties, the first part of the interview was not recorded, however Mrs. Gerrits was asked to repeat her statements.

- I: Zou je, eh- Zou je het voorgaande nog even kunnen herhalen?
- G: [chuckle] Het voorgaande. Eh- ehm. Waar ik- waar wij mee bezig zijn is met werkgeheugen en ik zei als je [pause] iemand met een werkgeheugentaak een dubbeltaak- ik ga straks wel uitleggen wat dat allemaal is, want jij zegt ik weet wat het is maar dat is even de vraag of je dat echt-
- I: I- I- Ik heb, eh, waarschijnlijk oppervlakkige, maar een redelijke ken- ik heb, eh, onderwijsk- eh, onderwijspsychologievakken gevolgd, dus ik ben wel enigszins bekend...
- G: Oh, ja daar heb je hem
- I: ...maar dat is al wel weer een goede twee jaar geleden, dus, eh
- G: Okee
- I: Het is misschien wat roestig, ehm, maar ik ben- ik ben bekend met het concept.
- G: Ja. Eh. Werkgeheugen is eigenlijk, ehm, één van de executieve functies, maar is eigenlijk het vermogen om informatie van verschillende aard even vast te houden en ondertussen met een bewerking bezig te zijn. Dus eigenlijk twee dingen tegelijk. Ehm. En dat met, eh, volle- volle aandacht. Als je zo'n soort taak, zo'n dubbeltaak -en dat is misschien al gewoon een som uit je hoofd uitrekenen, dat is al een dubbeltaak, want dan moet je stapjes tussendoor, deelstapjes moet je vasthouden, je moet de som vasthouden in je hoofd en ondertussen moet je rekenen- ehm, dan- die- die- dat werkgeheugen- als je dat geeft aan iemand die in een MRI, in een fMRI-scan zit, eh, ligt, ehm, dan zie je daar, eh, de gebieden van wat dan heet de gecontroleerde aandacht oplichten. En dat betekent dat- dat er dus heel veel overlap is tussen werkgeheugen en, eh, gecontroleerde aandacht. En gecontroleerde aandacht heb je eigenlijk nodig bij al het [pause] leren, ehm, ja, eigenlijk in het hele leven zou ik bijna zeggen, maar in ieder geval bij het leren. En dat is- Bij de meeste ADHDers zit- ligt- ligt daar het probleem,

naast een -en dat wordt ste- ook steeds meer duidelijk- prikkelverwerkingsprobleem. Ik zit niet in de prikkelverwerking, dan moet je echt bij een, ja, bij een orthopedagoog zijn of een ergotherapeut die meer daarop zit. Sensorische integratie, die kant. Maar ik zit dus meer aan die aandachtsregulatie, en dan heb je-. Even-. Ik jou gewoon wel wat dingen sturen dus...

I: Dat is helemaal prima!

G: ...niet dat je denkt van pôh, dit moet ik allemaal gaan zien te onthouden of ik moet het allemaal nu kunnen volgen. Ik, eh, zal jou een, eh, een eBook sturen wat mijn man heeft geschreven. Ehm. Wat hij eigenlijk, um, dit uitlegt van "wat gebeurt er nu in die aandachtsregulatie bij" eh, ehm, ja "kinderen/jong volwassenen". Ehm. En dat doet hij een beetje al pratende heeft hij dat geschreven alsof hij met een collega-psycholoog aan het sparren is.

I: Okee.

G: Ehm. Want hij heeft een speciale kijk daarop. Ehm. En- en- wat hij [pause] zegt en waar hij ook onderzoek naar heeft gedaan is, eh, dat die aandachtsregulatie- Je hebt eigenlijk verschillende systemen, maar grofgezegd zijn er eigenlijk drie, of misschien nog wel meer. Ehm. Maar ik zal er twee uitleggen. De ene is dus die gecontroleerde aandacht waar ik het net over had, en de andere is de stimulusgestuurde aandacht. En als jij zegt dat jij een ADHDer bent dan zul je je waarschijnlijk erin herkennen dat jij prima kunt gamen,

I: Mhm

G: Dat jij daar ongelóóflijk je aandacht bij kunt houden,

I: Jep. [chuckle]

G: dat dat totáál geen probleem is. Maar nu naar mij luisteren, zonder beeld ook nog waarschijnlijk...

I: Nee ik heb in de opname het beeld uitgezet. Ik kan je nog steeds zien.

G: Maar je hebt mij gelukkig wel- Want ik doe ook nog wel eens met mijn handen-

I: Ja, nee, ik ben zelf ook heel erg [chuckle] een eh [motions with hands]

G: Maar op het moment dat je in de colleges zit, of je iets moet bestuderen, dat het dan héél moeilijk is om je aandacht erbij te houden. En dat heeft er mee te maken dat je eigenlijk je brein op twee verschillende aandachtssystemen, eh, leunt. Op het moment dat jij aan het gamen bent, en hele directe prikkels, die uitdagend en flitsend en je arousal-niveau opstuwen, als- als dat op je af wordt gestuurd op je brein, dan gaat het de- de- de- het prikkelgestuurde, of het stimulusgestuurde aandachtssysteem gaat aan.

