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Understanding and Identifying Specific Learning Difficulties: Dyslexia, Autism Spectrum, and Attention Deficit/Hyperactivity in the Adult ESL/EFL Classroom

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University of San Francisco

Understanding and Identifying Specific Learning Difficulties: Dyslexia, Autism Spectrum, and Attention Deficit/Hyperactivity in the Adult ESL/EFL Classroom

A Field Project Presented to
The Faculty of the School of Education
International and Multicultural Education Department

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Teaching English To Speakers of Other Languages

By Kristen Kingfield Kearns Spring 2023

Understanding and Identifying Specific Learning Difficulties: Dyslexia, Autism Spectrum, and Attention Deficit/Hyperactivity in the Adult ESL/EFL Classroom

In Partial Fulfillment of the Requirements for the Degree

MASTER OF ARTS

in

TEACHING ENGLISH TO SPEAKERS OF OTHER LANGUAGES

by Kristen Kingfield Kearns Spring 2023

UNIVERSITY OF SAN FRANCISCO

Under the guidance and approval of the committee, and approval by all the members, this field project has been accepted in partial fulfillment of the requirements for the degree.

Approved:	
Luz Navarrette García	May 9, 2023
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Chairperson	

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ABSTRACT

Specific learning difficulties (SLDs), including dyslexia, autism spectrum disorders, and attention deficit/hyperactivity disorders, are significant factors that influence the way and rate at which students learn English as an additional language. However, few Teaching English to Speakers of Other Languages (TESOL) training programs address the cognitive and behavioral strengths and challenges these conditions carry for adult learners, in part due to concerns about bias in the over- and under- identification of learning disabilities among K-12 English language learners. Informed by Critical Disability Theory, and framed within a realistic discussion of the obstacles that remain in identifying and researching the parallel adult population and their learning needs, this thesis argues that all students in an English as a Second/Additional Language and English as a Foreign Language (ESL/EFL) classrooms benefit when SLDs are more readily recognized and teachers have a repertoire of research-backed, inclusive teaching strategies to draw on. The field project responds to this need for training with a teacher guidebook that explains U.S. legal requirements concerning students with disabilities, the effects of SLDs on second language acquisition, and the uses and limitations of current screening tools for SLDs in adult ESL/EFL populations. The guidebook also provides an annotated bibliography of effective adaptive and inclusive teaching strategies. Informed teachers will be better able to understand student needs, set realistic program and individual goals, participate in holistic identification processes, adopt effective teaching strategies, and serve as advocates for this understudied group of learners.

CHAPTER I

INTRODUCTION

Statement of the Problem

It is not difficult to see why it is so hard to distinguish the common struggles that come with learning a new language from the particular complications that arise when a student has a specific learning difficulty (SLD)¹ such as dyslexia, autism spectrum disorders (ASD), or attention deficit hyperactivity disorder (ADD/ADHD). Many of the manifestations overlap, even if the causes are quite different. For example, difficulty in understanding tone of voice, appropriate personal space, and body language can be typical pragmatic challenges in the adjustment to a new culture, yet these aspects of interpersonal communication can also feel mysteriously complex to a native speaker on the autism spectrum. Difficulty with phonological awareness, spelling, verbal memory, and a slower than average reading speed would not be uncommon in the English language classroom, yet they also can be indicators of dyslexia (Parrish, 2019). Students may respond to the enormous cognitive load of learning a new language with restlessness, frustration, or inability to direct focus to the most relevant input and may have difficulty transferring new vocabulary to long-term memory (Parrish, 2019). These behaviors can also characterize learners with ADD/ADHD.

¹ In the use of the term "specific learning difficulty (SLD)" I am following the reasoning of Judit Kormos (Kormos, 2017). She explains that the use of the word "disorder" or "disability" identifies the student's differing cognitive processes as a deficit in comparison to others, the prevailing medical model. This terminology has been critiqued for not accounting for the socially constructed aspect - differences only become disabilities when they interact in a mismatched way with environmental or institutional factors. The term "difference" and the more recent "neurodiversity", while appealing, do not fully express the reality that students with the differences discussed in this thesis do face challenges with certain learning tasks. The other advantage of the term difficulty is that it is able to encompass both those differences which have been classified as disabilities (dyslexia and dyscalculia) and those that traditionally have been labeled behavioral/psychiatric disorders (ASD and ADD/ADHD), acknowledging that both groups of differences have significant implications for learning processes.

Indeed, most new English as a Second Language/English as a Foreign Language (ESL/EFL) students will show some of these characteristics, especially if they have lack of experience with formal education, low literacy in their first language, limited exposure to English outside the classroom, or prior emotional or physical trauma (Schwarz, 2009; Simons Loustalet, 1999 in Parrish, 2019). Yet, when the difficulties persist over time, there may be good reason to consider whether they stem from SLDs and how to best address them.

How can teachers tell the prevalence of SLDs in their ESL/EFL classrooms? Significant research has begun to address the two-sided issue of over- and under-diagnosis of specific learning difficulties in the English language learner (ELL) population in the K-12 classroom (Migliarini & Stinson, 2021; Zetlin et al., 2011). In that setting, some English language learners (ELLs) are being misdiagnosed as having a SLD because of language limitations or a delay in language acquisition and a corresponding lack of cultural sensitivity in the professionals who are referring the ELL students for diagnosis (Migliarini & Stinson, 2021). This results in the ELLs being tracked into Special Education classes, which may ultimately limit their opportunity to learn both the language and grade-level content and result in social stigmatization (Richardson, 2008). However, on the flip side, some ELL students who have SLDs are not being diagnosed, and therefore not receiving the services they need, because their lack of achievement or progress was being accredited to language issues alone (Dickerson & Dickerson, 2020). Problems exist at all levels: identification/referral, evaluation, and placement/support. Even credentialed K-12 Special Education and English as a Second or Additional Language (ESL) teachers often lack training in distinguishing between a normal language delay and a disability which affects language (Zetlin et al., 2011). The lack of training and information are similar in post-secondary education (Mull et al., 2001), the EFL classroom (Fišer & Kałdonek-Crnjaković, 2022), and the

adult basic education (ABE) classroom (Corley & Taymans, 2002; Polson & White, 2001; Reynolds et al., 2012; Ross-Gordon, 2001).

The situation for adult learners is more opaque, since most research on adults has either been focused on post-secondary students with SLDs, with ELLs excluded because of the complicating factors they introduce into the study design, or on ELLs, with students with diagnosed SLDs excluded, again because they introduce an additional confounding variable to the study (Cline, 2000). Many tests designed to identify SLDs in the K-12 setting are not appropriate for adults and are normed using native English speakers (Parrish, 2019).

On the surface, it may seem that students with SLDs would be less common in the adult language classroom. For example, since a waiver of the foreign language requirement is one of the most common accommodations provided to students with dyslexia or ADD/ADHD in the post-secondary setting (Mull et al., 2001), it might seem like adults with these SLDs would find acquiring English as an additional language out of reach. But, for those in adult basic education ESL classes, a second or additional language is usually not a luxury, but an economic necessity, and the requirement, practically speaking, cannot be waived. The perception may also exist that adults with autism would be largely absent from ESL/EFL classrooms because media representation tends to show them inhabiting the extremes of the linguistic spectrum, either being non- or minimally verbal or polyglots, with extraordinary aptitude for language absorption. However, as Digard, et. al. (2020) show, there is a rich diversity of language profiles in the autistic community, differing in the number of languages known, the depth of knowledge of those languages, and the age at which the additional languages are being acquired, resulting in a real need for more research into the experiences of adults with autism learning a second language later in life.

Prevalence of SLD in Adult ESL/EFL Classrooms

For a variety of reasons to be discussed, it is difficult to get accurate figures for the percentage of students in adult ESL/EFL classrooms with SLD. The prevalence of ASD in youth is currently given as 1 in 59, with rates of some symptoms of dyslexia in youth as high as 15-20% (Shea et al., 2018). Since both these conditions persist through adulthood, it seems reasonable to take these numbers as a starting estimate for the adult populations as well. Despite the common misperception that ADHD is only a childhood disorder, studies show that it also persists into adulthood in 60% of cases, so that a recent estimate lists 5% of adults in US as having ADHD, with a higher percentage in males (Hsin-Yi Liang & Kelsen, 2017).

However, a large scale comparison of school districts in Texas by Dickerson & Dickerson (2020) indicates that the prevalence of SLDs (specifically ASD) is likely being underreported in children from Spanish and other non-English speaking homes because of language barriers involved in the identification of ASD in children of immigrants. Others also indicate that ESL students are less likely to be identified as having a SLD, not necessarily because the incidence rate is lower in that population, but because their home language may not have the terminology to describe learning disabilities and their country may not have offered disability support services or testing, or may have cultural stigmas associated with diagnosis (Patterson, 2008). While school-age data cannot be generalized to adult populations, again it seems reasonable to assume that some degree of under-reporting of SLDs occurs in adult ESL/EFL classrooms for the same reasons as well.

The diagnostic process itself can lead to under-diagnosis of ESL students because some definitions of SLDs (e.g., exclusionary definitions of dyslexia) require proof that the academic problems are not being caused by lower IQ or socio-cultural differences. IQ scores tend to come

out lower for students when they are tested in their L2 (as compared to when they are tested in their L1), thus it becomes difficult to show a discrepancy between performance on the SLD testing instrument and the "expected" performance based on IQ for ESL students because their IQ is being invalidly reported too low (Cline, 2000).

A review of twenty-six articles published between 1985-2000 gave prevalence numbers for post-secondary students self-reporting disabilities as 6-9%, with SLDs accounting for 29-35% of those disabilities, with ASD excluded from the count (Mull et al., 2001). This translates to 2-4% of post-secondary students having SLDs (dyslexia, dyscalculia, ADD/ADHD), a number that would be a very low estimate for adult classrooms since it only includes those students who self-report and document an official clinical diagnosis. A more accurate figure for the adult basic education population comes from the National Assessment of Adult Literacy (NAAL), which reported incidence rates of SLDs at around 30%; with only 6% self-reporting. This report also found self-reporting percentages to be higher in the 16-25 year-old, younger age groups (Patterson, 2008). This is likely because older students went through high school before the passage of significant legislation requiring public K-12 schools to provide accommodations and non-discriminatory policies for students with SLDs. Other studies reported in the literature cite numbers for adults with SLDs in Adult Basic Education (ABE) programs in the range of 10-50% (Patterson, 2008). Adult Basic Education programs are free or low cost public programs for adults age 18 and over offering instruction below the 9th grade level to develop the reading, writing, and computational skills needed to work towards high school diploma equivalency, enter vocational training programs, learn English, or prepare for citizenship. ABE programs tend to serve a large percentage of immigrant and ESL students, so they are a reasonable proxy for statistics in ESL populations. A four-year study of the screening processes for ABE programs in

Ohio gave an even wider possible range for SLDs, estimating between 5-80% and stating that less than 1% of students with suspected SLDs are receiving a clinical diagnosis while in the program (Reynolds et al., 2012). Even as education about SLDs and screening for them increased in the program, the overall number of students obtaining a diagnosis stayed very low since the cost of diagnostic assessment (\$500-\$2000+) is a prohibitive barrier for most ABE students.

Table 1Summary of Studies of Prevalence Rates of SLDs

Source	Prevalence	Population	Notes
Reynolds (2012)	11-14%	ABE students in Ohio, tracked for four years between 2005-8	Numbers are percentage of student who <i>screened</i> positive for SLD, only 0.1% received formal diagnoses
Reynolds (2012)	5-80%	ABE students in various types of programs and locations, with higher numbers in lower literacy class and/or urban locations	Range based on review of literature including data from (Mellard, 1998; Ross & Smith, 1990; White & Polson, 1999)
Mellard (2007) as cited in (Patterson, 2008)	29%	Kansas adult literacy program participants	
2006 National Assessment of Adult Literacy study cited in (Patterson, 2008)	30%	Adult literacy program students, nationwide study	Higher percentages found in lower level literacy classes and younger age groups, Self-reporting, documented prevalence: 6%
Corley & Taymans (2002)	10-50%	Figures based on 1993 nationwide survey of ABE program directors' estimates	
Polson & White (2001)	33%	ABE students - national survey of teacher estimates	Percentages higher in urban settings; less than 7% documented; includes all disabilities but learning disabilities were most common
Henderson (1998) as cited in (Mull et. al., 2001)	2-4 %	Post-secondary students, national study	Self-reported, documented only
Vogel (1998) as cited in (Mull et. al, 2001)	0.5-10%	Post-secondary students, sample of 502 U.S. institutions randomly chosen from each Carnegie classification	Self-reported, documented only; high variation by type of institution and degrees offered

To summarize, based on this body of literature, it seems possible to draw a few conclusions. First, there is no generally accepted consensus number for prevalence, and new studies are desperately needed, since many of the sources cited base their percentages on studies that are decades old. There are significant practical and theoretical obstacles to accurate diagnosis of SLDs in the adult ESL/EFL population, and we should assume that the numbers of adult students with SLDs in these classrooms is quite a bit higher than the number of students who will self-report and be able to document a SLD diagnosis. The numbers indicate that reasonable estimates could range from 10% to as high as 80%, where the higher end numbers are more likely to be found in lower level programs in inner cities and urban locations (Polson & White, 2001). The bottom line is that with or without a diagnosis, SLDs are affecting the learning processes and outcomes of a significant number of students in ESL/EFL classrooms. Teachers should be taking this population of students into consideration even if exact numbers remain uncertain and problematic.

Despite this need for action, few ESL/EFL teacher training programs provide coursework or support on how to recognize SLDs or how to best support those students in the classroom (Mull et al., 2001; Patterson, 2008; Polson & White, 2001). As a result, teachers often feel low self-efficacy in teaching these students, even when they, mostly through trial and error, are using methods that have been shown to be effective (Fišer & Kałdonek-Crnjaković, 2022; Nijakowska, 2022). A comprehensive review by Mull et. al. (2001) found that faculty are generally positive about and willing to support students with SLDs, but want more information about the accommodations that are available, the legal requirements, the students' responsibilities, the referral process, the nature of SLDs, how SLDs affect the assessment process in class, intervention strategies for emotional and behavioral needs, interventions strategies for cognitive

needs/delivery of material, counseling/consultation skills, and program evaluation. This area is ripe for additional teacher development.

Purpose of the Project

The goal of this field project is to provide adult ESL/EFL teachers with a handbook that addresses some of the above desires for additional training. The handbook includes the following:

- (1) A brief explanation of the three main legislative provisions (IDEA, Section 504 of the Rehabilitation Act, and the ADA) which set standards for private and public education programs in non-discrimination and accommodation practices for ESL/EFL students with diagnosed SLDs in the United States
- (2) Non-technical descriptions of the characteristics of the SLDs and how they affect language processing and learning (dyslexia, ASD, and ADD/ADHD)
- (3) Explanation of the process of and obstacles to identification, including examples of screening tools to help with informal assessment, since formal assessment may be inaccessible for a variety of reasons
- (4) A bibliography of resources indexed by SLD with information about teaching strategies and accommodations

Parts (2) and (3) are not intended to train teachers to conduct diagnostic assessments themselves, but rather to give them better insight into the types of activities that create challenges or discomfort for their students. They may assist in identifying students for referrals, but more

importantly, they can be used to direct teachers towards (1) the types of questions they can ask to better understand student challenges and (2) the available resources which offer strategies to support learners with SLDs, strategies that will likely be beneficial not only for the student in question, but for the whole class.

Theoretical Framework

The theoretical framework for this project comes from Critical Disability Theory, also termed DisCrit, and inclusive classroom pedagogy. A number of branches of critical theory have arisen in recent years, all concerned with maximizing human freedom and ending the domination of some groups over others based on socially constructed aspects of identity like race, gender, sexuality, and ethnicity. Critical theory aims to provide an explanation for the problem of inequality, identify the actors involved in making change, and provide norms for criticism and practical goals to recognize when transformation has successfully taken place. Hosking (2008) lists seven elements of Critical Disability Theory: the social model of disability, multidimensionality, valuing diversity, rights, voices of disability, language, and transformative politics.

Critical Disability Theory stresses the importance of the terms (language) used, and the term chosen at the beginning of this thesis, Specific Learning Difficulties (SLD) reflects the Critical Disability Theory ideological tenets that (1) disability has a socially constructed component and is not the unavoidable result of difference, (2) disability is must be understood as due to the interrelationship between difference, individual response to difference, and the social environment, and (3) the academic disadvantage experienced by people with learning differences is caused by the physical, institutional and attitudinal environment which does not

fully meet the needs of people who do not match the social expectation of normal linguistic learning processes (Hosking, 2008).