I: Ja.

G: En dat kost geen moeite. Dat kost het brein ook geen moeite. En daar komt eigenlijk een dopamine-stoot, en jij gaat aan, en jij gaat lekker, eh, bezig, en dat blijft eigenlijk elke keer gevoed worden door die prikkels. Op het moment dat jij in die collegezaal zit met

die [laughing] hele saaie, eh, docent ervoor, dan moet jij -want dan krijg je niet al die prikkels- dan moet jij zelf, dan moet je brein zelf, het gecontroleerde aandachtssysteem aanzetten. Die moet zelf wat doen. Je moet daar dus een effort, eh, plegen om de aandachtsregulatie op orde te houden. En als ADHDer voel je dan al van bzzzzzz. Van "voordat ik het weet ben ik weg, en- of ik ben er niet, of-". Nou, daar heb je dan ook weer verschillende vormen in, de ene zal veel meer gaan bewegen en [pause] gaan doen om eigenlijk kdat arousal-niveau maar omhoog te houden, dus zelf maar prikkels aan- [pause] aandienen, [chuckle] zullen we maar zeggen, en je hebt de dromers die...

I: [Interviewer points to himself]

G: Oh, jij bent er niet meer [laughs]. Jij krijgt het gewoon niet meer mee

I: Ik- ik-

G: Jij bent ergens anders

I: Eh, eh, mooi voorbeeld nu meteen: Ik merk dat als ik niet constant naar je blijf kijken, dat ik dan naar mijn opnamesoftware ga kijken om te kijken of alles goed gaat, en dan niet meer volg wat je zegt. [chuckle]

G: En wat je nu aan het doen bent is je werkgeheugen belasten.

I: Ja

G: En- en- en nu komen we op een puntje waar ik je misschien wel op een spoor kan zetten, want dit zouden docenten dus in de gaten moeten hebben bij ADHDers. Dat die heel erg geneigd zijn om prikkels te zoeken,

I: Mhm

G: en dat, op het moment dat je dat, eh, eh, eh, eh, doet, dat zij, eh, daarmee, eh, eigenlijk dat stimulusgestuurde aandachtssysteem aanzetten, maar dat dat niet het stim- het systeem is waarmee je leert en waarmee je het kunt onthouden, wat ik net heb gezegd.

I: Mhm

G: En, ehm, [pause], je gaat- Wat je- Waar jij je het jezelf moeilijk mee maakte, is dat je, eh, eigenlijk een soort dubbeltaak maakt door even ergens anders iets te kijken en ondertussen, uh, ja, moet je mij ook nog volgen. Dat kan best als het alletwee prikkelende dingen zijn en je het niet echt hoeft te onthouden, maar op het moment dat dat een hele zware taak is, namelijk echt mij volgen en echt snappen wat ik aan het zeggen ben, dan heb je een probleem, en maak je het jezelf eigenlijk nog moeilijker.

I: Ja.

G: Dan dat je het al hebt. Terwijl je denkt dat je iets goeds aan het doen bent want je bent jezelf aan het stimuleren om je aandacht erbij te houden.

I: Dus je bent- Lang verhaal kort ben je eigenlijk gewoon constant op zoek naar die dopaminekick?

G: Ja.

I: Eigenlijk.

G: Ja.

I: En- dat- dat- Ja dat- Dat is wel ongeveer-

G: Dat herken je wel, waarschijnlijk.

I: Dat herken ik inderdaad heel erg, dat is ook ongeveer wat ik- wat ik heb gehoord en gelezen, uh, over het hele- uhm, over wat er nou eigenlijk achter zit. Ja. Dus dat- dat-. Ja. Ik ben bekend-

G: En dat maakt dat- dat- Kijk, ehm, A-als we een soort Jochem Myjer¹ voor de groep zouden zetten, dan- dan helpt dat redelijk, maar dat gaat ook weer uitdoven, dus er moeten steeds sterkere prikkels komen dsu dan moeten-

I: Ironisch genoeg trouwens ook een ADHDer [chuckle]

G: Ja, precies! [laughs] Dat is niet voor niets! [laughing]

Maar ik denk dat deze gedachtegang van "hoe werkt dat nou met die dopamine?", ehm, "wat heb je nodig om gecontentreerd," eh, eh, nou ja "in de les te zitten?" -want dat is waar docenten mee te maken hebben- en, ehm, waar moet je je dan als docent bewust van zijn? En dan is het even de vraag "wat moet je doen?". Eh. Je moet eigenlijk, eh, denk ik, als docent, voldoende prikkel, eh, toedienen bij ADHDers om- om- iets in gang te zetten, maar je moet het- ehm, je moet vanuit die prikkel eigenlijk hun aandacht gaan trekken en proberen met interessante dingen- En bezig zijn, veel meer activerend leren zou je denk ik- kun je bij ADHDers een stuk verder mee komen dan dat je gewoon zo staat te oreren, bijvoorbeeld.

I: Ja.

G: Ik denk dat het. Kijk, ik kan hier echt uren over praten [laughing] dat is echt niet zo moeilijk. Ehm. Ik geef ook heel veel les. Ehm. Wat- Wat denk ik goed is, is dat ik jou dat eBook stuur.

I: Okee.

G: En dat je eens kijkt van "nou"- . Op zich is het leu- redelijk leuk om te lezen, ehm, het is dus een beetje op een luchtige manier, op een gespreksvorm, gebracht, ehm, tegen een collega die denkt dat die het allemaal weet maar het misschien niet zo weet, of, ja, zo iets.

I: Mhm

G: Zo hebben ze het eigenlijk een beetje samen opgesteld. Ehm. En ik denk van, nou, waarschijnlijk is het beste als je dat eens doet en dan eens gaat nadenken van als je dit nu weet, van hoe het brein werkt, eh [pause], in- in die aandachtsregulatie, uhm, wat- wat zou jij dan kunnen bedenken wat een docent zou kunnen doen om een- een- een leerling -want daar wil je naartoe- vanuit misschien die stimulusgestuurde aandacht wel naar die gecontroleerde aandacht krijgen. Want dat is het aandachtssysteem dat we nodig hebben om iets te leren.

- I: Ja.
- G: [pause]. Dus. Ja. Weet je, ik vind dat jij een heel mooi scriptieonderwerp hebt, maar antwoord ligt niet zo makkelijk-
- I: Het is geen makkelijke
- G: Het is niet zo makkelijk.
- I: Dat wist ik het moment dat ik eraan begon, dat- eh, het is- eh, ja. [stutter] Wat ik al zei, mijn hoofdmotivatie erachter is het feit dat ik denk dat er te weinig rekening mee wordt gehouden, met zo'n veelvoorkomende stoornis,
- G: Ja.
- I: En, eh, om even een, eh, [pause] een uitgever te citeren die ik hierover heb gesproken, dat is dodelijk. Dat kan- Uh. Een kind zomaar zichzelf dat laten oplossen, zonder- zonder begeleiding van een docent, zonder adequate begeleiding, kan- is dodelijk. Dat kan een ontzettende achterstand veroorzaken
- G: Want je ziet dat het wegglijdt, afglijdt, weggaat,
- I: Ja
- G: dat je grote kans hebt op uitval en, eh, onderpresteren
- I: Onderpresteren, studievertraging...
- G: Ja! Ja, en, uhm. Dus ik- i- Ja ik denk dat je helemaal gelijk hebt en, uhm [pause] de m- Ja de moeilijkhei- Ja, eh, nee dat is eigenlijk geen moeilijkheid. Ik vind het wel een mooi streven om een soort adviezen misschien op te stellen, want ik denk dat je moet oppassen dat je het niet te groot maakt, want dit is natuurlijk waar we eigenlijk al heel lang mee bezig zijn. Al moet ik zeggen, in de tijd-
- I: Slimmere mensen dan i- Slimmere mensen dan ik hebben, eh, waarschijnlijk al eens geprobeerd om dit uit te zoeken.
- G: Nee! Nee, nee, dat zeg ik niet. [chuckle] Ik ze- Wat ik zeg is, is dat, ehm, [pause], nou- wat ik- wat ik het mooie eraan vind wat jij doet- Kijk er is ontzettend veel onderzoek naar ADHD en er van alles, maar jij wil het heel erg naar de praktijk van de docenten brengen.

[Part of this interview contained no relevant discussion. Transcription resumes at 14:34]

- G: Maar ik denk, als ik daar even een heel kort antwoord op moet geven is dat je, eh, eigenlijk zou moeten proberen, of je bewust moet zijn, dat, eh, ADHDers ontzettend op hun stimulus-gestuurde aandachtssystemen leunen,
- I: Mhm
- G: want dat is ook eigenlijk hetgeen wat ze hun brein het meeste leren, eh, en dat wat- wat moeilijk is activeer je dus ook minder, en zal het brein ook minder vertonen, dus je maakt- wordt- Dat wordt steeds lastiger naarmate je ouder wordt, eh, omdat je het- Voor je brein geldt "use it or lose it", dus als je het niet gebruikt raak je het ook op een

gegeven moment kwijt en wordt het steeds lastiger. Dus ik denk dat je de kracht van ADHDers, namelijk heel erg op die stimulus, eh, zittten, dat je die moet gebruiken om het gecontroleerde aandachtssysteem, eh, te betrekken en- en- en- te krijgen. En dat is- dat is niet makkelijk, maar ik denk wel van als jij [pause] nadenkt, als docent, over van "ik heb hier ADHDers en ik heb deze stof te brengen, hoe ga ik het nou zo aanpakken, hoe ga ik het nou zo brengen dat ik dei ADHDers erbij krijg. En ik denk dat, en dat heet dan in de onderwijskunde, de Activerende Didactiek daar de beste methode voor is en daar zou je wat dingen uit kunnen halen die heel specifiek voor ADHDers, ehm, zou kunnen doen gelden,

I: Ja.