Drawing on the work of Crenshaw (2021) on intersectionality, Critical Disability Theory is also concerned with multidimensionality: issues at the intersection of disability with class, gender, race, sexual orientation, ethnicity and other socially constructed categories. Thus, it should pair naturally with the social justice concerns of ESL educators who often become advocates for populations marginalized by language, socio-economic conditions, citizenship status, and race. However, the TESOL field has been criticized, particularly in K-12 classrooms for not taking this perspective seriously enough to prevent ableism and racism from defining normal progress and behavior (Migliarini & Stinson, 2021).

The goal is not simply to create solidarity with multiply marginalized students, but to initiate and drive a response which takes full account of the disability so that adjustments can be made to eliminate the obstacles which stand in the way of welcoming the student and enabling full participation in the classroom. That is to say, learning differences cannot just be ignored in the name of treating everyone equally. Specific teaching strategies need to be put into place to reach equity, full integration into the learning community.

The teaching strategies advocated in this project are grounded in inclusive classroom pedagogy (Craven et al., 2015), the belief that curricula and the classroom environment should be designed to improve the education of **all** students by focusing on students' strengths and not their limitations, creating high student self-concepts, and investing in sufficient supportive, research based, innovative resources to make this possible. Since clinical diagnosis of learning disabilities in the adult ESL classroom is difficult for the reasons discussed above, teachers will most likely not be working with definitive answers about whether their students actually have

dyslexia, ADHD or ASD. Thus, it is necessary to focus on those strategies which benefit students with and without SLDs, both for theoretical, i.e., ethical, and practical reasons.

The Universal Design for Learning (UDL) model, developed by the Center for Applied Special Technology provides one foundation for inclusive pedagogy (CAST, 2018). This will be more fully discussed in Chapter 2, but briefly, it centers on the principles of providing (1) multiple means of engagement (2) multiple means of delivery of content, and (3) multiple means of expression, action, and assessment. It may or may not rely on the use of adaptive technology and also takes the affective experience of the learner into consideration, as well as the transfer of learning to new environments and contexts.

Significance of the Project

This project is intended to have an impact on multiple levels. First and foremost, when teachers are aware of the challenges their students face and the resources available to make learning more accessible, ESL/EFL students with SLDs have a better chance of reaching their language and academic goals. When compared with the general population, adults with any type of disability or illness are more likely to have literacy rates in the lowest cohort as measured on tests given by the National Adult Literacy Study (Corley & Taymans, 2002), so it is crucial to have extra support in place to reduce the performance gap. Despite the challenges, many students with SLDs will work through their difficulties and be ready to transition from ESL and ABE programs into post-secondary education or employment. In these situations, it would be helpful if teachers could identify and refer transitioning students who might qualify for accommodations early in their educational path, educate the students about their rights and how to seek support, and work to change cultural biases against people with disabilities of all kinds (Reynolds et al.,

2012). Then, the students will be better equipped to meet the challenges of their advanced programs and careers. There is some evidence that fostering bilingualism in students with ASD does not impose too high a cognitive load and may instead be beneficial for developing social and communication skills in both languages (Digard et al., 2020) and therefore improve the students' overall happiness and quality of life.

The benefit will not be limited to only the students with SLDs, however. Many of the teaching strategies which help students with SLDs have been shown to also benefit students with and without dyslexia (Yaqoubi et al., 2022), ASD (Mashal & Kasirer, 2011), and ADHD (Hsin-Yi Liang & Kelsen, 2017; Mama & Icht, 2019). Strategies for working with students with SLDs tend to be multisensory, so the teaching practices can appeal to a wide variety of learning preferences in the classroom (Yaqoubi et al., 2022). At times, the presence of students with SLDs in the classroom can be affect the learning dynamic for all students negatively if the student is, for example, inattentive, overly mobile, or impulsive (Kałdonek-Crnjaković, 2020), so if teachers have some training in keeping these students engaged, the whole class benefits.

Teachers generally want to help their students, but they cannot do so effectively and confidently if they do not know or understand the learning processes of the students in their classrooms. Because of the lack of training on SLDs in ESL teacher training programs, educators often have to rely on student observation and student disclosure of previous special education enrollment for information. The students themselves may be good sources of information about what is working and not working for them with their learning difficulties, but they are unlikely to initiate conversations about it (Polson & White, 2001). If teachers have the information about SLD characteristics, they will be in a better position to know which students to approach, what to look for, and what to ask. Training can give teachers a better sense of their own efficacy from the

knowledge that their methods are grounded in data (Fišer & Kałdonek-Crnjaković, 2022; Nijakowska, 2022).

Finally, the project aims to make an impact at the program evaluation level. Teachers who are informed about SLDs and who have a better sense of the number of students in their classes who are affected will be better able to assess the quality of the curricula and support services for this population.

CHAPTER II

REVIEW OF THE LITERATURE

This review of literature supports the claim that adult ESL/EFL students would benefit from increased teacher awareness of specific learning difficulties, including information about the characteristics of these disabilities/disorders, the ways they impact language acquisition, methods of diagnosis/screening, and effective teaching strategies in working with these students. The body of scholarship that justifies this claim includes evidence that (1) students with these learning difficulties are prevalent in adult language programs, (2) these SLDs often create predictable challenges for students, and (3) the challenges can be lessened or overcome with targeted teaching strategies, which most often have a universally positive effect on all students, regardless of whether they have an SLD diagnosis. The prevalence of SLDs was discussed at length in Chapter I, so this review will focus on the impact of each of the SLDs on the language learning process and the evidence that accommodations and teaching strategies can have a positive impact on learning outcomes for each of the SLDs in question: (a) Dyslexia, (b) Autism Spectrum Disorders, and (c) Attention Deficit Hyperactivity Disorder. Critical Disability Theory (also called DisCrit), in combination with the philosophy of inclusive, learner-centered pedagogy, provides a frame for this review, with Universal Design for Learning serving as a model.

Theoretical Framework

The theoretical framework for this project begins in the fundamental idea that education must be learner-centered. As described in Parrish (2019), learner-centered pedagogy is informed by the belief that all students bring background knowledge and life experiences to the classroom

that can be assets for instruction. In learner-centered teaching, the content of instruction and modes of instruction are designed to be relevant to the learner's needs and responsive to their experiences. Learners should be able to make active choices about classroom activities and should be acquiring strategies that will help them long-term in their continuing education inside and outside the classroom. To do these things effectively, teachers will need to be continuously evaluating their own instruction and students' progress to respond to learners' needs and strengths. This process of assessment should offer a variety of ways for learners to demonstrate what they know.

What does this mean for students with SLDs? First, it means helping students take a fresh perspective on their own learning differences, which may have previously been cast as deficiencies. It means not simply ignoring the difficulties students are having and assuming they will clear up with time, because there will be students with SLDs in the classroom, with or without diagnoses. It means that teachers need to educate themselves about the differences, strengths, and challenges they bring, adjusting teaching strategies and modes of assessment to be as responsive as possible to all students' needs.

Closely related to the idea of a learner-centered classroom is the notion of inclusion. The theory of inclusive education rests on the idea that diversity in the classroom is a strength, and that students with a broad spectrum of learning needs can work and learn together effectively in the same setting when the conditions are suitable (Moriña, 2020). While support systems to address learner needs can exist separate from and external to the classroom, this is less than ideal from an inclusion point of view. In the same vein, inclusion does not mean just solving the issue of how to "mainstream" or accommodate students with SLDs. The goal of inclusive education and pedagogy is to transform educational systems, beginning with the learning environment

itself so that all learners can participate, regardless of culture, language, or learning differences. Teachers and learners alike should come to see diversity as "a challenge and enrichment of the learning environment, rather than a problem" (UNESCO, 2008). In the context of this project, this means focusing on teaching strategies that not only support students with SLDs, but are also likely to be beneficial to all students.

Moriña (2020) describes inclusive pedagogy not as being limited to teaching actions, but including attitude, design, and planning as well. In the inclusive classroom, decisions are being made not solely on the basis of teachers' knowledge and competencies, but also as a reflection of their values and beliefs about the inherent worth of including all students by being responsive to their individual differences, in this case, their SLDs.

Critical Disability Theory (Hosking, 2008) is a helpful lens in relating this project to work that is being done in other branches of Critical Theory relating to race, gender, sexuality, and other socially constructed aspects of identity. Critical Disability Theory is explicit about the fact that equity is impossible where inclusion is lacking. That is, inclusion is not simply a pedagogical preference, but a social justice issue that connects to the power dynamics of ableism at work in society as a whole. As mentioned in Chapter I, Critical Disability Theory contains seven elements: the social model of disability, multidimensionality, valuing diversity, rights, voices of disability, language, and transformative politics.

The overlap of some of these elements with the philosophies of learner-centered, inclusive education is clear - both involve valuing diversity and listening to the voices of disability in giving students as active a role as possible in shaping their own learning experience. It is worth unpacking a few of the other elements as well. As mentioned, "language" in this

context is closely related to the social model of disability. Practically speaking, this model informs the choice to use the term "specific learning difficulties" in this thesis.

As the literature review by Mull et al. (2001) points out, there are a variety of commonly used definitions for learning disability (for example, from the U.S. Office of Education, 1977; National Joint Commission on Learning Disabilities, 1981, 90; Association for Children with Learning Disabilities, 1986; Interagency Commission on Learning Disabilities, 1987 cited in Mull et al., 2001). According to Reynolds et al. (2012), drawing on the work of the National Research Center on Disabilities (2007) cited in that study, the core of the idea of specific learning disabilities is that they are (1) specific, that is, related to a *narrow* range of academic activities and outcomes; (2) learning, that is, related to *cognition* processes intrinsic to the individual; and (3) disabilities, that is, characteristics that have a significant effect on the day-to-day activities of the individual. While they may occur in combination with other physically or mentally disabling conditions, such as sensory difficulties, or just with lack of adequate opportunity for education, they are not primarily due to these confounding factors.

The problem with this term, "specific learning disability" and the term "specific learning disorder" used in the DSM-V, is that they reflect medical and deficit-only based models. This biological/psychological approach can be helpful in describing the behavior, cognitive processes, and affective characteristics of the learners, but the type of solutions it leads towards -- diagnose and treat, rehabilitate, or accommodate -- are not necessarily inclusive (Kormos, 2017; Shea et al., 2018).

The social model of disability that Critical Disability Theory advocates for calls for language that reflects a social and political model of the situation, where conditions are disabling because of a mismatch between the individual and an exclusionary environment that results in

power differentials in society. While no term is perfect and acceptable to everyone, in my understanding, the term "specific learning difficulties" (Kormos, 2017) is most successful in capturing the helpful aspects of the medical terms (specific, learning) without denying the social, interactional nature of the problem - it exists in the relation between the learners' strengths and weaknesses and their context, not as a by-product of assumptions about what is "normal." Unlike the terms "learning difference," "learning preference," or "neurodiversity," however, specific learning difficulties carries the demand for a real solution. These are students who bring richness of experience to the classroom and real needs.

Finally, the theoretical work of CAST in developing the Universal Design for Learning (UDL) guidelines (2018) offers helpful criteria for evaluating inclusive strategies and responses in the classroom. The goal of the project was to create a framework for learning experiences that are open to all, but also stimulating for all. They advocate for the idea that educators need to work to transform learning environments, not learners. Finally, they center on the idea that rigorous learning can happen for everyone when environments are consciously designed to reduce barriers to participation. As mentioned in Chapter I, the guidelines have a three-part structure calling for (1) multiple means of engagement, (2) multiple means of delivery of content, and (3) multiple means of expression, action, and assessment. Offering these things may or may not rely on the use of adaptive technology and also should take the affective experience of the learner into consideration, as well as the transfer of learning to new environments and contexts.

While the UDL guidelines are not solely focused on creating inclusive spaces for students with SLDs, many of the concrete suggestions and directives reiterate research-backed practices supported by studies on what works with students with SLDs, for example, minimizing

distractions, using meta-cognitive self-assessment and reflection, offering alternative modes of delivery for auditory and visual information, varying methods of student response, and providing executive function support (CAST, 2018). If the UDL guidelines set the goals, the studies discussed offer evidence for the effectiveness of this approach. When teachers are aware of the challenges and difficulties affecting their students and have information about how to best help the students with SLDs or suspected SLDs, in many cases, the entire class can benefit.

Dyslexia

Of the three SLDs considered in this project, dyslexia is the most researched in the ESL/EFL context. Dyslexia is currently understood to be a learning difficulty that affects the acquisition of word identification caused by problems in phonological processing (Elbro et al., 2012). Cline (2000) stresses the importance of using a "non-exclusionary" definition when assessing dyslexia in ESL/EFL populations and quotes the British Psychological Society's definition (1999) as a good example of a definition that is less likely to result in over- or under-diagnosis in this population: "Dyslexia is evident when fluent and accurate word reading and/or spelling develops very incompletely or with great difficulty. This focuses on literacy learning at the 'word level' and implies that the problem is severe and persistent despite appropriate learning opportunities" (5). The salient points here are that dyslexia affects reading at the *word level* (i.e, it is a bottom-up, not a top-down comprehension issue) in a *severe* way, hindering progress, such that problems *continue* long term even with adequate educational opportunities and responsive teaching.

Consequently, the problems that language learners with dyslexia are likely to face are difficulties in phonological awareness, verbal memory, and verbal processing speed, which lead

to difficulties in spelling, written and spoken expression, acquiring listening and reading skills and vocabulary and grammar learning (Fišer & Kałdonek-Crnjaković, 2022; Peter et al., 2021; Tsakalidou, 2022). They may also experience difficulty with serialization and visual and auditory discrimination (Tsakalidou, 2022). Rather than speaking or listening skills, these difficulties are more likely to affect reading and writing (Fišer & Kałdonek-Crnjaković, 2022), but tasks like reading maps, following multistep directions, and chunking sequences of numbers into orders of magnitude might also pose difficulties because they require sequential processing (Peter et al., 2021).

The types of errors that a student with dyslexia might make include misspellings when copying words, slower reading, and difficulty in pronunciation (Fišer & Kałdonek-Crnjaković, 2022), although it is crucial to stress that there are other factors besides dyslexia which could result in these errors in an ESL/EFL classroom as well. More specifically, one might see a student with dyslexia make mistakes by writing a word according to its sound, without following the spelling rules, have difficulty in recognizing or analyzing a word in its compounds, struggle with words that are not used often and words with no grapheme-phoneme correspondence, or make additions, subtractions, replacements and transpositions of syllables and letters (Porpodas, 2003 in Tsakalidou, 2022), but again, unless these errors are severe and persist even with increased education and language exposure, they are not infallible signs for diagnostic purposes. In one study with adults, sequential rearrangement of letters, doubling the wrong letter, migrating one letter, dropping or adding a silent letter, difficulty with homophones, and substitution of another letter with the same sound were stronger indicators than the stereotypically expected behavior of right/left reversal of individual letters, e.g., substituting d for b (Peter et al., 2021).

Although these impacts on performance and learning seem significant, there is evidence

that suggests that adjustments in teaching practices and strategies and adaptations in the classroom can positively affect performance of students with dyslexia who are learning a new language. According to Tsakalidou (2022), approaches like (a) focusing on improving phonological awareness, (b) slowing the pace of instruction by concentrating on only the most relevant information, (c) reducing vocabulary lists, (d) using continuous assessment, and (e) using a multisensory teaching method have been successful.

A small-scale, longitudinal study of two male Croatian EFL students with dyslexia (diagnosed in their L1) found that for both the youth and the young adult involved, developing metalinguistic skills through the use of a multi-sensory, explicit teaching teaching approach was helpful for improving spelling, and to a lesser degree, vocabulary acquisition (Kałdonek-Crnjaković, 2021b). The benefit of this approach would extend beyond students with dyslexia since metacognition (conscious thinking about the rules and patterns of the language) is important in second language acquisition in general. Through metacognition, learners build their mental lexicon by identifying morphological patterns, become able to discover rules without help, apply the rules, and create mnemonic devices.