G: Maar het gaat erom dat je moet kunnen betrekken en moet kunnen activeren. En dat betekent dat je de verwerking van stof, en het leren van allerlei leerstof meestal via de activerende of de iets-er-mee-doen, veel beter iets leren dan dat je het zo vertelt.

I: Ja. [pause] Dat is een hele hoop informatie waar ik best wel wat mee kan, dus dat is, eh.

G: [laughs] Sorry!

I: Nog een reden dat ik dit opneem! [laughs]

G: Jajajaja. Ja.

I: Nee, dat is een hoop informatie waar- [stutter] waar ik mee kan werken, absoluut.

[Rest of the interview contained no relevant information. Transcript ends here]

Appendix B – English version

Below translation was done using DeepL Translator, after which it was proofread by the author, a native speaker of Dutch.

I: Could you, um- Could you repeat What you said before?

G: [chuckle] What I said before. Um- um. What I- What we're working on is with working memory and I said if you [pause] give someone with a working memory task a dual task- I'll explain what all that is in a moment, because you say I know what it is but that's just a question of whether you really-

I: I- I- I have, um, probably superficially, but a reasonable know- I have, um, taken educational psychology- um, educational psychology courses, so I am somewhat familiar....

G: Oh, yes there you go

I: ...but that's been well over two years ago, so, um

G: Okay

I: It might be a little rusty, um, but I'm-I'm familiar with the concept.

G: Yes. Um. Working memory is actually, um, one of the executive functions, but is really the ability to hold information of different kinds for a while and in the meantime be engaged in an operation. So basically two things at once. Um, and doing that with, um, full- full attention. If you do a kind of task like that, a double task -and that might be just calculating something in your head, which is already a double task, because then you have to take steps in between, you have to hold on to the partial steps, you have to hold on to the sum in your head and meanwhile you have to calculate- um, then- that- that- that- that working memory- if you give that to someone who is in an MRI, in an fMRI scan sitting, um, lying, um, then you'll see there, um, the areas of what is then called the controlled attention light up. And that means that-that there's a lot of overlap between working memory and, um, controlled attention. And controlled attention is what you actually need in all [pause] learning, um, yes, actually in all of life I would almost say, but at least in learning. And that's- With most ADHDers, that's where the problem lies, in addition to a -and that's becoming more and more apparent- stimulus processing problem. I'm not in the field of stimulus processing, then you'd really need to be with a, yes, with an orthopedagogue or an occupational therapist who is more into that. Sensory integration, that field of study. But so I'm more on that attention regulation, and then you have-. Just-. I you just send some things so...

I: That's totally fine!

G: ...not that you're thinking like '*pôh*, I have to go and memorize all this or I have to be able to follow it all now'. I, um, will send you an, um, an eBook that my husband wrote. Um. Which he actually, um, explains this "what really happens in that attention regulation in" um, um, yes "children/young adults". Um. And he does that while talking like- he has written that as if he is sparring with a fellow psychologist.

I: Okay.

G: Um. Because he has a special take on that. Um. And- and- what he [pause] says and what he's also done research on is, um, that that attention regulation- You actually have different systems, but roughly speaking there are actually three, or maybe more. Um. But I'll explain two of them. So one is that controlled attention that I was just talking about, and the other is stimulus-driven attention. And if you say you're an ADHDer then you'll probably recognize in it that you're fine with gaming,

I: Mhm

G: That you can keep your attention on that incredibly well,

I: Yup. [chuckle]

G: That that's not a problem at all. But now, listening to me, probably without image as well....

I: No I turned off the picture in the recording. I can still see you.

G: But you have me fortunately- Because I also do sometimes with my hands-

I: Yes, no, I'm very much a [chuckle] an uh [motions with hands] kind of person myself.

- G: But the moment you are in the lectures, or you have to study something, it is very difficult to keep your attention. And that has to do with the fact that your brain is actually leaning on two different attention systems. The moment you're gaming, and receiving very direct stimuli, which are challenging and flashy and drive up your arousal level, if- if that's sent at you, at your brain, then it turns the- the- the stimulus-driven, or the stimulus-driven attention system is turned on.
- I: Yes.
- G: And that takes no effort. That doesn't cost the brain any effort. And there's actually a dopamine rush, and you get going, and you get, um, busy, and that actually keeps getting fed every time by those stimuli. The moment you sit in the lecture hall with the [laughing] very boring, eh, teacher in front of you, then you -because then you don't get all those stimuli- you have to- then your brain has to switch on the controlled attention system. It has to do something itself. So you have to make an effort to keep the attention regulation in order. And as an ADHDer you already feel like bzzzzz. Like "before I know it I'm gone, and- or I'm not there, or-". Well, you have different forms of that, one will move around a lot more and [pause] to actually keep that arousal level up, so he/she will present stimuli to [pause], [chuckle] we'll say, and you have the dreamers who...
- I: [Interviewer points to himself]
- G: Oh, you're not there anymore [laughs]. You just don't get it anymore
- I: I- I-
- G: You're somewhere else
- I: Um, um, nice example right now: I'm noticing that if I don't keep looking at you constantly, then I start looking at my recording software to see if everything is going well, and then I don't follow what you're saying anymore. [chuckle]
- G: And what you're doing now is taxing your working memory.
- I: Yes
- G: And- and- and now we're getting to a point where I might be able to put you on track, because this is what teachers should be observing with ADHDers. That they are very prone to seeking stimuli,
- I: Mhm
- G: and that, the moment you do that, um, um, um, um, that they, um, with that, um, actually turn on that stimulus-driven attention system, but that that's not the stim- the system that allows you to learn and allows you to remember, what I just said.
- I: Mhm
- G: And, um, [pause], you're going to- What you- What you gave yourself a hard time with is that you, um, actually make a kind of double-task by looking at something somewhere else for a while and meanwhile, uh, yes, you also have to follow me. That's fine if the

two things are stimulating and you don't really have to remember, but the moment that that becomes a very difficult task, namely really following me and really understanding what I am saying, then you have a problem, and you make it even more difficult for yourself.

I: Yes.

G: Then you already have it. While you think you're doing something good because you're encouraging yourself to keep your attention.

I: So you're- Long story short you're actually just constantly looking for that dopamine kick?

G: Yes.

I: Actually.

G: Yes.

I: And-that-that- Yes that- That's pretty much-

G: You recognize that, probably.

I: I do indeed recognize that very much, that's also pretty much what I- what I've heard and read, uh, about the whole- uhm, about what's actually behind it. I: Yeah. So that-that-. Yes. I'm familiar-

G: And that makes that- that- Look, um, I-if we were to put a kind of Jochem Myjer in front of the group, then- that helps reasonably, but that's also going to fade out again, so there should be stronger and stronger stimuli then-

I: Funnily enough, by the way, also an ADHDer [chuckle].

G: [Yes, exactly! laughs] That's not for nothing! laughing]

But I think that this train of thought of "how does that work with the dopamine?", um, "what do you need to be concentrated," um, um, well "in class?" -because that's what teachers have to deal with- and, um, what do you need to be aware of then as a teacher? And then the question for a moment is "what should you do?" Um. You actually have to, um, I think, as a teacher, administer enough stimulus, um, to- to- set something in motion with ADHDers, but you have to- um, you have to draw their attention from that stimulus and try to do interesting things and be busy, much more activating learning, I think, you can get ADHDers a lot further with that than you can with just standing there and lecturing, for example.

I: Yes.

G: I think it is. Look, I can really talk about this for hours [laughing] that's really not that hard. Um. I also teach a lot. Um. What- What I think is right is that I send you that eBook.

I: Okay.

- G: And that you take a look of "well"-. In itself, it's fun- fairly fun to read, um, so it's kind of in a light-hearted way, in a conversational way, brought, um, to a colleague who thinks they know it all but maybe they don't, or, yeah, something like that.
- I: Mhm
- G: That's kind of how they drew it up together actually. Um. And I think of, well, probably the best thing is if you do that once and then start thinking of if you know this now, of how the brain works, um [pause], in- in that attention regulation, um, what- what could you think of what a teacher could do to get a- a- a student -because that's where you want to go- from maybe that stimulus-driven attention to that controlled attention. Because that's the attention system that we need to learn something.
- I: Yes.
- G: [pause]. So. I: Yeah. You know, I think you have a very nice thesis topic, but answer is not so easy-
- I: It's not an easy one
- G: It's not that easy.
- I: I knew that the moment I started it, that- um, it's- um, yeah. [stutter] What I said, my main motivation behind it is the fact that I think it's not taken into account enough, with such a common disorder,
- G: Yes.
- I: And, um, just to quote a, um, [pause] a publisher that I've talked to about this, that's deadly. That can- Uh. To have a child just solve that by himself, without- without guidance from a teacher, without adequate guidance, can- is deadly. That can cause someone to fall behind very badly
- G: Because you see it, slipping, going away,
- I: Yes
- G: That you have a great chance of dropping out and, um, underachieving
- I: Underachievement, study delay....
- G: Yes! Yes, and, uhm. So I- i- Yes I think you're absolutely right and, uhm [pause] the m- Yes the difficulty- Yes, um, no that's not actually a difficulty. I do think it's a nice endeavor to sort of set up advice maybe, because I think you have to be careful not to make it too big, because of course this is what we've actually been working on for a long time. Although I have to say, in the time-
- I: Smarter people than i- Smarter people than me have, um, probably tried to figure this out before.
- G: No! No, no, I'm not saying that. chuckle] I'm saying- What I'm saying is, is that, um, [pause], well- what I- what I like about what you're doing- Look there's an awful lot of

research on ADHD and all kinds of things, but you very much want to bring it to teacher practice.