An additional study (Kałdonek-Crnjaković, 2021a) with a Mandarin-speaking student with dyslexia showed that the multisensory, explicit approach can be helpful with students with dyslexia coming from non-alphabetic languages as well. The student participated in a 12-week intervention with a teacher using as many as possible but at least two senses in content delivery (visual, auditory, tactile, kinesthetic); giving ample opportunities for over-learning; and offering explicit, systematic instruction of phoneme pronunciation, grapheme recognition, and phonological awareness skills, with a comparative approach to differences between the L1 and L2. Following the intervention, the student, who had been struggling to progress from basic

interpersonal communicative skill (BICS) proficiency to more academic material, increased scores on vocabulary retrieval tests of the words learned during the intervention and showed improvement in the use of reading and spelling strategies for future tasks. The student also showed changes in affective responses to learning, becoming more engaged, confident and internally motivated.

Fortunately, the multisensory structured learning approach has been shown to be effective not only with students with dyslexia, but also with ESL/EFL students who are struggling to progress for a variety of reasons. Schneider and Evers (2009) showed that at the K-12 level, an approach that included explicit instruction about linguistic patterns, conscious effort to build more complex ideas on previously taught easier material, multi-sensory practice, frequent practice opportunities, and emphasis on developing metacognitive skills had positive effects with a broad population of "at-risk" ESL students, where "at-risk" was defined as meaning at risk for failing curricular and standardized school requirements because of limited English proficiency.

For students with dyslexia, adaptations to the classroom space and materials can also be helpful, including adjusting the light, temperature, and level of volume on audio recordings, equipping the classroom adequately, arranging the seating appropriately, allowing individualized pace of work, modifying learning materials by adopting a different layout, reducing or chunking the content, and enlarging texts (Fišer & Kałdonek-Crnjaković, 2022). Since most of these recommendations dovetail with general ESL/EFL teaching advice (Parrish, 2019), it is hard to imagine them having anything but a positive effect on all students in the classroom regardless of diagnosis or learning difference status.

Autism Spectrum Disorders

Autism spectrum disorders (ASD) have an onset in early childhood, but may not be diagnosed until later, and persist through the lifespan. Housel (2020) describes how autism research has largely been focused on young children and how its success in increasing early detection and treatment/intervention has led to a burgeoning higher-functioning adult population, which is becoming more prevalent in ABE and post-secondary education. Due to the heavy focus on addressing autism in early childhood, less research has addressed the older age group's needs.

Autism spectrum disorders manifest in a variety of behaviors and impairments including difficulty with social interactions and communication, restricted interests, repetitive behaviors, and problems with empathy, executive function, and social/emotional self-regulation (Housel, 2020). Some consider a central part of the problem to be a compromised "Theory of Mind," or an inability to understand the mental states of others (BaronCohen et al., 1985, in Kalandadze et al., 2022). Students with ASD can also exhibit difficulties with sensory processing (being highly sensitive to sensory stimulation), rigidity of routine, and difficulty in visualizing images mentally (Hashim et al., 2022). They may also appear inattentive due to lack of eye contact (Shea et al., 2018).

Because of the nature of ASD, the impact on language acquisition is largely in pragmatics, i.e., the social use and understanding of language in contexts (Kalandadze et al., 2022). Students may have difficulty in understanding tone of voice, personal space, facial expressions, body language, and how others' perspectives differ from their own (Shea et al., 2018). An autistic child's language development is often hampered by a lack of social engagement and, as a result, autistic adults may have limited vocabulary and syntax, unusual

tone or pitch in their speech, and little or no understanding of how to converse in their L1 (Hashim et al., 2022).

Students with ASD show considerable variation with competency in structural aspects of language like semantics and grammar, but often struggle with metaphor, irony, idiom, humor, and other non-literal uses of language (Kalandadze et al., 2022; Mashal & Kasirer, 2011). It has not been shown definitively whether this is due to "theory of mind" difficulties, reduced vocabulary/core language skills (Kalandadze et al., 2022) or possibly rigidity in strategy use where an unwillingness to break from routine makes it difficult to suppress literal meanings already familiar and in front of mind (Mashal & Kasirer, 2011).

One of the challenges involved in supporting students with ASD is that because it is defined by a broad spectrum of behaviors and difficulties, each student's struggles will be unique and as a result, the solutions need to be individually tailored. Because of differences in sensory sensitivity, some students may benefit from brightly colored materials, while others will respond better to muted colors. They may vary in how many rest breaks are needed to avoid overstimulation, and they will have different tolerance levels for changes to routine, teachers, or physical surroundings in the classroom (Hashim et al., 2022). Some general recommendations include using printed visual images in teaching to address difficulty with visualization, providing students with their own copies of all materials to avoid discomfort with negotiating how to share, and structuring a lot of repetition into activities to appeal to the desire for routine (Hashim et al., 2022).

In terms of assisting students with ASD with understanding of metaphor and idioms, however, a study by Mashal and Kasirer (2011) shows that some interventions, in this case a mapping strategy, can be effective not only with students with ASD, but also with students with

other learning disabilities and the neurotypical students in the class as well. In this case, the participants were 60 teenagers, with approximately an even distribution of students with ASD, learning disabilities, and no known specific developmental or learning challenges. Initial pre-tests showed that the ASD and LD groups performed worse than the control group on all tests: idiom comprehension, metaphor comprehension, and executive function. The teaching intervention involved using thinking maps where students were encouraged to write the associations and features of the words and select the shared associations as the "ground" of the metaphor to put in the center, disregarding the irrelevant information. The various interpretations were explored in discussion until a conventional interpretation emerged. Teachers followed up the mapping exercise with a questionnaire including meaningless and meaningful expressions in order to enhance awareness for meaningless interpretations and inhibit inappropriate interpretations. Although the intervention was more effective with the LD and control groups, the ASD group also showed some improvement, suggesting that attending to the needs and challenges of students with ASD can create a learning environment that meets the goals of the inclusive classroom, where all students benefit.

Other suggestions for working with this population also fit inclusive classroom guidelines. These include advising teachers to give instructions in clear, concise, concrete language that is free of idioms, sarcasm, and figurative language, things that can be difficult for all ESL/EFL students to understand (Shea et al., 2018). Using rubrics and templates to explain assignment requirements also works well with students with ASD who tend to have excess anxiety about performance, and these tools benefit all students who like clarity on expectations and explicit directions (Shea et al., 2018).

Attention Deficit/Hyperactivity Disorder

Attention Deficit/Hyperactivity Disorder (ADHD) is increasingly viewed as an impairment of executive functioning, particularly short term memory, but there continues to be debate whether cognitive deficits can be correlated with ADHD or whether there are confounding factors in play (Hsin-Yi Liang & Kelsen, 2017). The characteristic features outlined in the DSM-V are (1) inattention, such as forgetfulness in daily activities, lack of interest in activities that require extended periods of concentration, failure to meet deadlines, lack of organization, and limited attention to detail, and (2) hyperactivity, such as excess fidgeting or mobility, talking too much, interrupting, intruding, or blurting out in conversations (CDC, 2022). Inattention can be present without hyperactivity. ADD and ADHD do persist into adulthood in 60% of cases (Hsin-Yi Liang & Kelsen, 2017), but symptoms will manifest differently in adults and children, and an adult diagnosis requires that a larger number of the features be present (CDC, 2022).

Estimates suggest that 5% of adults in the United States have ADHD, with a higher percentage in males than females (Hsin-Yi Liang & Kelsen, 2017). Some evidence suggests that gender differences exist - females are less likely in general to be diagnosed, but among those who are, they are more likely to be diagnosed with the inattentive subtype, experience academic difficulties, and experience problems with internalizing such as anxiety and depression (Hsin-Yi Liang & Kelsen, 2017).

Signs that might indicate ADHD in an adult student situation include failure to complete assignments despite having the requisite skills; distracted, fidgety, frustrated, agitated, impulsive, or overly emotional behavior in class; low reading stamina or falling asleep during reading;

disorganized materials or thoughts; and difficulty in organizing thoughts for written assignments even when strong verbal expressive skills are present. Again, it is crucial to note that other factors which can affect the ESL population including culture shock, prior trauma, work/childcare obligations, and minimal exposure to structured educational settings could also result in similar behaviors without ADHD being a factor. Taking notes can also be a challenge because students with ADHD have difficulty disregarding irrelevant stimuli (Shea et al., 2018). They may also have inferior planning and time management capabilities, and struggle with indecision, punctuality, and prioritization (Hsin-Yi Liang & Kelsen, 2017).

ADHD may affect language acquisition in several ways. Difficulty with language is a common comorbidity, but some studies do not show a correlation. Students with ADHD show a high variance in academic performance in general and second language proficiency in particular (Hsin-Yi Liang & Kelsen, 2017). However, attention is a critical part of language aptitude because it is related to short term memory and working memory. Executive functioning is also important for deciding which stimuli are important and should be attended to. Consequently, a student with ADHD may have a hard time paying attention to more complex socio-pragmatic aspects of language, may develop fluency at the expense of accuracy, and may have less control of spelling and punctuation due to lack of attention to detail (Kałdonek-Crnjaković, 2020). One commonly cited symptom in adults with ADHD is long-term memory problems, mainly in verbal memory (Fuermaier et al., 2017; Skodzik, Holling, & Pedersen, 2017, cited in Mama & Icht, 2019). The research suggests that the problems come from deficits in attention in the initial learning/encoding process and not the retrieval stage.

A study by Egeland, Nordby Johansen, and Ueland (2010, cited in Mama & Icht, 2019)

showed that the adult students with ADHD tended to use less effort-intensive strategies for learning vocabulary, such as rote repetition, whereas the other study participants reported using strategies involving imagery and elaboration, which are generally considered more effective because they build mental connections between the items. Hence, activities that encourage students to use varied mnemonic devices could be beneficial for students with ADHD, with cross benefits for the whole class. For example, a study by Mama and Icht (2019) showed a positive effect for students with and without ADHD encoding new words in long term memory when the new words were vocalized (read aloud) in addition to being studied silently.

Research by Hsin-Li Liang and Kelsen (2017) with EFL Mandarin-speaking college students indicated that gender differences in how ADHD affects academic performance may also be related to choice of learning strategy, with females generally using more social/affective strategies and males more memorization strategies. The females with likely ADHD had the highest performance of any group in this study, while the males with likely ADHD had the lowest. The females without ADHD and the males without ADHD fell in the middle. The researchers' conclusions about pedagogical implications were similar to the study discussed previously: teachers should encourage a wide variety of strategies for all learners, discourage over reliance on memory alone, suggest several metacognitive approaches to improve listening skills, select materials appropriately for maximum interest, and expand learner background knowledge.

While the strong auditory sense in students with ADHD can be used to their advantage, for example, in reading vocabulary or written work aloud, teachers need to be cautious about overdoing a multi-sensory approach because simultaneous presentation of visual, auditory, tactile, and kinesthetic material can be highly distracting for students with ADHD or overly

stimulating for students with other SLDs (especially ASD). Hence, Kałdonek-Crnjaković adds the caveat that a multi-sensory approach should be chosen judiciously, depending on how ADHD is presenting in a student (which may depend on gender, age, and cognitive maturity) and how it is affecting their language acquisition process (2020).

Some practices which are likely to help students with ADHD do fit more seamlessly into the inclusive classroom guidelines, since they benefit the vast majority of students. These include offering students choices about how to demonstrate competence, chunking material, ensuring that classroom activities do not last more than ten minutes, encouraging SMART goal setting, keeping set classroom rules, and changing the seating arrangement to allow for spaces for concentration and social interaction when each is needed (Kałdonek-Crnjaković, 2020). Older students in particular, with and without ADHD, are likely to respond well to an explicit approach that explores differences between L1 and L2 and promotes metacognitive awareness with questions, for example, "Why did you use this tense in this sentence?" (Kałdonek-Crnjaković, 2020). A classroom that addresses the needs of students with ADHD can improve the learning environment for all students if the under-supported student with ADHD would otherwise have been impulsive, overly mobile, or distractingly inattentive.

Summary

Because students with SLDs are likely to be present in adult ESL/EFL classrooms, a learner-centered, inclusive approach, informed by Critical Disability Theory, calls for teachers to be informed about the strengths and needs this population brings to their educational experience. Research in this area (the intersection of second language acquisition, **adult** education, and

SLDs) is still limited, and certainly more work needs to be done. This literature review has shown that although dyslexia, ASD, and ADHD create relatively predictable challenges for students, when teachers have an awareness of the equity and cognitive issues at hand, the challenges can be lessened or overcome with targeted teaching strategies. There is no easy, one-size fits all solution--the multi-sensory approach must be applied judiciously to avoid overstimulation, distraction, and infantilization; an explicit approach must balance bottom-up strategies with top-down processing. But, the good news is that many of the teaching strategies recommended for supporting students with SLDs will have a universally positive effect on all ESL/EFL students, regardless of whether they have an SLD diagnosis. More inclusive classrooms are possible and within reach.

CHAPTER III

THE PROJECT AND ITS DEVELOPMENT

Brief Description of the Project

The field project I created is a guide intended to address the lacuna in TESOL teacher training programs on the subject of learning disabilities and other psychological/behavioral disorders that can create learning differences and challenges for students. Specifically, it focuses on three of the most common of these conditions: dyslexia, autism spectrum disorder, and attention deficit/hyperactivity disorder. The intended audience for the field project is adult ESL/EFL teachers, though it could also be useful for administrators of language schools, adult basic education programs, intensive English programs, or community college ESL programs. It is suitable to be used as a resource in an inservice training day or provided as supplementary reading material in a teaching training course on assessment and/or student needs analysis. Currently, the project is designed to be accessed in print format; however, because it was created in Google slides, it can also be made available in an electronic version for presentations, including live links to the additional resources discussed within it. Eventually, the intention is to convert the material into an Open Educational Resource, freely available on the internet, that could be expanded and adapted for use in a wider variety of English language teacher training settings in the United States and abroad.

The guide is structured into four main parts. *Part I: The Legal Landscape* presents a very brief history of disability rights in education and an overview of the legal requirements for non-discrimination and reasonable accommodations for students with documented disabilities in adult basic education, vocational programs, and post-secondary education. The provisions addressed are the IDEA: Individuals with Disabilities in Education Act (1975), Section 504 of

the Rehabilitation Act (1973), and the ADA: Americans with Disabilities Act (1992). Legal definitions are provided for *disability*, *documentation*, and *reasonable accommodation*. The choice to begin with this information was based on the fact that adhering to the requirements set by these laws is the minimum instructors and administrators must do in supporting these students. Students with disabilities have the right to learn in an environment that supports their needs. There are a variety of ways of fulfilling the legal requirements, however, some of which might further separate or alienate the learners from their classmates. Moving beyond a strategy of accommodation, based on a deficit model of disability, to the goal of creating truly inclusive classrooms requires training teachers about the disabilities, the identification process, and potential adaptations to teaching and assessment strategies.

Thus, Part II: Understanding Specific Learning Difficulties provides detailed information about three of the most common conditions which can create specific learning difficulties for students: dyslexia, autism spectrum disorder, and attention deficit/hyperactivity disorder. This ordering was chosen because dyslexia is the most researched of the three in terms of academic implications for language acquisition, since it is by definition, related to ease of development of a language skill. Dyslexia is covered in the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-V) under the general heading of Specific Learning Disorders, while the other two covered in my field project have their own separate sections in the DSM-V, and are treated in the order in which I present them. The use of the DSM-V as the primary source for information in this section underlines the fact that these conditions are inherently neurological, have clear clinical definitions, and have a predictable range of effects on the learning process. However, because there are valid criticisms of the medical, deficiency model of these disabilities, the introduction to Part II includes a note on terminology and compares

medical and critical disability theory informed models of understanding disability, stressing that learning disabilities must be viewed as having not only neurological, but also social, and contextual components.

Part II begins with a list of common strengths exhibited by students with these specific learning difficulties, in part as a reminder that all cognitive differences bring strengths and weaknesses. The section continues with overview information for each of the three conditions, prevalence in the general population, diagnostic criteria, and a chart presenting the potential impacts of each on language learning and the four languages skills: reading, writing, listening, and speaking. The goal was to provide technical information in language that was accessible to teachers without professional training in psychology. The table synthesizes research from journal articles on the implications of each specific learning difficulty for language learning and gives concrete examples, in many cases adding information beyond what is covered in the DSM criteria.