[Part of this interview contained no relevant discussion. Transcription resumes at 14:34]

G: But I think, if I had to give a very short answer to that is that you should, um, actually try, or be aware, that, um, ADHDers lean incredibly on their stimulus-driven attention systems,

I: Mhm

G: because that's also actually what they teach their brain the most, um, and that what- what's difficult you also activate less, and the brain will also exhibit less, so you make- That becomes more and more difficult as you get older, um, because you have to use it- For your brain, "use it or lose it," so if you don't use it you also lose it at some point and it becomes more and more difficult. So I think the strength of ADHDers, which is to be very much on that stimulus, um, is that you have to use it to engage the controlled attention system, um, and- and- and- to get it. And that's- that's not easy, but I do think of when you [pause] think, as a teacher, about of "I've got ADHDers here and I've got this material to bring, how am I going to approach it, how am I going to bring it in such a way that I get dei ADHDers there. And I think, and this is called in educational science, the Activating Didactics is the best method for that and you could get some things out of that that could apply very specifically to ADHDers, um,

I: Yes.

G: But the point is that you have to be able to engage and you have to be able to activate. And that means that you have the processing of material, and the learning of all kinds of material usually through the activating or the something-else-else-else, much better learning something than telling it like it is.

I: Yes. [pause] That's a whole bunch of information that I could pretty much use, so that's, um.

G: [laughs] Sorry!

I: Another reason I'm recording this! [laughs]

G: Yeah.

I: No, that's a lot of information that- [stutter] that I can work with, absolutely.

[Rest of the interview contained no relevant information. Transcript ends here]

Appendix C

Original ADHD-School-Expectation survey items and answers, in German and English, as provided by Dort

Sheet 2 and 3, respectively “Einstellung – attitude” and “Interventionen – Interventions” were omitted from this Appendix as they were not used for this study.

ASE (ADHS-Schul-Erwartungsfragebogen/ADHD-school-expectation)				
Wissen/knowledge				
	Auswertung	Evaluation		
	Die visuelle Analogskala (VAS) sollte in 12 Bereiche unterteilt sein. Eine korrekte Antwort im ersten Sechstel der VAS (für korrekt falsche Antworten: Bereich 1 & 2; für korrekt richtige Antworten: Bereich 11 & 12) wird mit einem Punkt bewertet. Insgesamt können 24 Punkte erzielt werden.	The visual analogue scale (VAS) should be subdivided into 12 sections. A correct answer within the first sixth (<i>for correct false answers: section 1 & 2; for correct true answers: section 11 & 12</i>) of the VAS is granted one knowledge point. In total 24 knowledge points can be earned.		
	Instruktion	Instruction		
	Bitte geben Sie an, ob die folgenden Aussagen Ihrer Meinung nach eher richtig oder eher falsch sind. Kreuzen Sie dazu bitte die Stelle der Skala an, die Ihrer Meinung nach am besten passt.	Please declare whether the following statements are rather true or false according to your opinion. Mark therefor the scale at the position that fits best according to your opinion		
			falsch/	richtig/
Item	German	English	false	true
1	Zur Abklärung einer ADHS sind viele diagnostische Quellen notwendig	For the clarification of ADHD, many diagnostic sources are necessary.	0	1
2	Schülerinnen und Schüler mit ADHS haben Schwierigkeiten ruhig sitzen zu bleiben	Pupils with ADHD have difficulties staying seated quietly.	0	1
3	Zu hoher Medienkonsum & damit einhergehende Reizüberflutung ist eine Ursache für ADHS	Too much media consumption, as a consequence thereof sensory overload, are causes of ADHD.	1	0
4	Schülerinnen und Schüler mit ADHS platzen mit Antworten heraus	Pupils with ADHD blurt out with answers.	0	1
5	Eine alleinige medikamentöse Behandlung ist bei der Behandlung von ADHS ausreichend	A solely drug treatment is sufficient in the treatment of ADHD.	1	0