Figure 1
Sample Table of Effects by Language Skill

Reading	Writing
decoding symbols into sounds and associating them with meanings is more difficult short term memory problems affect long-term form-meaning associations, making sight reading more difficult, slowing reading speed, which can also result in reduced comprehensi effects tend to reduce receptive vocabulary, which can lead to reading comprehension difficult.	can lead to difficulty with rote learning and inductive learning/implicit learning; students can find it hard to extract patterns and recognize regularity in grammar structures when they are having a harder time remembering past exposure to words/patterns • sequencing problems can result
Listening	Speaking
verbal memory problems can make it harder to identify phonemes and word boundarie students may have difficulty following multi-step directions	short term memory problems can make automatization difficult reduced receptive vocabulary will in turn limit productive vocabulary pronunciation, especially of multi-syllable words, can be challenging

Note: This table showing the effects on each of the four language skill areas is replicated in the same format for all three specific learning difficulties discussed in the project.

To be clear, teachers will not be diagnosing students. The information about diagnostic criteria in this part is intended to help teachers build empathy for student challenges, reduce stigmatization, and provide background knowledge which could be shared with students to help them in their own process of self-discovery.

Teachers cannot support students with specific learning difficulties unless they know

which students might be affected. *Part III: Identifying Students with SLDs* covers levels of assessment, beginning with the general classroom assessment in which all students already participate, and progressing to more targeted identification, screening, and diagnostic processes.

Figure 2
Sample Table Providing Context for the Screening Instruments included in Part III

Identification vs. Diagnosis

	Identification	Screening	Diagnosis
Who is involved?	Student, teacher, possibly family members	Student, trained teacher and/or specialist	Student, Psychologist, possibly family members
What information is collected?	Informal interviews Classwork portfolio Classroom observations Test scores	More formal interview Data from identification process	Structured diagnostic interviews Standardized testing Data from identification and screening processes
What are the results?	Awareness of existence of student difficulty Better understanding of the nature and effects of the difficulty	Can indicate whether further study by a professional might be warranted Can offer more information about students' strengths and weaknesses	If done in a culturally, linguistically sensitive way, can provide a specific diagnosis and documentation of a disability or disorder
Why is it useful?	Can help inform a plan of action and support, which could include changing teaching strategies and modes of content delivery or offering options for alternate means for students to demonstrate competence	Can inform decisions about referral for diagnosis and a plan of action and support	Can provide information about underlying causes, can further specify the nature of the difficulty, can inform plan of support, entitles the student to reasonable accommodations in future education and work settings

Challenges and confounding factors are discussed, as well as the risks and benefits inherent in pursuing formal diagnosis. Again, it must be underlined that teachers are not fully qualified to

provide diagnoses, and in fact, it is beyond the scope of this project to train teachers to even screen ESL/EFL students. Nevertheless, two sample screening instruments are presented in this section to give teachers an idea of the type of questions which are asked. The questions may be useful starting points for teacher-student conversations about strengths, challenges, and needs. Even if screening instruments have not been validated with an ESL/EFL population, there is benefit in teachers knowing what types of questions they include, how the questions are phrased, and how they are administered.

The goal of identification is not labeling students, but supporting them. *Part IV: Teaching Strategies and Resources* offers an annotated bibliography of resources on teaching strategies for supporting students with learning disabilities in general and these three featured conditions specifically. There is information about inclusive classroom pedagogy, Universal Design for Learning, multi-sensory/explicit teaching and using technology for alternate means of delivery of content.

Figure 3
Sample of Annotation and Sources as included in Part IV

Multi-sensory/ Explicit teaching

One promising area of research is multi-sensory, explicit teaching. To be multi-sensory the teacher uses as many as possible but at least 2 senses in content delivery (visual, auditory, tactile, kinesthetic) and gives the student ample opportunities for over-learning. Explicit here refers to systematic instruction of phoneme pronunciation, spelling pattern recognition, and phonological awareness skills, with an explicit, comparative approach to differences between the L1 and L2. While an inductive approach, where students are guided towards discovering patterns on their own in carefully selected examples of language, is favored by many teachers, some research suggests that this method can be challenging and less effective for students with dyslexia and other SLDs than a more explicit approach.

Nijakowska, J. (2008). An experiment with direct multisensory instruction in teaching word reading and spelling to Polish dyslexic learners of English. *Language learners with special needs: An international perspective*. Ed. J. Kormos, and E. Kontra. Bristol: Multilingual Matters. 130–157.

Sparks, R., Artzer, M., Patton, J., Ganschow, L., Miller, K., Hordubay, D. J., & Walsh, G. (1998). Benefits of multisensory structured instruction for at-risk foreign language learners: A comparison study of high school Spanish students. *Annals of Dyslexia*, 48, 239–270.

Hopefully, this section will provide a starting point for teachers exploring options to try as we await more comprehensive, research-supported literature about effective teaching practices for the population of students facing the dual challenge of second language acquisition and specific learning difficulties.

Development of the Project

The initial inspiration for this project came from my experience as a teacher and as a parent. I have worked for the past ten years providing academic support to graduate students

studying in a Roman Catholic seminary in order to be ordained as priests. Our students represent a variety of language backgrounds, including native English speakers; first or second generation American, bilingual students who may have had some years of education in English but who did not (and still do not) speak English regularly at home; some recent immigrants who have never done coursework in English; and some multilingual international students on student visas who have never been in an English speaking environment before. Much of my work at the Student Learning Center is in supporting all these different types of students in further English language acquisition, reading and writing skills, and public speaking in workshop settings and one-on-one tutoring.

The formation program for priests can last six to seven years, and our total enrollment is small, so I often work closely with the same students in small groups and one-on-one for years. I have a front row seat to their progress or lack thereof because I conduct re-assessments and follow up with professors for feedback on their writing and speaking each semester. Our program has a good success rate overall in helping students attain and exceed the minimum required proficiency level. However, sometimes there are students, who despite tremendous effort both on our side and their side, seem quite slow to progress. Occasionally our students come in with documented learning disabilities, but most of the international students and first/second generation students do not, and they generally do not have the resources or inclination to explore or pursue a diagnosis.

The lack of progress or very slow progress that I saw in some students led me to begin to wonder about explanations and how I could recognize specific learning difficulties in our ESL population in particular. Although learning styles/preferences and issues of fossilization were addressed in the MA-TESOL classes I was taking, I found little to no mention of neurological,

cognitive learning differences in any of my coursework. I began to ask questions like "What does dyslexia look like in adult ESL students?" and "How can I distinguish the normal mental fatigue that comes from studying content in a different language from attention deficit challenges?"

Last year when I was taking a course on the sociology of language, learning the challenges students of English face in understanding the pragmatic aspects of language, my own college-age daughter began to explore the possibility that her own difficulties in this area, challenges that she was finding it impossible to mask in the more complex social environment of college, could be explained by autism spectrum disorder. I was struck by the similarity in her challenges and the pragmatic challenges faced by English learners in a new environment. I felt an immense empathy for ESL students who might be dealing with both sets of difficulties simultaneously, that is, both autism and developing pragmatic proficiency in a new language. Would it be possible to assess the source of the difficulties in a language learner? Could similar strategies be of use to both groups, even if the cause of the struggles was different?

The primary question for me became identification because that seemed like the logical first step on the road to better supporting my students - I needed to know who they were sooner in their academic careers in order to better teach them so they could learn and progress. In order to convincingly argue that there was a problem that needed addressing, I focused my initial research on discovering what statistics were available about the prevalence of learning disabilities in general in the adult ESL/EFL classroom. Even this seemingly simple question turned out to be complex and contentious. It quickly led me to debates about the dangers of overand under-diagnosis of learning disabilities in the ELL population in the K-12 environment, and I began to see why the topic of identification of learning disabilities was treated with extreme caution in the field of TESOL. Incorrectly implying that a student has a learning disability when

they only have proficiency issues could be taken as evidence of language or culture based bias, or even racism. However, the need for caution does not justify ignoring the topic of specific learning difficulties altogether. Becoming more aware of the challenges inherent in sorting through confounding factors in diagnosis, the limitations on research, and the potential negative consequences of misidentification only made me more committed to really understanding what was happening cognitively for these under-studied, under-discussed students and how to best help them achieve their goals.

Challenges

As I mentioned, a main impetus for the project for me was finding an explanation for student lack of progress. I wanted to find tests that I could use or checklists that would be definitive, and I hoped that curating these instruments and explaining how and why to use them could be the heart of my field project. The more research I did, however, the more I came to understand that not only do such litmus tests not exist, but moreover, there are incredible obstacles in the way of their development, even for researchers and clinicians with the proper expertise. In fact, nearly every questionnaire I found in use for screening came with explicit instructions that it was <u>not</u> to be considered reliable or valid for ESL/EFL populations. Thus, in the end, the section that I thought would be filled with screening instruments instead had to become a detailed explanation of the challenges inherent in the screening process and context and caveats for the use of the instruments I included. It also proved to be difficult to determine whether the instruments I found, all which were readily available in full on the internet, were in fact in the public domain. The two that I included as samples were chosen simply because they were the only two I could verify were publicly available. For the other instruments, I provided

the full name and the developers (in addition to a link which was viable at the time of publication of the guide) so that teachers could at least conduct their own library or internet searches to access them. I also endeavored to reiterate the caveats for their use multiple times.

Figure 4
Sample of Screening Instrument Presentation (link only) with Caveats for Use

Autism Spectrum: Screening Tools

A number of self-report screening questionnaires for adult autism are available online. Their primary purpose is self-discovery, so they give minimal information about students' strengths and weaknesses in a language learning environment. Teachers who direct students to these self-surveys should be sure the students are aware that the online scoring has not been shown to be valid for ESL/EFL students. However, the results may be a useful starting point for a conversation.

Autism Spectrum Quotient (AQ)

This tool was developed by Baron-Cohen, et. al. (2001) at the Cambridge Autism Research Centre and includes 50 statements which participants rate as to how strongly they feel the item applies to them.

https://psychology-tools.com/test/autism-spectrum-quotient

A side effect of the difficulty of correctly identifying which ESL students have specific learning difficulties is that creating control and experimental groups for research on effective teaching strategies is very challenging. Thus, at times I found the literature to be thin on successful strategies and evidence-backed adaptations for the adult population. Resources on second language acquisition and dyslexia greatly exceed those for the other two conditions, with ADHD a distant second place, and autism exponentially behind in number of studies. While I would have liked to expand the resource section with more detail about teaching strategies, time constraints have pushed this into a future project for me.

Ultimately, though in developing the project and the resource section in particular, I was encouraged by two discoveries. First, not only do many of the strategies seem to be effective in mitigating the learning challenges for more than one of the strategies (making precise screening and diagnosis less necessary), many of them also prove effective for addressing the needs of other populations (e.g., students with limited formal education) and even for the "control" groups, that is, the students with no noticeable or measurable disabilities or disadvantages.

Second, many of the strategies will already be familiar to ESL teachers who are often trained to favor an eclectic style of teaching and are usually willing to use "every trick in the book" to build language skills.

The end result of the project is a guide I wish I had had years ago, one that I look forward to sharing with other educators for the benefit of all students.

The Project

The project can be found in its entirety in the Appendix.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Although there are numerous challenges to accurate and complete identification of adult students with specific learning disabilities in the ESL/EFL classroom, reasonable estimates based on the prevalence of these conditions in the general population, in adult education programs, and in low-literacy populations where data is available suggest that, as a minimum, 10% of students are affected, and numbers may be as high as 80% in some environments, particularly in low literacy level classes in urban locations (Corley & Taymans, 2002; Polson & White, 2001). However, few teacher training programs provide an overview of how these conditions affect the language learning process or discuss how to best support students with these learning challenges (Mull et al., 2001; Pižorn & Babuder, 2022). This may be due to concerns that the suggestion that a significant number of ESL/EFL students have specific learning difficulties may be seen as motivated by racial, cultural, or linguistic biases or, at best, a misunderstanding of the language learning process and the wide variety of factors that can affect the rate at which an adult ESL/EFL student will progress (Moriña, 2020; Richardson, 2008). Unfortunately, ignoring the situation does not cure the ills of societal problems and may leave the affected students themselves equally poorly served by both those who are under-informed, and as a result under-sensitive, to inclusion issues in the classroom and those who are informed, but overly cautious about them.

Thus, the goal of this thesis has been to draw attention to the issue of specific learning difficulties in ESL/EFL classrooms through (1) conducting a review of the literature and research

to help clarify the extent and effects of the problem and (2) creating a guidebook to address the gap in ESL/EFL teacher training curricula on this topic. The work has led me to several conclusions.

First, exploring the data about the prevalence of specific learning difficulties has confirmed my own intuitive sense that for some ESL students it is likely that there are cognitive differences at work that can provide at least a partial explanation for slow progress or a lack of progress. Even a conservative estimate of 5% (for example, for a university intensive English program) or 15% (for an ABE ESL program) would mean that in a class of 25 students, teachers could reasonably expect to have 1-4 students dealing with specific learning difficulties.

Affirming that there are students with SLDs in the classroom can remove the guilt that teachers (and the students themselves) may feel when progress is slow. A realistic appraisal of the prevalence of SLDs can and should inform goal setting at the student and program level. At the same time, understanding the prevalence of SLDs can open the gate to a new avenue for teachers to travel down to investigate strategies and find resources, bringing a sense of renewed hope. Thus, in one sense, it may not be important to identify exactly which students have SLDs in order to allow the reality of the prevalence to inform our expectations, attitudes, and teaching practices.

Second, this project has led me to conclude that there is no downside to learning about the disabilities and disorders that could potentially be affecting these students. There is no reason not to cover the topic alongside all the other factors that affect second language acquisition, like culture shock, past trauma, prior education level, affective factors, and comparative aspects of the L1. A teacher who is well-informed about typical characteristics, behavior patterns, error patterns, and the challenges associated with SLDs is far less likely to misidentify a student than a

teacher who has no training. A teacher who understands the challenges inherent in the process of identification, screening, and diagnosis and the differences between these activities will be more likely to gather and evaluate assessment data with care and a holistic vision of confounding factors. While some countries do have educational policies that aim for the full inclusion of students with disabilities, many do not. Thus, many students are coming from cultures which deeply stigmatize all types of disability. Only teachers who are well-informed will be able to dispel myths, advocate for disability rights, and begin to change attitudes among students, their colleagues, and administrators.

Third, even the most cursory look at identification, screening, and diagnosis of adult ESL/EFL students leads to the conclusion that having a goal of matching each individual student who is struggling to progress with a precise diagnosis is unrealistic. Even if financial obstacles were removed and clinician accessibility issues were solved, the tools simply do not exist (Elbro et al., 2012; Polson & White, 2001; Reynolds et al., 2012; Richardson, 2008; Zetlin et al., 2011). In essence, it becomes a chicken and egg situation. We do not have reliable and valid tools for identifying and diagnosing adult ESL students with SLDs, so it becomes impossible to create control and experimental groups of ESL students with and without SLDs to test or norm the screening surveys that would facilitate the identification/diagnosis process. But again, this cannot be an excuse for doing nothing. Students are the best sources of information about their own challenges if teachers are willing to engage them in conversations, and these conversations can be guided by knowing and understanding the types of questions found on the screening tools that do exist, even if they are imperfectly suited to the ESL/EFL situation.

The fourth conclusion is that luckily, in many cases precise identification is not necessary for exactly the same reason that diagnosis is difficult - there are so many complicating and

confounding factors. A SLD is always going to be only one of many factors that affects how quickly or slowly a student can learn. Few ESL/EFL classrooms are homogeneous, even if they supposedly contain only one Common European Framework of Reference (CEFR) level of student. Because there are so many things which can affect (1) the rate at which a student will progress in learning a language and (2) the strategies that will be most effective for their learning, ESL teachers are increasingly counseled to adopt an eclectic teaching approach. This aligns well with the UDL recommendation for offering multiple means of content delivery and assessment, which means that teachers may already be doing a lot of the right things for their SLD students. They may just need the confidence to lean deeply into the multi-media or scaffolded strategies they are already using more. The research that has been done on teaching strategies for working with students with SLDs has generally shown that they benefit all learners and not only those with disabilities (Kałdonek-Crnjaković, 2020; Mama & Icht, 2019; Mashal & Kasirer, 2011; Schneider & Evers, 2009). ESL/EFL teaching appears to be an area where UDL principles can be successfully taken from theory into practice with positive results for everyone.

Fifth, in some cases, however, students with SLDs do require more personalized adaptations and accommodations - understanding the differences between SLDs and being aware of the variety of ways they might present in a student are important because the most effective teaching and learning strategies for a student with autism might not be the same as those for a student with ADHD. In an environment where exact diagnosis may be logistically difficult or prohibitively expensive, teachers need to have a full portfolio of strategies under their belts and at least some awareness of when to try a particular technique. This starts with an understanding of the learning strengths and difficulties each condition presents. That is to say, an informed

heuristic approach is always preferable to an uninformed trial and error approach, and less likely to perpetuate biases.