6	Schülerinnen und Schüler mit ADHS sind aggressiv	Pupils with ADHD are aggressive.	1	0
7	ADHS ist zu einem großen Anteil erblich	ADHD can be inherited to a large extent.	0	1
8	Für die Vergabe einer ADHS-Diagnose gibt es weltweit festgelegte Kriterien	For the assignment of the ADHD diagnosis, there are globally determined criteria.	0	1
9	Bewegungsmangel ist keine Ursache für ADHS	Lack of exercise is no cause of ADHD.	0	1
10	Es gibt wirksame spezifischen ADHS-Interventionen für den Unterricht	There are effective ADHD specific interventions for school lessons.	0	1
11	Schülerinnen und Schüler mit ADHS zeigen alle die gleichen Symptome	Pupils with ADHD show all the same symptoms.	1	0
12	Psychotherapie ist wirksamer, wenn Eltern und Lehrer mitarbeiten	Psychotherapy is more effective if parents and teachers collaborate.	0	1
13	Die ADHS Behandlung ist in der Regel erfolgreich	The therapy of ADHD is normally successful.	0	1
14	ADHS wird bei Jungs häufiger diagnostiziert als bei Mädchen	Boys are more often diagnosed with ADHD than girls.	0	1
15	Die Symptomatik einer/eines Schülerin/Schülers mit ADHS verändert sich nicht mit zunehmendem Alter	The symptoms of a pupil with ADHD changes with increasing age.	1	0
16	Schülerinnen und Schüler mit ADHS reagieren anders auf Belohnungen als Schülerinnen und Schüler ohne ADHS	Pupils with ADHD respond differently to reward than pupils without ADHD.	0	1
17	Falsche Ernährung löst ADHS aus	False diet causes ADHD.	1	0
18	Ein einzelner Termin bei einem Psychologen/Arzt reicht aus, um das Vorliegen einer ADHS zu überprüfen	One single appointment at a psychologist/doctor is sufficient to examine the presence of ADHD.	1	0
19	Die Rate an Schülerinnen und Schülern mit ADHS ist in den letzten Jahren spürbar gestiegen	The rate of pupils with ADHD has notably increased in the last years.	1	0
20	Schüler mit ADHS haben Schwierigkeiten Aufgaben zu Ende zu bringen	Pupils with ADHD have difficulties in finishing tasks.	0	1
21	Medikamente können bei starker ADHS-Ausprägung notwendig sein	Drugs can be necessary if the ADHD symptoms are severe.	0	1
22	Es gibt neurobiologische Ursachen für ADHS	There are neurobiological causes of ADHD.	0	1
23	Etwa 3-4 Schüler/innen pro Klasse sind von ADHS betroffen	Approximately 3-4 pupils per class* are affected by ADHD.	1	0
24	Falsche Erziehung führt zu ADHS	False parenting causes ADHD.	1	0

Appendix D

Tim van Leeuwen Thesis Survey

Start of Block: Introduction

Intro: Thank you for taking the time to fill in this survey.

This survey is entirely in English, but some Dutch terms may be used as the subject of this thesis is the Dutch educational system specifically. Note that all of the questions pertain to your activities as an English teacher. If you teach other additional subjects, please restrict answers to your role as an English teacher and English classes only. Please answer all questions truthfully or to the best of your knowledge. All of your answers will be processed in a way that will protect your anonymity and privacy in compliance with the GDPR (also known as AVG in Dutch).

In order to avoid bias, I will not explain the purpose of this survey. For those interested, an explanation of the purpose of this survey and the BA thesis it is a part of can be found at the very end of the survey. You are kindly requested to not share that information with anyone who might still fill in this survey as to not influence them.

End of Block: Introduction

Start of Block: 1. Preliminary information

1.1 What is your age?

25 or younger (1)

26-35 (2)

36-45 (3)

46-55 (4)

56 or older (5)

1.2 For how long have you been an English teacher?

Less than 2 years (1)

2-5 years (2)

6-10 years (3)

11-15 years (4)

16-20 years (5)

More than 20 years (6)

1.3 Do you teach at a regular secondary school, or does the school you teach at have an alternative teaching philosophy (such as Montessori, Vernieuwend Onderwijs, etc.)?

- I teach at a regular secondary school (1)
- I teach at a school with an alternative teaching philosophy (2)
-

1.4 What level(s) of secondary school have you taught in the past 4 years?

- VMBO (1)
- HAVO (2)
- VWO (3)
-

Display This Question:

If What level(s) of secondary school have you taught in the past 4 years? = VMBO

1.4.1 What paths within VMBO have you taught in the past 4 years?

- Theoretische Leerweg (a.k.a. TL or VMBO-t) (1)
- Gemengde Leerweg (a.k.a. GT, TL or VMBO-g) (2)
- Kaderberoepsgerichte Leerweg (a.k.a. KB, BK, or VMBO-kader) (3)
- Basisberoepsgerichte Leerweg (a.k.a. BB or VMBO-basis) (4)
-

Display This Question:

If What level(s) of secondary school have you taught in the past 4 years? = VWO

1.4.2 Have you taught any specialized path within VWO within the past 4 years?

Yes, Gymnasium (1)

Yes, Technasium (2)

Yes, other (3)

No (4)

1.5 What grades have you taught in the past four years?

Year 1: 12 - 13 y/o (1)

Year 2: 13 - 14 y/o (2)

Year 3: 14 - 15 y/o (3)

Year 4: 15 - 16 y/o (4)

Display This Choice:

If What level(s) of secondary school have you taught in the past 4 years? = VWO

Or What level(s) of secondary school have you taught in the past 4 years? = HAVO

Year 5: 16 - 17 y/o (5)

Display This Choice:

If What level(s) of secondary school have you taught in the past 4 years? = VWO

Year 6: 17 - 18 y/o (6)

End of Block: 1. Preliminary information

Start of Block: 2. ASE

ASE Intro: This study deals with the relation between ADHD and language learning, specifically English as Foreign Language, or EFL. The following questions aim to gauge your familiarity with the symptoms of ADHD. Each question is a true/false statement about ADHD and its symptoms. If you are entirely unsure whether a statement is true or false, you may answer "Unsure". Please take your time on each question.

ASE Please answer the following statements to your best knowledge. Please note that "Unsure" is on the far left.