Recommendations

The intended audience for the field project is teachers, so my primary recommendation for implementation would be use in teacher training programs. It could be made available as a reference resource in electronic or print form, but it could also be presented at a conference workshop or teacher in-service training. It could be included as supplemental material in graduate level TESOL coursework on a variety of topics such as needs analysis, materials development, second language acquisition, or even culturally responsive teaching. An abridged version, edited with simplified language and envisioned in a culturally sensitive way, could also be a useful resource for the students themselves.

There are many ways in which the project could be expanded. To begin, the final section on teaching strategies could be developed into a separate, complementary guide, synthesizing and further describing the research that exists on evidence-based, effective classroom practices for different SLDs and different ESL/EFL student circumstances. This was beyond the scope of this thesis; indeed, *Bridges to Practice. A Research-Based Guide for Literacy Practitioners*Serving Adults with Learning Disabilities, the series of guidebooks created in 1999 with a similar purpose to my Part IV (but without the ESL-specific focus) was the product of five years of collaborative work by three different large governmental agencies. Although ambitious, the expansion of Part IV of the field project would create a resource useful to many ESL/EFL teachers.

Unfortunately, though, an obstacle is that the number of peer-reviewed journal articles and research studies which focus on this specific intersection of categories - adults, ESL/EFL, and SLDs remains surprisingly low (Kormos, 2017), so this lack would need to be addressed first. While work has been done on adults with learning disabilities (e.g., *Bridges*, mentioned above) study participants who do not have English as a L1 are often excluded from research. Because of the legal landscape, more work has been done investigating the needs of K-12 students who are English language learners and have learning disabilities, but adult learners have different needs because their language learning process is significantly different than a child's, and they are far less likely to be the target group for a study. Even reputable, published articles which give teaching advice tend to be based on extrapolations from study groups that check two of the boxes but not all three. Certainly, more research into effective TESOL strategies that are specific to adults with these learning difficulties is merited and badly needed.

Perhaps the largest hurdle in doing studies with this population is the lack of reliable, valid screening and diagnostic tools. How can we test to see if a teaching strategy is effective with adult ESL students with SLDs if we cannot accurately identify who they are in the first place? Thus, this is the first area in which far more research still needs to be undertaken, even if it is limited to detailed case studies of the few students who have been able to access diagnoses by qualified clinicians.

My final recommendation is that there is clearly fruitful ground for more collaboration between Disability Support Services and Diversity and Inclusion programs which give attention to language learners. The starting point for my project was observations about the similarities in needs. I don't want to suggest that shared challenges and needs allow us to conflate the causes - a language proficiency deficiency is by no means a learning disability. It is true that even if the

needs are the same, the same solutions may not necessarily always work in the same way for both types of learners because the causes of the challenges are fundamentally different. However, the central premise of this project is that there are, in fact, a number of students who live in the intersection of both target populations. And, researchers and advocates for the two groups could certainly be talking and listening to each other. When there are strategies that have been proven to work well with both types of students, the leaders of these programs could have valuable allies in each other for advocacy to better ensure the strategies are implemented at classroom and policy levels.

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APPENDIX

Understanding Specific Learning Difficulties in the Adult ESL/EFL Classroom

Understanding Specific Learning Difficulties in the Adult ESL/EFL Classroom

Kristen Kingfield Kearns

Field Project MA-TESOL Program University of San Francisco Spring 2023

About this Project

Dear fellow educators,

This project grew out of my own experiences as a teacher and a parent.

While I have been serving as the director of the Student Learning Center at a small graduate level institution, over the years a number of multilingual students have been referred to my office with learning challenges that on the surface appeared to be language proficiency problems. In some cases, when years of support resulted in only limited progress, I began to suspect that the learning difficulties were of a different nature and had a fundamentally neurological cause. Learning disabilities got little mention, if any, in the courses I had taken in second language acquisition, and the more I looked into how to identify learning disabilities, the more I realized that distinguishing between language competency issues and specific learning difficulties is both incredibly complex and under-studied.

Recently, a late autism spectrum diagnosis for my own daughter made me acutely aware that whether we identify students with neurological and psychological conditions that impact their learning in an officially documented way or not, these students most definitely are in our classrooms and need support that is responsive to their learning needs if our classrooms are to be truly inclusive.

There are no easy answers as to how to identify students, which students to screen or refer, and what methods or accommodations will be most beneficial. However, my goal with this guide is to bring together and curate information about a few specific learning difficulties and give teachers (1) the background knowledge they need to begin informed conversations with their students about strengths and challenges and (2) resource lists with suggestions for adapting teaching strategies to respond to student needs.

Part I: The Legal Landscape presents an overview of the legal requirements for non-discrimination and reasonable accommodations for students with disabilities in adult basic education, vocational programs, and post-secondary education. This, of course, is the minimum we must do in supporting these students. Moving beyond this to the goal of creating truly inclusive classrooms requires training teachers about the disabilities, the identification process, and potential adaptations.

About this Project

Thus, Part II: Understanding Specific Learning Difficulties provides detailed information about three of the most common conditions which can create specific learning difficulties for students: Dyslexia, Autism Spectrum Disorder, and Attention Deficit/Hyperactivity Disorder. It includes overview information, prevalence in the general population, diagnostic criteria, and a discussion of the potential impacts of each on language learning and the four language skills: reading, writing, listening, and speaking. To be clear, teachers will not be diagnosing students. The information in this part is intended to build empathy for student challenges, reduce stigmatization, and provide background knowledge for teachers themselves and for teachers to share with students.

Teachers cannot support students with specific learning difficulties unless they know which students might be affected. *Part III: Identifying Students with SLDs* covers levels of assessment, beginning with the general classroom assessment in which all students already participate, and progressing to more targeted identification, screening, and diagnostic processes. Challenges and confounding factors are discussed, as well as the risks and benefits inherent in pursuing formal diagnoses. Again, I want to underline that teachers are not going to be providing diagnoses, and in fact, it is beyond the scope of this project to train teachers to even screen ESL/EFL students. Nevertheless, sample screening instruments are presented in this section to give teachers an idea of the type of questions which are asked. The questions may be useful starting points for teacher-student conversations about strengths, challenges, and needs. Even if screening instruments have not been validated with an ESL/EFL population, there is benefit in knowing what they include and how they are administered.

The goal of identification is not creating a label, but supporting students. *Part IV: Teaching Strategies and Resources* offers an annotated bibliography of resources on teaching strategies for supporting students with learning disabilities in general and these three featured conditions specifically. Hopefully, this will provide a starting point as we await more comprehensive, research-supported literature about effective teaching practices for the population of students facing the dual challenge of second language acquisition and specific learning difficulties.

Thank you for taking the time to grow as an educator and better support these students.

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Part I: The Legal Landscape

From Discrimination to Inclusion

Teachers want their students to learn and succeed in the classroom, and most willingly strive to create a learning environment that is free of discrimination.

At the bare minimum, in the United States this requires adhering to the non-discrimination laws which govern educational institutions. The disability rights movement arose in the 20th century as disabled veterans from the World Wars returned home and fought for equal access and treatment in the workplace. By the 1960s, the rise of civil rights activism gave disability rights supporters inspiration and allies. Access to education was a key topic from the beginning, and parents led the way, advocating for their children to be included in traditional school and social settings and not limited to separate institutions or asylums.

Even the first disability laws in the 1970s included both mental and physical disabilities in their scope, but non-discrimination statutes have expanded in terms of the types of schools and programs covered.

There are differences between requirements for K-12 and post-secondary education, primarily that in the later, students must largely act as their own advocates even in settings where disability support services are offered. Teachers who are knowledgeable about the legal landscape will be better able to assist students with this difficult task. Ideally, of course, teachers will go above and beyond the minimum of non-discrimination to understand their students' specific difficulties and learn about how to best support their needs, working toward the goal of a truly **inclusive classroom**.

Useful Definitions

Disability: a physical or mental impairment that substantially limits one or more major life activities.

Documentation of a disability: for learning disabilities this means an evaluation by a licensed psychologist, usually done within the last three years. The school is not required to pay for this.

Reasonable accommodation: a modification or adjustment that allows an otherwise qualified student with a disability to enjoy the benefits, privileges, and opportunities available to all students. It must not reduce, fundamentally alter, or eliminate curricular or course requirements.

Inclusive classroom pedagogy (Craven et al., 2015), the belief that curricula and the classroom environment should be designed to improve the education of all students by focusing on students' strengths and not their limitations, fostering high student self-concepts, and investing in sufficient supportive, research based, innovative resources to make this possible.

Laws Covering Students with Disabilities

Laws for K-12 Education

IDEA: Individuals with Disabilities Education Act (1975)

This law requires that an Individual Education Plan (IEP) be created for each student with disabilities and updated each year in grades K-12. It also requires K-12 schools to provide specialized instruction when needed.

The IEP will set goals for post-secondary education, training, employment and may suggest transitional support, but it does not apply after high school. Likewise, the IDEA provisions do not extend to cover students past grade 12.

Nevertheless, if a student had an IEP in high school, it can be useful to consider because it will provide information about what kind of accommodations they were receiving and which ones were useful.

Laws for Post-Secondary Education

(Junior Colleges, Colleges, Universities, Vocational Programs, and Adult Basic Education)

Section 504 of the Rehabilitation Act (1973)

This law requires that any school that gets federal funding, which includes all public and most private schools, must make sure that qualified individuals with disabilities are not excluded. The appropriate supports and reasonable accommodations must be made to allow for equal participation in classes, assessments, housing, and other school activities. Students cannot be denied admission because of a disability. Students do not have to disclose their disability, but they must document it to obligate the school to provide accommodations. However, schools can choose to provide accommodations without documentation. The school does not need to lower admission or achievement requirements or change basic programs or services and is not required to provide services of a "personal nature".

ADA: Americans with Disabilities Act (1992)

While complex, essentially this update extends the provisions of Section 504 to all schools regardless of whether or not they receive federal money.

Part II: Understanding Specific Learning Difficulties

Introduction: A Note on Terminology

Terminology matters. In this project, I have chosen to use the term *specific learning difficulty* with the acronym *SLD*.

The prevailing medical model is to use the word *disorder* or *disability* to identify a student's differing cognitive processes as a deficit in comparison to others. This terminology has justly been critiqued for not accounting for the socially constructed aspect of disability - differences only become disabilities when they interact in a mismatched way with environmental or institutional factors. However, the more neutral term, *difference*, and the newer term, *neurodiversity*, while appealing, do not fully express the reality that students with the differences discussed in this handbook *do* face challenges with certain learning tasks, and those challenges deserve sensitive and responsive attention from teachers, administrators, and policy makers.

The term *difficulty* is intended to bridge between the medical terms and *difference*. Specific Learning Difficulty (SLD) can encompass both those differences which have been medically classified as disabilities (dyslexia and dyscalculia) and those that traditionally have been labeled behavioral/psychiatric disorders (ASD and ADD/ADHD), and the term can acknowledge that both groups of differences have significant implications for learning processes, and hence may pose difficulties for students.

In this section when giving the clinical descriptions, we will retain the medical terms as a reminder that these differences result from physiological, neurological causes, but it is important to always keep the broader critical context in mind. Focusing first on dyslexia, then ASD, and finally ADD/ADHD, each section will outline the defining characteristics as described in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-V), which is the 2013 update of the clinical manual of the American Psychiatric Association that sets the criteria used by medical professionals to diagnose all mental disorders in the United States. We will also discuss the impact of each learning difficulty on second language acquisition.

Strengths

Because this project is focused on supporting students who are having difficulties, the majority of this part outlines characteristics that make learning harder for students with SLDs. However, these students are creative, intelligent, and talented and contribute in valuable ways to the classroom.

Common strengths of students with SLDs include

- Problem-solving skills
- Outside-the-box creative thinking
- Outgoing or gregarious personalities
- Strong compensatory skills in areas not affected by SLD (e.g., technical skills with computers, artistic ability)
- Empathy for the challenges of others, visible and invisible
- Persistence
- Expertise in areas of strong interest

Dyslexia

Overview

Dyslexia is included in the DSM-V under the general category of Specific Learning Disorders. Dyslexia refers to a particular subset of learning difficulties with

- Accurate or fluent word recognition
- Decoding (word level reading, sounding out words, mapping letters to sounds)
- Spelling (adding, omitting, substituting, or migrating letters)

It is a "bottom-up" processing disorder, so it differs from learning disorders that affect "top-down" reading comprehension, which include difficulty in understanding the meaning of what is read or making inferences based on what is read. It also differs from learning disorders that affect written expression (e.g., inability to form coherent paragraphs or communicate ideas clearly in writing). The difficulties with word recognition, decoding, and spelling must be persistent, even with instruction, and cause significant problems with academic or job performance, though they may not become apparent until the academic demands exceed the individual's processing capacities (e.g., on timed tests). It is important to note that the difficulties described are not a marker of intellectual ability or the result of vision or hearing problems. Highly gifted and talented individuals may have dyslexia. It is important to consider whether the difficulties could alternately be caused by stress or trauma, lack of language proficiency, or limited exposure to formal education.

Prevalence

The prevalence of all specific learning disorders (including all areas of reading, writing, and math) is 5-15% in children and approximately 4% in adults. They are 2-3 times more common in males than females. Dyslexia is the most common of the specific learning disorders.

Criteria

Since diagnosis of specific learning disorders is dependent on a holistic review of a person's academic history and performance, no checklist of criteria exists. The difficulties in word recognition, decoding, and spelling described above should

- Be persistent progress seems limited, after 6+ months of extra support
- Be disproportionate to age, developmental and educational level
- · Usually only affect one academic skill or domain
- Have been clearly noticeable in early school years for most individuals

The difficulties should not be due to

- intellectual disabilities or developmental delays affecting <u>all</u> aspects of learning
- · economic disadvantage or lack of opportunity for education
- lack of familiarity with the language
- a decline from a former state of higher ability

In adults, dyslexia might present as

- slow, effortful, or inaccurate reading
- relying heavily on context to read new words
- mispronouncing multi-syllable words
- the need to reread things many times to understand
- avoiding work and leisure activities that require reading
- preference for accessing text through text-to-speech software or audiobooks
- numerous spelling errors

(DSM-V) 12

Effects on learning

Dyslexia affects phonological awareness, phonological short term memory, and verbal processing speed, in simpler terms, it makes it difficult for students to learn and remember sequences of sounds in order. Although this is a "bottom-up" processing issue, it can have cascading effects to nearly all aspects of second language acquisition. If students had dyslexia-related difficulties in reading in their L1 that were not overcome, the lower level of literacy in L1 will likely make learning an L2 more difficult. Students with dyslexia tend to have higher levels of foreign language anxiety, especially in contexts where a high amount of value is being placed on accuracy and spelling in written language. This affective factor of anxiety correlates with more difficulty in language learning. Dyslexia also correlates with students having extrinsic rather than intrinsic motivation for learning the language, meaning they are less likely to be learning because they enjoy it. This also tends to slow or limit second language acquisition.

Dyslexia: Effects by Language Skill (Fišer & Kałdonek-Crnjaković, 2022; Kormos, 2017; Peter et al., 2021; Tsakalidou, 2022)

Reading	Writing
 decoding symbols into sounds and associating them with meanings is more difficult short term memory problems affect long-term form-meaning associations, making sight reading more difficult and slowing reading speed, which can also result in reduced comprehension effects tend to reduce receptive vocabulary, which can lead to reading comprehension difficulties 	 shorter working memory span can lead to difficulty with rote learning and inductive learning/implicit learning; students can find it hard to extract patterns and recognize regularity in grammar structures when they are having a harder time remembering past exposure to words/patterns sequencing problems can result in difficulty with transcribing auditory or written information without error spelling errors are common
Listening	Speaking
 verbal memory problems can make it harder to identify phonemes and word boundaries students may have difficulty following multi-step directions 	 short term memory problems can make automatization difficult reduced receptive vocabulary will in turn limit productive vocabulary pronunciation, especially of multi-syllable words, can be challenging

Autism Spectrum Disorder

Overview

Autism spectrum disorder is defined by persistent difficulty with social communication and interaction and developing, maintaining, and understanding relationships. Restricted, repetitive patterns of behavior, interests, or activities must also be present. For most individuals, the onset is in early childhood, but some develop compensatory strategies that can mask the disorder. For others, the disorder does not become apparent until social demands exceed the individual's coping mechanisms. Regardless, for diagnosis, the current presentation of symptoms must cause significant impairment. The disorder is called a "spectrum" because of the wide range of possible manifestations. Autism can present

With or without intellectual impairment
With or without structural language impairment
In conjunction with other neurodevelopmental, mental, or behavioral disorders (or not)

Previously, autism without intellectual or language impairment was termed Asperger's disorder, but this is now included under the umbrella of autism spectrum disorder. Symptoms are assessed as to level of severity (from "requiring support" to "requiring very substantial support"). Autism in adolescents and adults has a high correlation with anxiety and depression, particularly in women.

Prevalence

The prevalence is given as approximately 1%, with the diagnosis rate four times higher in males. However, this gender disparity may be explained by under-diagnosis in women due to their tendency towards masking or subtler presentation of the criteria.

Criteria

These characteristics must be judged relative to cultural norms, be pervasive and sustained, and cause functional impairment.

Characteristics	Examples	
Lack of social-emotional reciprocity	Inability to sustain back-and-forth conversation Limited sharing of emotions, interests Failure to initiate or respond to social interactions	
Deficit in non-verbal communicative skills	Mismatch of verbal and non-verbal communication Unusual eye contact or body language Lack of use of gesture or facial expression	
Difficulty in developing, maintaining, and understanding relationships	Inability to shift behavior to match social situation Difficulty making friends Lack of interest in peers Preference for solitary activities Unrealistic ideas about what friendship entails	
Stereotyped or repetitive motor movements or speech	Lining things up or flipping objects repeatedly Tics, flapping, tapping Echoing words or using idiosyncratic phrases	
Insistence on sameness, adherence to routine	Extreme distress at small changes Difficulty with transitions Inflexible thinking patterns Ritualized behaviors (in diet, movement patterns) Insistence on following rules exactly	
Highly restricted, intense interests	Strong attachment to or preoccupation with an object Narrow range of interests (e.g., only video games)	
Over- or under- sensitivity to sensory input	Adverse reactions to textures, tastes, sounds, smells, or lighting Seeming indifference to heat or cold	

Autism Spectrum Disorder: Criteria

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Effects on learning

Because ASD includes, by definition, a spectrum, there are a broad range of language impacts: from complete lack of speech, to language delays or poor comprehension, to highly developed, but stiff or overly literal language. As with dyslexia, if ASD has affected L1 language development directly or through lack of social engagement, this will likely also make L2 development more challenging. In general, the most pronounced effects for high-functioning students will be in language pragmatics, or understanding which language to use and how to use it in different social contexts.

Contrary to popular advice, studies have shown no benefit in language development if autistic children are limited to being exposed to only one language. In fact, students with ASD may have strengths that can aid in second language acquisition including strong rote learning ability, high tolerance of monotony, and in some students, an ability to imitate accents. Many high-functioning students with ASD can and do achieve high levels of L2 proficiency.

Autism Spectrum: Effects by Language Skill (Hashim et al., 2022; Kalandadze et al., 2022; Kormos, 2017; Mashal & Kasirer, 2011)

Reading	Writing
 considerable variation with competency in structural aspects of language like semantics and grammar limited social engagement can hamper vocabulary development difficulty with understanding metaphor, irony, idiom, humor, and other non-literal uses of language difficulty understanding authorial attitude or motivations of characters 	 as in reading, varied levels of proficiency with syntax and grammar preference for writing only on a limited range of topics because of restricted interests potential difficulties with non-literal or metaphorical genres of writing or expressions
Listening	Speaking
 difficulty in understanding tone of voice, personal space, facial expressions, body language, and how others' perspectives differ from their own lack of eye contact may make students seem inattentive 	 lack of non-reciprocal speech, the element of speech for the sake of creating/maintaining a relationship conversations may be purely informational, one-sided need for explicit explanations of when/how to join a conversation, what verbal and nonverbal social cues to look for need for explicit explanations of what is acceptable to say in a given situation unusual pitch or tone

Attention Deficit/Hyperactivity Disorder

Overview

Attention deficit/Hyperactivity disorder is included in the DSM-V under the general category of neurodevelopmental disorders. It is characterized by inattention and disorganization which impair the individual's productivity in a way inconsistent with their age or developmental level. Hyperactivity/impulsivity (inability to sit still, excessive fidgeting, inability to wait, intrusive behavior) may or may not also be present, and it also must be inconsistent with the individual's age or developmental level. The slash (/) in the acronym is intended to represent the possibility of the attention component with or without the hyperactivity component. ADD/ADHD is often accompanied by oppositional/defiant behavioral disorders, but these are considered separate pathologies. It is not simply laziness, irresponsibility, or uncooperativeness, but may be misinterpreted as such, and consequently can negatively impact the quality of interpersonal relationships.

Prevalence

ADD/ADHD is reported as present in 5% of children and 2.5% of adults in most cultures. It is approximately 1.5-2 times more frequent in males than females.

Criteria

The symptoms must have been present for at least 6 months, and adults (17+) must show at least 5 from one of either the inattention list or the hyperactivity list or 5 in both (for a total of 10) for the joint ADHD diagnosis. They should not be the result of lack of comprehension or general defiance.

Inattention List (must show 5 or more)

Characteristics	Examples
Lack of attention to detail	Makes careless mistakes in homework Overlooks necessary details at work
Difficulty sustaining attention	Shows lack of focus during a class lecture Is unable to complete long reading independently
Difficulty listening in conversations	Mind seems elsewhere, even when no obvious distractions are present
Failure to follow through	Starts strong, but doesn't complete schoolwork or workplace duties
Difficulty with organization	Belongings and work are messy Cannot keep track of deadlines
Avoiding tasks requiring sustained mental effort	Dislikes homework, schoolwork, preparing reports, completing long forms
Tendency to lose things	Loses papers, keys, pencil, telephone, wallet
Easily distracted	Is easily siide-tracked by external noise or internal, unrelated thoughts
Forgetfulness in daily activities	Doesn't return calls, pay bills, or show up for appointments

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Criteria

The symptoms must have been present for at least 6 months, and adults (17+) must show at least 5 from one of either the inattention list or the hyperactivity list or 5 in both (for a total of 10) for the joint ADHD diagnosis. They should not be the result of lack of comprehension or general defiance.

Hyperactivity List (must show 5 or more)

Characteristics	Examples
Fidgeting	Taps hands or feet when seated
Inability to stay seated	Leaves seat in classroom at inappropriate times, restlessness
Inability to engage or relax quietly	Avoids solitary, sedentary activities
"On the go" or "Driven by a motor"	Dislikes sitting in restaurant or a movie Companions can't keep up, feel worn out
Excessive talking	Monopolizes group discussion
Talking out of turn	Blurts out answer before question is done Finishes other people's sentences
Difficulty waiting	Feels very agitated or acts disrespectfully in lines Acts without considering possible harm to self or others Makes major life decisions without forethought Seems unable to delay gratification
Tendency to interrupt or intrude	Butts into conversations Takes or uses other people's possessions without asking Intrudes into or takes over group activities

(DSM-V) 21

Effects on learning

Although ADD/ADHD correlates with lower school performance/academic achievement, there is a wide range in the effects, and as noted, it is unrelated to intellectual ability. In fact, in one study, 36.4% of students with ADD/ADHD shared cognitive and linguistic characteristics with the group of highest achievers as measured on the Modern Language Aptitude Test.

Some studies show no difference in memory ability or grammar sensitivity, but more difference from peers in things that require attention control and attention to detail. Attention is a critical part of language learning because it is related to short term memory and working memory. Executive functioning, which can be impaired in students with ADD/ADHD, is also important for deciding which stimuli are important and should be attended to.

Attention Deficit/Hyperactivity Disorder: Effects by Language Skill

(Skodzik, Holling, & Pedersen, 2017; Hsin-Yi Liang & Kelsen, 2017; Kałdonek-Crnjaković, 2020; Mama & Icht, 2019)

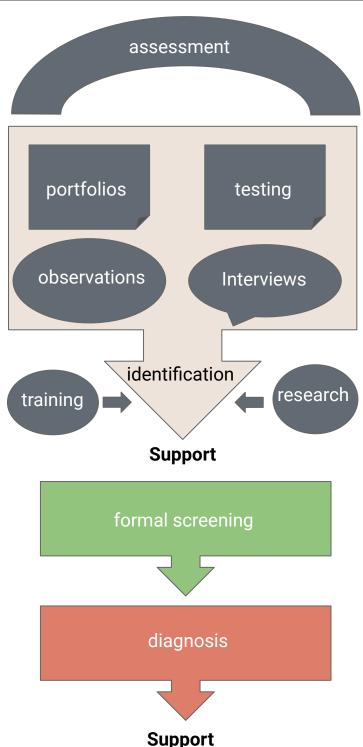
Reading	Writing
 may have difficulty sustaining attention on longer readings may want to only use less effort-intensive strategies in learning vocabulary (rote memory as opposed to creating mnemonics) or reading 	 may be less able to focus on most relevant, important parts of feedback may find it harder to inhibit automatic response patterns (for example, L1 spelling patterns may override L2 patterns) executive function issues can make it hard to attend to coherence, cohesion, accuracy, and appropriateness at the same time in writing may have less control of spelling and punctuation due to lack of attention to detail may have difficulty with organization of ideas
Listening	Speaking
 cannot restrict attention to relevant linguistic features has difficulty retaining chunks of language in memory for further processing may have a hard time deciding which stimuli to attend to 	 may be less able to focus on relevant, most important parts of feedback may have difficulty inhibiting automatic response patterns (L1 words or pronunciation come out when trying to speak L2 may develop fluency at the expense of accuracy may be overly verbal, interrupting or intruding because of lower impulse control

Part III:
Identifying
Students with
Specific
Learning
Difficulties

Learning disabilities are by nature invisible and identifying the students who have them can be difficult and complicated in the ESL/EFL classroom. But, we cannot work to find solutions to problems we aren't aware of. Before looking at how to recognize these students, it is important to think about what the goals of identification are and know the limitations in the process. First, let's look at the difference between assessment, identification, screening, and diagnosis.

Assessment should be an ongoing process for <u>all</u> students. It is a broad umbrella term for the collection of information about the student through observations, collecting a portfolio of work, and/or testing, and can extend to include interviews, formal testing, screening, and diagnosis. Regular classroom assessment, including homework, written assignments, and teacher observations during in-class group work, is the starting point for understanding student difficulties regardless of the cause.

Assessment can measure ability at a single point in time, may give information about placement in a class or program, and can be used to set student goals or inform program level or policy decisions. The process and the results should help the student become aware of strengths and weaknesses and should also take into account how the teaching strategies and the learning environment might be causing or contributing to the student's difficulties.



Identification is a first step. It is a narrower process aimed at recognizing that a student is having difficulties, understanding the nature of those difficulties, and using that awareness to inform the development of a plan of action. It can be carried out by a teacher (or the student) and doesn't necessarily need to specify the underlying cause of the difficulties. This includes looking analytically at test and classroom performance to notice patterns, educating oneself about SLDs, and trying a variety of teaching strategies to see what is most effective.

Screening is the next, <u>optional</u> step. This is a more formal type of assessment done using standardized questionnaires or structured interviews, sometimes by teachers, but usually by a specialist. Its goal is to guide decisions about which students could benefit from a referral to a clinician. It is not a substitute for professional diagnosis and cannot determine whether or not a student has a disability or disorder. Screening can be done for a specific learning difficulty or for learning difficulties in general. Screening instruments are generally designed to over-identify, meaning that not all students who meet the screening criteria for a referral will meet the criteria for a diagnosis, if they choose to pursue that option. Organizations must have informed consent from students to collect records and begin any kind of testing process that is not uniform for all students, including screening.

Diagnosis is another, also optional step. Diagnosis must be done by a licensed, trained psychologist and also requires informed consent. It is generally not covered by the school or school district, and can be quite expensive, costing from several hundred to several thousand dollars. Diagnosis will include considering all the information collected by teachers and specialists, as well as interviews with the student. Often diagnosis includes a standardized intelligence test, such as the Wechsler Adult Intelligence Scale–Fourth Edition (WAIS IV) (Wechsler, 2008) and a standardized achievement test like the Wechsler Individual Achievement Test– Second Edition (WIAT II) (Wechsler, 2005). Psychologists are looking for a 1-2 standard deviation between performance on the intelligence test and performance on the achievement test. Because of cultural bias in these tests and the fact that students will generally score lower when tested in a language different from their first language, the validity of this discrepancy-based method of testing is questionable for ESL/EFL students tested in English (Cline, 2000).

	Identification	Screening	Diagnosis
Who is involved?	Student, teacher, possibly family members	Student, trained teacher and/or specialist	Student, Psychologist, possibly family members
What information is collected?	Informal interviews Classwork portfolio Classroom observations Test scores	More formal interview Data from identification process	Structured diagnostic interviews Standardized testing Data from identification and screening processes
What are the results?	Awareness of existence of student difficulty Better understanding of the nature and effects of the difficulty	Can indicate whether further study by a professional might be warranted Can offer more information about students' strengths and weaknesses	If done in a culturally, linguistically sensitive way, can provide a specific diagnosis and documentation of a disability or disorder
Why is it useful?	Can help inform a plan of action and support, which could include changing teaching strategies and modes of content delivery or offering options for alternate means for students to demonstrate competence	Can inform decisions about referral for diagnosis and a plan of action and support	Can provide information about underlying causes, can further specify the nature of the difficulty, can inform plan of support, entitles the student to reasonable accommodations in future education and work settings

Goals

The ultimate goal of the identification-screening-diagnosis process is **not** labelling the student. The benefit of all the steps is that they can inform teachers and students as to what type of support is needed to facilitate learning. Each component in the process is a beginning, not an end in itself.

In addition to accommodations, possible means of support which can be offered following any type of assessment include changes to teaching strategies, offering a variety of modes of content delivery, and giving all students choices of alternate means of demonstrating competency. Part IV offers an annotated bibliography of resources with further suggestions for teaching adaptations. The good news is that in most cases, the alterations suggested benefit all language learners, not only those with SLDs.

Sources p. 25-27: (Kormos, 2017; Reynolds et al., 2012)

Feasibility: Can and should a diagnosis be pursued?

While diagnosis may be possible in some cases, for the vast majority of ESL and EFL students, there are significant barriers standing in the way.

Barriers to Diagnosis

- Negative teacher and administrator attitudes toward SLDs
- Lack of understanding of the referral process by teachers or program administrators
- Lack of teacher/staff time for screening and referral
- Lack of awareness of local diagnosticians
- Lack of local diagnosticians
- Student transportation issues, especially in rural areas
- Lack of culturally competent diagnosticians with knowledge of L2 acquisition processes
- Lack of valid and reliable diagnostic tests in students' L1
- Lack of diagnostic tests in English normed on ESL populations
- Prohibitively high cost of diagnosis
- Cultural stigmas and misunderstanding of learning disabilities
- Lack of student interest in pursuing diagnosis
- Miscommunication in assessment process due to limited language proficiency

(Dickerson & Dickerson, 2020; Reynolds et al., 2012)

Advantages and Disadvantages

Even if a valid diagnosis were to be accessible to all adult students, the process is not without risks. It's important to stop and consider what can be gained and what negative consequences could follow if a diagnosis is pursued.

Can and should a diagnosis be pursued?

Benefits

- 1. Student and teacher can better understand the student's neurocognitive functioning, behavior, emotional state, academic strengths and weaknesses, and/or relationships.
- 2. Formal identification and documentation is needed to best advocate for appropriate accommodations in higher education and vocational settings
- 3. Students and teachers will better understand how to set reasonable progress goals.
- 4. Specific recommendations for treatment and responsive teaching and learning strategies can be researched and implemented
- 5. Diagnosis can integrate information from multiple sources to arrive at a holistic understanding of a student's academic history and current performance.
- 6. A diagnosis may help explain why a student is struggling and thereby improve a student's self-concept and help them connect to others with similar challenges
- 7. Students may feel more valued because they are being taken seriously and having their needs and challenges considered by a professional

Risks

- 1. Assessment can uncover unexpected underlying problems/difficulties that could be difficult to accept
- 2. Although stigmatization is not jusitfied, students may feel increased social stigma from peers or family after receiving a diagnosis
- 3. A diagnosis may force students to come to terms with limitations and make changes in expectations and life goals
- 4. A diagnosis will not guarantee that a student will receive the needed accommodations; students will still need to self-advocate
- 5. A diagnosis does not mean there will be a cure or complete resolution of the difficulties

Confounding Factors: Is there another possible explanation?