Item #	Question	Unsure (1)	False (2)	True (3)
1	Students with ADHD have difficulty staying seated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Sensory overload caused by consumption of too much media is a cause of ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	Students with ADHD tend to blurt out answers without being asked	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	ADHD can be treated with medication alone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	Children with ADHD are aggressive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	ADHD is largely passed on genetically	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	Diagnosis of ADHD is done on the basis of globally determined criteria	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	Lack of exercise is no cause of ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	Children with ADHD all show the same symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	Psychotherapy is more effective if parents and teachers also contribute	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	Treatment of ADHD is usually successful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12	Boys are diagnosed with ADHD more often than girls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	The symptoms of a student with ADHD change as they get older	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	Students with ADHD respond differently to reward than students without ADHD do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	ADHD can be caused by an unhealthy diet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	A single appointment at a psychologist or psychiatrist is enough to determine ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	The amount of people with ADHD has increased in recent years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	Students with ADHD have difficulty finishing tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	If symptoms are severe, medication can be absolutely necessary for the treatment of ADHD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	ADHD has neurobiological causes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21	ADHD is caused by bad parenting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: 2. ASE - Knowledge

Start of Block: 3. Preparedness

3 - Intro The following questions are about how you as a teacher deal with children with learning difficulties and ADHD in the classroom. You will be presented with several questions that will ask you to answer on a scale from "Strongly disagree" through "Strongly agree". For these questions, there is no "unsure" option.

3.1 Have you had any students which have been diagnosed with ADHD in the past 4 years. You may also answer with "yes" if the diagnosis was made after you stopped teaching the student

- Yes, several (1)
 - Yes, one or two (2)
 - No, not to my knowledge (3)
-

3.2 Have you had any students in the past 4 years that were *not* diagnosed with ADHD to your knowledge, but of whom you have a strong suspicion they may have ADHD?

- Yes, several (1)
 - Yes, one or two (2)
 - No (3)
-

3.3 Please answer each statement to the best of your ability.

(Participants were asked to give an answer from 1 through 6, where 1 is “Strongly Disagree” and 6 is “Strongly Agree”)

Item #	Question
1	I am familiar with common learning difficulties
2	I am familiar with ADHD and how to recognize it
3	Teacher training has adequately prepared me to deal with children with learning difficulties
4	Teacher training has adequately prepared me to deal with children with ADHD.
5	I teach in a way that engages both students with and without ADHD.
6	When I know a student has ADHD, I know how to adapt my teaching method to accommodate for that student
7	The school textbooks I use in my classroom provides the flexibility I require to deal with students with learning difficulties and ADHD.
8	I find it difficult to manage my classroom when there is a student with ADHD in it
9	Students with ADHD are annoying
10	I am a good teacher

Display This Question:

*If Have you had any students in the past 4 years that were *not* diagnosed with ADHD to your knowled... = Yes, several*

*Or Have you had any students in the past 4 years that were *not* diagnosed with ADHD to your knowled... = Yes, one or two*

3.2.1 Earlier in this survey, you answered that you have had students of whom you had a strong suspicion they may have ADHD, but who were not diagnosed. Have you taken action in any way in order to support this or these student(s) and if yes, what actions have you taken.

No (1)

Yes, (2) _____

End of Block: 3. Preparedness

Start of Block: 4. Closing Section and Consent

4 – Intro: Thank you for taking the time to fill in this survey. Your answer will lead to greater accuracy and a clearer picture of the current situation.

The research question of the BA thesis this paper is "What methods are currently employed in Dutch secondary education to assist the learning of students with ADHD when learning English?". Evidence suggests that on average, considering the average class with around 25 students, each class has at least one student, likely more, with ADHD that will be diagnosed before they are 17. In many cases, ADHD is not as obvious as many might think. However, the current Dutch educational system has no obvious measures in place to assist these students despite their prevalence.

The ultimate goal of this thesis is to provide teachers with scientifically argued guidelines and suggestions to assist them in understanding and teaching children with ADHD.

4.1 Can I contact you directly if I have further questions regarding your answers in this survey? You will only be contacted for follow-up on open questions, not on the True/False or Agree/Disagree questions.

Yes (1)

No (2)

4.2 Would you like a copy of this BA thesis when it is finished and approved?

Yes (1)

No (2)

Display This Question:

If Can I contact you directly if I have further questions regarding your answers in this survey? You... = Yes

Or Would you like a copy of this BA thesis when it is finished and approved? = Yes

4.2.1 Please enter the e-mail address I can use to contact you and/or send the copy of the thesis to below. In accordance with the GDPR, your e-mail address will not be shared with anyone. All contact information provided in this survey will be deleted at most one year after this study's completion (which is projected to be February 2021).

4.3 Do you have any further comments on this survey?

Consent: Finally, In order to complete this survey, we require your explicit consent to collect and analyze your information.

I agree that research data gathered for the study may be published or made available provided my name or other identifying information is not used. I understand that the research data, without any personal information that could identify me (not linked to me) may be shared with others.

End of Block: 4. Closing Section and Consent