In K-12 settings, much attention has been focused on the over-referral and over-diagnosis of ESL students with learning disabilities. Unfortunately, this has resulted in students being tracked into Special Education programs unnecessarily and sometimes with negative consequences like stigmatization, social isolation, and limitations on opportunities for academic progress. While it is important that students get the support they need, the assessment process must be holistic, taking a broad range of observations and information into consideration. The list to the right details other factors besides SLDs which can complicate the language learning process for ESL/EFL students and slow their progress. Teachers should consider the impact of all circumstances in the identification process.

Note that these factors will likely affect a student's performance and progress in *all* areas, while a SLD is likely to be more apparent in some areas or skills than others, for example, in reading, but not in speaking or listening comprehension.

- •Limited academic skills or L1 literacy due to limited previous formal educational opportunities
- •Lack of effective study habits, minimal exposure to different learning strategies
- •Contrastive difference or interference from the L1, particularly if there is no written form or the learner's written language is non-alphabetic or uses a non-Roman alphabet.
- •Mismatch between the teaching style and the student's learning expectations or preferences
- •Stress, culture shock, or past trauma affecting concentration and memory
- Personal factors such as age, physical health, social/cultural identity, food insecurity, and positive or negative feeling towards the dominant English-speaking culture
- •Vision and hearing problems, diagnosed or undiagnosed
- •Additional physical impairments (such as traumatic brain injury)
- External problems with work, health, and family
- Inconsistent attendance
- Lack of exposure to English outside the classroom
- •Limited time to study or practice because of work responsibilities

Identification: Getting started

As mentioned before, identification of students with possible SLDs must be a holistic process. Teachers have many potential sources of information. Students are the best source of information about their learning difficulties, but they may be unlikely to talk about them with their teachers unless the teacher initiates the conversation. Any information gathering that goes beyond what is being done with the class as a whole should be preceded by ensuring informed consent about the process from the student.

Sources of Information for the Identification Process

1. Informal classroom observations regarding

Behavior

Academic Work

Learning Strategies Used

2. Formal class-based collection of data

Portfolio of work collected at regular intervals

Comparison of pre- and post- unit test scores

Comparison of work done with accommodation or assistance and work done without

- 3. Interviews with the Student
 - Informal conversations about strengths and challenges inside and outside of classroom
- Informal conversations about past academic history and family history of SLDs Formal interviews based on screening questionnaires

Source: (Kormos, 2017)

Identification: Getting started

Questions to consider at this stage:

- 1. Has the problem persisted over time?
- 2. Did the problem exist in the learner's L1?
- 3. Is there a prior diagnosis or family history?
- 4. Has the problem resisted normal instruction?
- 5. Does the learner show a clear pattern of strengths and weaknesses in class?
- 6. Does the learner show a clear pattern of strengths and weaknesses outside of class?
- 7. Does the learner have an inconsistent skill profile, e.g. strong speech but little ability to read?
- 8. Does there seem to be difficulty with memory or organization?
- 9. Does the problem interfere with learning or another life activity to a significant degree?

Note: SLDs may not be as noticeable in a student's L1 because of differing natures of the languages (e.g., non-alphabetic, no written form) or because the student has highly developed compensatory strategies for working in their L1 which are not yet in place with the new demands of learning an L2.

Sources: Kormos, 2017; Rios Erickson, 2008.

Next Steps

Once teachers have undertaken a comprehensive identification process and have good reasons to suspect an SLD may be contributing to a student's lack of progress, they may want to initiate more involved conversations with the student or refer them to someone trained to administer an appropriate screening tool. It is beyond the scope of this guide to train teachers as screeners; however, that does not preclude teachers from learning about the existing screening tools and their scope and limitations. The next section presents a number of tools which are publicly available online.

Screening Tools

Limitations and Caveats

Unfortunately, there are few, if any, screening tools or diagnostic tools that have been normed with adult ESL/EFL populations. Moreover, the adult ESL/EFL population is far from homogeneous with varied language proficiency levels, differing L1s, and varied levels of prior academic study. The confounding factors listed on p. 31 make screening ESL/EFL students challenging even for trained professionals. Therefore, the screening tools included in this section **cannot be considered valid or reliable** using the standard cut-off scales, even when the instruments are translated into the students' L1. **Under no circumstances can a screening instrument be used as a substitute for a diagnostic tool.**

However, student answers to the questions in standardized screening instruments can still provide teachers and students with valuable information about the nature and extent of students' learning challenges and may help point teachers and students towards support strategies that have worked for others with similar difficulties, even if the cause cannot be definitively stated.

General Screening Tools

These instruments were not designed to specify which learning disability or disorder is affecting a student. They are a starting point to determine whether further focused screening for particular disabilities could be productive.

The **Payne Inventory** was developed by Nancie Payne, President and Senior Consultant, Payne & Associates, Inc., Olympia, Washington, under contract for the Washington State Division of Employment and Social Services Learning Disabilities Initiative (November 1994 to June 1997). It contains general questions (related to both math and language) and has an addition health screening questionnaire. The research and the screening tool are in the public domain.

The **Washington-13 Learning Need Screening Tool** selects thirteen items from the Payne Inventory that were found to be particularly associated with a LD diagnosis 73% of the time (in a non-ESL population). It takes about 30 minutes to administer. It is reprinted on p.36-39 for reference.

LEARNING NEEDS SCREENING TOOL

Background & Development

The Learning Need Screening Tool is a brief, oral interview developed through an intensive authentic research project for the State of Washington Division of Employment and Social Services Learning Disabilities Initiative (November 1994-June 1997) under contract with Nancie Payne, MS, Senior Consultant, Payne & Associates, Inc., Olympia, Washington.

Funded by federal and state resources, the research as well as the Learning Needs Screening Tool are in the public domain and can be accessed by anyone who wishes. However, prior to implementation or use in a program or system, several facts must be noted:

The research was conducted with a welfare clientele; thus the tool may not be valid with other populations. Use with other populations not having the same or similar characteristics as the research study could lead to misinterpretation of information and put the client screened by the Tool at risk as well as the entity using the Tool.

The Learning Needs Screening Tool has not been validated and is not an appropriate tool to use in its present form with populations who have limited English proficiency (LEP).

Criteria for implementation and use must be explored and clearly established in order to minimize discrimination or perceived bias when providing services. A set of standards for services should be established to ensure protection of the client and the entity using the Tool. All individuals should be screened for health-related needs (physical, vision, hearing, etc.) as well as other impacts (mental and emotional health) that may manifest as learning disabilities. This may mean adopting a more intensive interview protocol as a next step after initial screening. Simply screening for a condition does not allow the user to make the assumption that the individual has the condition for which he/she is being screened.

Appropriate referrals and resources must be put into place prior to implementation. An organization or program cannot simply screen individuals without having the next steps in place. The Tool has been validated through the research and in using the Tool; the user accepts the responsibility associated with using a valid screening tool.

Protocols for confidentiality and disclosure of information must be established.

The organization or system's capacity to serve individuals with learning disabilities and other cognitive disorders must be evaluated.

The Tool is most effective when proper training, implementation, and evaluation protocols are put into place.

The Learning Needs Screening Tool is not a diagnostic tool and should not be used to determine the existence of a disability.

LEARNING NEEDS SCREENING

Interviewer Name:
Interview Date:
Client Name:
Date of Birth:
Social Security #:
Gender: Male Female
How many years of schooling have you had?
Check ALL earned: High School Diploma GED TechnicalVocational Certificate AADegree Other(specify):
What kind of job would you like to get?
Do you have experience in this area? _ Yes _ No
What makes it hard for you to get or keep this kind of job?
What would help?
BEFORE PROCEEDING TO THE QUESTIONS, READ THIS STATEMENT ALOUD TO THE CLIENT:
The following questions are about your school and life experiences. We're trying to find out how it was for you (or your family members) when you were in school or how some of these issues might affect your life now. Your responses to these questions will help identify resources and services you might need to be successful securing employment.
See final page for directions and scoring.
The Learning Needs Screening is not a diagnostic tool and should not be used to determine the existence of a disability.

Section A	
1. Did you have any problems learning in middle school or junior high school?	Yes No
2. Do any family members have learning problems?	Yes No
3. Do you have difficulty working with numbers in columns?	Yes No
4. Do you have trouble judging distances?	Yes No
5. Do you have problems working from a test booklet to an answer sheet?	Yes No
Count the number of "Yeses" for Section Ax1=	
Section B	
6. Do you have difficulty or experience problems mixing arithmetic signs (+/x)?	Yes No
7. Did you have any problems learning in elementary school?	Yes No
Count the number of "Yeses" for Section Bx2=	
Section C	
8. Do you have difficulty remembering how to spell simple words you know?	Yes No
9. Do you have difficulty filling out forms?	Yes No
10. Did you (or do you) experience difficulty memorizing numbers?	Yes No
Count the number of "Yeses" for Section Cx3=	
Section D	
11. Do you have trouble adding and subtracting small numbers in your head?	Yes No
12. Do you have difficulty or experience problems taking notes?	Yes No
13. Were you ever in a special program or given extra help in school?	Yes No
Count the number of "Yeses" for Section Dx4=	
Total "Yeses" multiplied by factor indicated for A, B, C, D	
See next page for directions and scoring	
14. Check to see if the client has ever been diagnosed or told he/she has a learning disability. If so, by whom and when?	
The Learning Needs Screening is not a diagnostic tool and should not be used to determine the existence of a disability.	

LEARNING NEEDS SCREENING DIRECTIONS

- I. Ask the client each question in each section (A, B, C, D) and question #14.
- 2. Record the client's responses, checking "Yes" or "No."
- 3. Count the number of "Yes" answers in each section.
- 4. Multiply the number of "Yes" responses in each section by the number shown in the section subtotal. For example, multiply the number of "Yes's" obtained in Section C by 3.
- 5. Record the number obtained for each section after the "=" sign in the section subtotal.
- 6. To obtain a Total, add the subtotals from Sections A, B, C, and D.

If the Total from Sections A, B, C, and D is 12 or more, refer for further assessment.

It is recommended interviewers ask an additional set of medical/health-based questions to gather more complete background information.

The Learning Needs Screening is not a diagnostic tool and should not be used to determine the existence of a disability.

ADDITIONAL QUESTIONS WHICH MAY BE ASKED:

GLASSES:
Does the client need or wear glasses? Yes _ No _
Last examination was within two years? Yes _ No _
HEARING: Does the client need or wear a hearing aid? Yes _ No_
MEDICAL/PHYSICAL: Has the client experienced any of the following?:
- Multiple, chronic ear infections Yes _ No_
- Multiple, chronic sinus problems Yes _ No _
- Serious accidents resulting in head trauma Yes _ No_
- Prolonged, high fevers Yes _ No _
- Diabetes Yes _ No _
- Severe allergies Yes _ No _
- Frequent headaches Yes _ No _
- Concussion or head injury Yes _ N o _
- Convulsions or seizures Yes No
- Long-term substance abuse problems Yes _
- Serious health problems Yes _ No _
Is the client taking any medications that would affect the way he/she is functioning? Yes _ No_
If yes, what is the client taking?
How often?
Does the client need medical or follow-up services? Yes _ No _

Referrals needed/made: The Learning Needs Screening was developed for the Washington State Division of Employment and Social Services Learning Disabilities Initiative (November 1994 to June 1997) under contract by Nancie Payne, senior Consultant, Payne & Associates, Olympia, Washington.

Dyslexia Screening

Formal diagnostic testing for dyslexia is often done in the student's native language because the results usually transfer to the L2. However, although there are more than 280 languages with more than a million speakers, only a small number of them have developed tools to measure of reading ability, so testing in second language is often necessary. Current dyslexia tests for ESL students have different cut-off points depending on the similarity between the student's native language and English, so interpretation of these results can be problematic (Elbro et al., 2012).

On the other hand, screening questions *can* be asked about reading and reading habits in the students' first and additional languages fairly easily. But, teachers should be aware that for students coming from a non-alphabetic L1, dyslexia can impact reading much more severely in English than it did in the L1, so it is important to ask questions about reading in both languages. The fact that English has 120 graphemes to represent 44 phonemes with very low consistency (8%) can also make dyslexia's impacts more apparent in English reading as compared to reading in other languages (Kałdonek-Crnjaković, 2021).

The International Dyslexia Association provides two well-respected screening tools on its website: The **Dyslexia Self-Assessment for Adults** is a short, 10-question tool developed by Bowman and Culotta (2010):

https://dyslexiaida.org/dyslexia-test/

They also provide access to the **Adult Reading History Questionnaire**, developed by Lefly and Pennington (2000), which is more involved, with 23 questions about students' experiences with reading as a child and now. A few questions ask students to compare their own reading speed and proficiency to that of other students with similar educational backgrounds, and these might be difficult for some to answer, but most questions are more general about habits and preferences. Again, the cut-off scores should not be considered reliable measures for ESL students, so the caveat remains that this should be used for the purpose of self-discovery and beginning a conversation.

https://dyslexiaida.org/screening-for-dyslexia/dyslexia-screener-for-adults/

Since the identification process involves more than screening questionnaires, teachers can also be observing classwork and homework for the types of errors that signal difficulty with phonological processing:

Type of Error	Example
sequential rearrangement	form in place of from
doubling the wrong letter	diferrent in place of different
transposing or migrating one letter	whit in place of with
transposing or migrating one syllable	aminal in place of animal
dropping/adding a silent letter	nowe in place of now
left/right reversal of individual letters	deb for bed
confusion of homophones	their in place of there
spelling phonetically	importense in place of importance
difficulty with words that have little or no grapheme-phoneme correspondence	for example, <i>eight</i>

Sources: (Peter et al., 2021; Tsakalidou, 2022)

Just as spelling errors in children with dyslexia tend to change over time in frequency and type of error, changes can be expected as ESL students develop more fluency and familiarity with the language.

Some researchers have had success in identifying dyslexia in second language learners with a kind of phonetic aptitude test, where a few novel symbols are created and assigned to phonemes. The new symbols are combined into nonsense words that can be taught phonetically to the students. The students are tested to see how much scaffolding and practice is required for them to successfully learn the new "words" in this made-up language, if they are able to do so at all. The advantage of this testing process is that it levels the playing field of prior language exposure, but clearly, it would be a time-consuming experiment for teachers to do as a screening in a class setting (Elbro et al., 2012).

Autism Spectrum: Screening Tools

A number of self-report screening questionnaires for adult autism are available online. Their primary purpose is self-discovery, so they give minimal information about students' strengths and weaknesses in a language learning environment. Teachers who direct students to these self-surveys should be sure the students are aware that the online scoring has not been shown to be valid for ESL/EFL students. However, the results may be a useful starting point for a conversation.

Autism Spectrum Quotient (AQ)

This tool was developed by Baron-Cohen, et. al. (2001) at the Cambridge Autism Research Centre and includes 50 statements which participants rate as to how strongly they feel the item applies to them.

https://psychology-tools.com/test/autism-spectrum-quotient

Autism Spectrum Quotient (AQ-10)

This is a short version of the same tool, with only 10 questions, that takes 2-5 minutes to complete. It is designed for primary care physicians to use to see if patients should be referred to a specialist. It is available in 5 languages with prompts for adults age 16+.

https://embrace-autism.com/aq-10/

Ritvo Autism and Asperger Diagnostic Scale (RAADS-14)

Another short form questionnaire is the Ritvo Autism and Asperger Diagnostic Scale, which has 14 items that asks about behaviors and attitudes in a person's youth and adult life. https://psychology-tools.com/test/raads-14

Autism Spectrum Screening Questionnaire (ASSQ)

Because ASD can present very differently in women and men, it is helpful to use a screening tool that takes this into consideration. The ASSQ has a revised version (ASSQ-REV) designed to better identify ASD in women. Both the original and revised version are available for download here: https://www.gu.se/en/gnc/gncs-resources/screening-questionnaires/assq-autism-spectrum-screening-questionnaire

Sample Topics

Respondents evaluate how often or how severely they experience difficulty with things like

- understanding how others are feeling or what others are thinking
- feeling overwhelmed by sensory input
- working in group situations
- chatting and social encounters
- making friends
- reading non-verbal communication cues
- understanding non-literal meanings of language (metaphors, poetry, irony, sarcasm)
- unplanned changes to routines
- dealing with interruptions
- understanding others' reactions or motivations (in real life or fiction)

Attention Deficit/Hyperactivity: Screening Tools

Two commonly used self-report screening tools for adult ADHD are available online and are given below:

Adult ADHD Self-Report Screening Tool: Adult ADHD Self-Report Scale (ASRS-v1.1)

This instrument was developed through the World Health Organization and the workgroup on Adult ADD/ADHD, including researchers from the medical schools at New York University and Harvard University. It contains 18 questions, which address the criteria as laid out in the DSM-IV (fourth edition). It is publicly available for use by healthcare professionals and takes about 5 minutes. It is reprinted on p. 45-47 for reference. Like all the tools, it is not a substitute for a diagnosis. https://add.org/wp-content/uploads/2015/03/adhd-questionnaire-ASRS111.pdf

ADHD-RS-IV with Adult Prompts

The ADHD-RS-IV was developed by George J. DuPaul, Thomas J. Power, Arthur D. Anastopoulos, and Robert Reid for diagnosis of ADHD in children, but the version linked below has been revised to include adult prompts. It includes 18 items, also following the DSM-IV criteria and asks respondents to rate whether they experience the symptoms described not at all, mildly, moderately, or severely. https://www.qandadhd.com/Content/pdf/ADHD-RS-IV_Tear-Pad-with-Adult-Prompts.pdf

The behaviors covered in the questions on both instruments include

- Carelessness or difficulty in finalizing details of projects
- Difficulty with organization in school and personal life
- Forgetfulness/difficulty remembering appointments
- Procrastination
- Difficulty sitting still or fidgeting, always being in motion
- Frequently misplacing or losing things
- Talking too much or interrupting in group settings
- Blurting out answers, being unable to wait to take turns
- Being easily distracted, daydreaming, or unfocused
- Avoiding tasks that require sustained mental effort
- Poor memory for directions received auditorily

Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist Instructions

The questions on the back page are designed to stimulate dialogue between you and your patients and to help confirm if they may be suffering from the symptoms of attention-deficit/hyperactivity disorder (ADHD).

Description: The Symptom Checklist is an instrument consisting of the eighteen DSM-IV-TR criteria. Six of the eighteen questions were found to be the most predictive of symptoms consistent with ADHD. These six questions are the basis for the ASRS v1.1 Screener and are also Part A of the Symptom Checklist. Part B of the Symptom Checklist contains the remaining twelve questions.

Instructions: Symptoms

- 1. Ask the patient to complete both Part A and Part B of the Symptom Checklist by marking an X in the box that most closely represents the frequency of occurrence of each of the symptoms.
- 2. Score Part A. If four or more marks appear in the darkly shaded boxes within Part A then the patient has symptoms highly consistent with ADHD in adults and further investigation is warranted.
- 3. The frequency scores on Part B provide additional cues and can serve as further probes into the patient's symptoms. Pay particular attention to marks appearing in the dark shaded boxes. The frequency-based response is more sensitive with certain questions. No total score or diagnostic likelihood is utilized for the twelve questions. It has been found that the six questions in Part A are the most predictive of the disorder and are best for use as a screening instrument.

Impairments

- 1. Review the entire Symptom Checklist with your patients and evaluate the level of impairment associated with the symptom.
- 2. Consider work/school, social and family settings.
- 3. Symptom frequency is often associated with symptom severity, therefore the Symptom Checklist may also aid in the assessment of impairments. If your patients have frequent symptoms, you may want to ask them to describe how these problems have affected the ability to work, take care of things at home, or get along with other people such as their spouse/significant other.

History

Assess the presence of these symptoms or similar symptoms in childhood. Adults who have ADHD
need not have been formally diagnosed in childhood. In evaluating a patient's history, look for
evidence of early-appearing and long-standing problems with attention or self-control. Some
significant symptoms should have been present in childhood, but full symptomology is not
necessary.

Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist

Please answer the questions below, rating yourself on each of the criteria shown using the scale on the right side of the page. As you answer each question, place an X in the box that best describes how you have felt and conducted yourself over the past 6 months. Please give this completed checklist to your healthcare professional to discuss during today's appointment.

	Never	Rarel	Somet	Often	Very Often	
How often do you have trouble wrapping up the final details of a project, once the challenging parts have been done?						
2. How often do you have difficulty getting things in order when you have to do a task that requires organization?						
3. How often do you have problems remembering appointments or obligations?						ı
4. When you have a task that requires a lot of thought, how often do you avoid or delay getting started?						
5. How often do you fidget or squirm with your hands or feet when you have to sit down for a long time?						
6. How often do you feel overly active and compelled to do things, like you were driven by a motor?						
PART A						ı
7. How often do you make careless mistakes when you have to work on a boring or difficult project?						
8. How often do you have difficulty keeping your attention when you are doing boring or repetitive work?						
9. How often do you have difficulty concentrating on what people say to you even when they are speaking to you directly?						
10. How often do you misplace or have difficulty finding things at home or at work?						ı
11. How often are you distracted by activity or noise around you?						ı
12. How often do you leave your seat in meetings or other situations in which you are expected to remain seated?						
13. How often do you feel restless or fidgety?						ı
14. How often do you have difficulty unwinding and relaxing when you have time to yourself?						
15. How often do you find yourself talking too much when you are in social situations?						I
16. When you're in a conversation, how often do you find yourself finishing the sentences of the people you are talking to, before they can finish them themselves?						
17. How often do you have difficulty waiting your turn in situations when turn taking is required?						
18. How often do you interrupt others when they are busy?						46
PART B						ı

The Value of Screening for Adults With ADHD

Research suggests that the symptoms of ADHD can persist into adulthood, having a significant impact on the relationships, careers, and even the personal safety of your patients who may suffer from it.1-4 Because this disorder is often misunderstood, many people who have it do not receive appropriate treatment and, as a result, may never reach their full potential. Part of the problem is that it can be difficult to diagnose, particularly in adults.

The Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist was developed

in conjunction with the World Health Organization (WHO), and the Workgroup on Adult ADHD that included the following team of psychiatrists and researchers:

- Lenard Adler, MD
 Associate Professor of Psychiatry and Neurology New York University Medical School
- Ronald C. Kessler, PhD
 Professor, Department of Health Care Policy Harvard Medical School
- 3. Thomas Spencer, MD Associate Professor of Psychiatry Harvard Medical School

As a healthcare professional, you can use the ASRS v1.1 as a tool to help screen for ADHD in adult patients. Insights gained through this screening may suggest the need for a more in-depth clinician interview. The questions in the ASRS v1.1 are consistent with DSM-IV criteria and address the manifestations of ADHD symptoms in adults. Content of the questionnaire also reflects the importance that DSM-IV places on symptoms, impairments, and history for a correct diagnosis. 4

The checklist takes about 5 minutes to complete and can provide information that is critical to supplement the diagnostic process.

References:

- 1. Schweitzer JB, et al. Med Clin North Am. 2001;85(3):10-11, 757-777.
- 2. Barkley RA. Attention Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment. 2nd ed. 1998.
- 3. Biederman J, et al. Am J Psychiatry. 1993; 150:1792-1798.
- 4. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision. Washington, DC, American Psychiatric Association. 2000: 85-93.

Part IV: Teaching Strategies and Resources

Imagining the Inclusive Classroom

Inclusive education rests on the idea that diversity in the classroom is a strength, and that students with a broad spectrum of learning needs can work and learn together effectively in the same setting when the conditions are made suitable. While support systems to address learner needs can exist separate from and external to the classroom, this is less than ideal from an inclusion point of view. Inclusion does not mean just solving the issue of how to "mainstream" or accommodate students with SLDs. Inclusive pedagogy aims to transform educational systems, beginning with the learning environment itself, so that all learners can participate, regardless of culture, language, or learning differences. To this end, in creating this annotated bibliography, I have focused on teaching strategies that not only support students with SLDs but are also likely to be beneficial to all students.

Despite increasing interest in how to best serve adult students who are learning English with the added challenges of SLD's there are still very few studies which focus on populations that check all three boxes – adult, ESL or EFL, and SLD. Variation in language levels and other factors and lack of diagnostic tools for ESL/EFL students make it practically impossible to create control and experimental groups for a study or generalize results from a sample. However, this list includes some recent research as well as some less technical sources of information on effective practices.

Universal Design for Learning (UDL)

Universal Design originated in the movement to create accessible architecture and physical environments, but it is increasingly being applied to pedagogy. The goal of the project was to create a framework for learning experiences that are open to all but also stimulating for all. The guidelines have a three-part structure calling for

- (1) multiple means of engagement,
- (2) multiple means of delivery of content, and
- (3) multiple means of expression, action, and assessment.

Offering these things may or may not rely on the use of adaptive technology and also should take the affective experience of the learner into consideration, as well as the transfer of learning to new environments and contexts. Some of the strategies UDL advocates include minimizing distractions, using meta-cognitive self-assessment and reflection, offering alternative modes of delivery for auditory and visual information, varying methods of student response, and providing executive function support.

Burgstahler, Sheryl (2021). Universal Design in education: Principles and applications. *DO-IT*, University of Washington.

https://www.washington.edu/doit/universal-designeducation-principles-and-applications

Center for Applied Special Technology (CAST). (2015). "About Universal Design for Learning." www.cast.org/our-work/about-udl.html

Center for Applied Special Technology (CAST). (2018). "The UDL Guidelines." http://udlguidelines.cast.org/

Evmenova, A. (2018). Preparing teachers to use Universal Design for Learning to support diverse learners. *Journal of Online Learning Research* 4 (2): 147–171.

Lowrey, K. A., A. Hollingshead, K. Howery, and J. B. Bishop. (2017). More than one way: Stories of UDL and inclusive classrooms. *Research and Practice for Persons with Severe Disabilities* 42 (4): 225–242. doi:10.1177/1540796917711668.

Stahl, S. (2011). UDL in postsecondary practice. *Design for All*, 6(12), 50-63.

Strehorn, K. C. (2001). The application of Universal Instructional Design to ESL teaching. *Internet TESL Journal* 7 (3).

Yaqoubi, Mohammadi & Golzar, 2022. An analysis of Universal Design for Learning at collegial level: effective ways to maximise learning outcomes, inclusion, and equity. *Research in Post-Compulsory Education*, 27(4), 594–621. https://doi.org/10.1080/13596748.2022.2110775

Multi-sensory/ Explicit teaching

One promising area of research is multi-sensory, explicit teaching. To be multi-sensory the teacher uses as many as possible but at least 2 senses in content delivery (visual, auditory, tactile, kinesthetic) and gives the student ample opportunities for over-learning. Explicit here refers to systematic instruction of phoneme pronunciation, spelling pattern recognition, and phonological awareness skills, with an explicit, comparative approach to differences between the L1 and L2. While an inductive approach, where students are guided towards discovering patterns on their own in carefully selected examples of language, is favored by many teachers, some research suggests that this method can be more challenging and less effective for students with dyslexia and other SLDs than a more explicit approach.

Nijakowska, J. (2008). An experiment with direct multisensory instruction in teaching word reading and spelling to Polish dyslexic learners of English. *Language learners with special needs: An international perspective*. Ed. J. Kormos, and E. Kontra. Bristol: Multilingual Matters. 130–157.

Sparks, R., Artzer, M., Patton, J., Ganschow, L., Miller, K., Hordubay, D. J., & Walsh, G. (1998). Benefits of multisensory structured instruction for at-risk foreign language learners: A comparison study of high school Spanish students. *Annals of Dyslexia*, 48, 239–270.

Technology

Although technology cannot alone be the solution, innovations in close-captioning and text-to-speech and speech-to-text software can be useful in creating a multi-sensory experience for learners.

Blázquez Arribas, L., Barros del Río, M. A., Alcalde Peñalver, E., & Maria Sigona, C. (2020). Teaching English to adults with disabilities: A digital solution through en-abilities. *Teaching English with Technology*, *20*(1), 80–103.

Pfenninger, S. (2015). MSL in the digital ages: Effects and effectiveness of computer-mediated intervention for FL learners with dyslexia. *Studies in Second Language Learning and Teaching*, *5*(1), 109–133. https://doi.org/10.14746/ssllt.2015.5.1.6

Yizhe Jiang, Qian Wang, & Zhenjie Weng. (2022). The influence of technology in educating English language learners at-risk or with disabilities: A systematic review: Vpliv tehnologije pri poučevanju angleščine ogroženih učencev ali učencev s posebnimi potrebami: sistematični pregled. *CEPS Journal*, *12*(4), 53–74. https://doi.org/10.26529/cepsj.1426

MidWest Association of Language Learning Technology. *Promoting an inclusive approach with tips on accessibility using technology* https://www.youtube.com/watch?v=vfLTfDmhUxg

Working with students with Dyslexia

Dyslexia is the most widely researched of the SLDs, thus there are several book-length resources available with information and strategies. In addition to the multi-sensory, explicit approach, numerous studies also support teaching strategies that foster meta-cognitive approaches to learning.

Guise, J., Reid, G., Lannen, S., & Lannen, C. (2016). Dyslexia and specific learning difficulties: Assessment and intervention in a multilingual setting. In L. Peer & G. Reid (Eds.), *Multilingualism, literacy and dyslexia: Breaking down barriers for educators* (2nd ed ed., pp. 61–73). New York: Routledge.

Helland, T., & Kaasa, R. (2005). Dyslexia in English as a second language. *Dyslexia*, 11(1), 41–60.

Nijakowska, J. 2010. *Dyslexia in the foreign language classroom*. Bristol: Multilingual Matters.

Schneider, Elke, & Crombie. 2003. *Dyslexia and foreign language learning*. London: David Fulton.

Working with students with ASD

Understanding the nature of each SLD is crucial because what works for one student may not work with another. Unfortunately, currently resources for working with ESL/EFL students with ASD are very limited, and even fewer focus on adults specifically, but some suggestions studied with the K-12 population may be worth trying. Students with ASD can find a multi-sensory approach overwhelming. Instead, they may need rest breaks to avoid over-stimulation and may have different tolerance levels for changes to routine, teachers, or physical surroundings in the classroom. Some general recommendations include using printed visual images in teaching to address difficulty with visualization, providing students with their own copies of all materials to avoid discomfort with negotiating how to share, and structuring a lot of repetition into activities to appeal to the desire for routine and leverage the high tolerance for monotony to maximize automatization.

Digard, B. G., Sorace, A., Stanfield, A., & Fletcher-Watson, S. (2020). Bilingualism in autism: language learning profiles and social experiences. *Autism: The International Journal of Research and Practice*, 24(8), 2166–2177.

https://doi.org/10.1177/1362361320937845

Hashim, H. U., Yunus, M. M., & Norman, H. (2022). Autism, children and English vocabulary learning: A qualitative inquiry of the challenges they face in their English vocabulary learning journey. *Children*, *9*(5), 628-N.PAG.

https://doi.org/10.3390/children9050628

Working with students with ADD/ADHD

The strong auditory sense in students with ADD/ADHD can be leveraged by reading vocabulary or written work aloud. However, teachers need to be cautious about over-doing a multi-sensory approach because simultaneous presentation of visual, auditory, tactile, and kinesthetic material can be highly distracting for students with ADD/ADHD. A multi-sensory approach should be chosen judiciously, depending on how ADD/ADHD is presenting in a student (which may depend on gender, age, and cognitive maturity). Other strategies include offering students choices about how to demonstrate competence, chunking material, ensuring that classroom activities do not last more than ten minutes, encouraging SMART goal setting, keeping set classroom rules, and changing the seating arrangement to allow for spaces for concentration and social interaction. Older students have been shown to respond well to an explicit approach that explores differences between L1 and L2 and promotes metacognitive awareness with questions.

Kałdonek-Crnjaković, A. (2020). Teaching an FL to students with ADHD: Poučavanje stranoga jezika učenicima s ADHD. *Govor*, *37*(2), 205–222. https://doi.org/10.22210/govor.2020.37.10

Effective Practices for Teaching Students with SLDs

Although not all of these resources are specifically focused on second language acquisition, teachers may want to try some of the approaches that have been studied for general adult basic education and post-secondary education. These resources cover Dyslexia, ASD and ADD/ADHD.

Bridges to practice: A research-based approach to serving adults with learning disabilities Learning to Achieve (2009) http://lincs.ed.gov/programs/learningtoachieve/learningtoachieve.html

Housel, D. A. (2020). When co-occurring factors impact adult learners: Suggestions for instruction, preservice training, and professional development. *Adult Learning*, *31*(1), 6. https://doi.org/10.1177/1045159519849910

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About the Author

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She is the mother of three girls. When she's not teaching, she can be found on the coastal trail, in the pool, or in the dance studio, working on turning her childhood dream of being a ballerina into (an amateur) reality.