

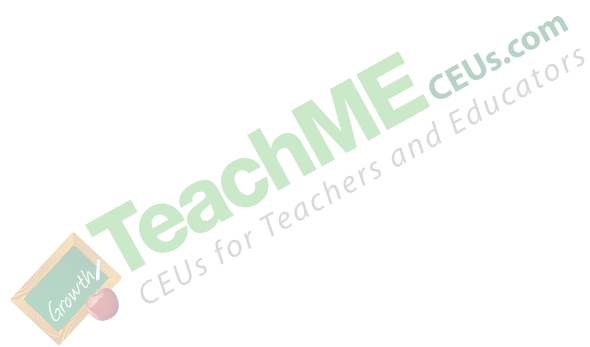
Mediating Attention Deficits Among Students



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Introduction

Attention Deficit/Hyperactivity Disorder (ADHD) is considered one of the most common neurodevelopmental disorders of childhood, and it is estimated to affect around 5% of children worldwide (ADDitude Editors, 2023). This course aims to provide educators with a deeper understanding of attention deficits and their manifestations in students, covering a wide range of topics. By exploring specific strategies tailored to the classroom environment, teachers will acquire the skills to create inclusive learning spaces that cater to students with ADHD.

Throughout this course, participants will engage with various key areas of study. Firstly, participants will explore the definition, characteristics, and causes of ADHD. Next, the course will cover the assessment and diagnosis of attention deficits, enabling educators to identify and understand these conditions in their students. Thirdly, participants will delve into the behavioral deficits and learning difficulties associated with attention deficits, gaining insights into the challenges faced by affected students. Lastly, this course will equip teachers with appropriate instructional strategies, behavior management strategies and accommodations to effectively support students with attention deficits.

Section 1: Understanding Attention Deficits

Definitions and Characteristics

ADD vs ADHD

The terms ADD (Attention-Deficit Disorder) and ADHD (Attention-Deficit Hyperactivity Disorder) have changed over the years. ADD, previously used to describe the disorder, is now considered an outdated term for what we now call ADHD (Anderson, 2023). The term ADD was used until around 1987 when "hyperactivity" was added to the name, resulting in the term ADHD. Before 1987, a child could be diagnosed with ADD, either with or without hyperactivity.

However, starting in the early 1990s, the diagnosis shifted to ADHD, encompassing both inattentive and hyperactive/impulsive symptoms (Anderson).

Many people still use the term ADD, either out of habit or because it's more familiar to them than ADHD. Some individuals use it to refer to the inattentive type of ADHD, without hyperactivity. However, this usage was not intended, and continuing to use an outdated term can lead to confusion (Anderson, 2023). The current approach to understanding ADHD is to eliminate the concept of separate types and focus on which symptoms are most prominent; the clusters of symptoms are still considered, but they are not classified as distinct types (Anderson).

Most importantly, the diagnosis of ADHD can still apply even if a child does not display hyperactive or impulsive behaviors (Anderson, 2023). This can be confusing for parents or educators who question whether a child could have ADHD without these specific symptoms. Anderson emphasizes that children with prominent inattentive symptoms, and fewer hyperactive symptoms of ADHD, should be evaluated by a trained clinician as they may be more likely to be overlooked at school. It is crucial for teachers to understand that children who are not fidgeting or displaying disruptive behavior can still experience significant difficulties related to ADHD (Anderson). The key point is that a child who struggles with attention, even without the other symptoms that typically result in disruptive behavior, still requires understanding and support.

ADHD: Definition, Characteristics and Diagnostic Criteria

Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental condition that affects a significant number of children and often persists into adulthood. As teachers, it is important for us to understand ADHD, its characteristics, and its different types in order to provide appropriate support to our students. This section aims to provide you with an overview of ADHD.

Definition and Characteristics

The Diagnostic and Statistical Manual of Mental Disorders (5th ed., text-rev.) [DSM-5-TR], defines ADHD as “a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development” (American Psychological Association, 2022b). ADHD encompasses a combination of persistent difficulties, including challenges in sustaining attention, hyperactivity, and impulsive behavior (Mayo Clinic, 2019). It is important to note that children with ADHD may also experience low self-esteem, difficulties in relationships, and poor academic performance. While some individuals may see a reduction in symptoms as they grow older, others may continue to experience manifestations into adulthood (Mayo Clinic). However, with the right strategies and support, individuals with ADHD can learn to be successful.

Subtypes of ADHD

ADHD can present in different ways, and there are three main subtypes: Predominantly inattentive, predominantly hyperactive/impulsive, and combined type (Mayo Clinic, 2019).

1. **Predominantly Inattentive:** This subtype is characterized by a majority of symptoms related to inattention (Mayo Clinic). Children with predominantly inattentive ADHD may exhibit the following behaviors:
 - Difficulty paying attention to details or making careless mistakes in schoolwork or job tasks.
 - Trouble staying focused on tasks or play.
 - Inattentiveness, even when directly spoken to.
 - Challenges in following instructions and completing assignments.
 - Difficulty organizing tasks and activities.

- Aversion to or dislike of mentally demanding tasks such as homework.
- Frequently losing items required for activities, such as toys or school assignments.
- Easily getting distracted and forgetful regarding daily activities. (Mayo Clinic)

2. **Predominantly Hyperactive/Impulsive:** This subtype primarily involves symptoms of hyperactivity and impulsivity (Mayo Clinic). Children with predominantly hyperactive/impulsive ADHD may display the following behaviors:

- Fidgeting, tapping hands or feet, or squirming in their seats.
- Struggling to remain seated in the classroom or in other situations.
- Constantly being on the go or in motion.
- Engaging in running or climbing when it is inappropriate.
- Difficulty playing or engaging in activities quietly.
- Tendency to talk excessively.
- Frequently blurting out answers, interrupting the questioner.
- Impatience when waiting for their turn.
- Interrupting or intruding on others' conversations, games, or activities. (Mayo Clinic)

3. **Combined Type:** This type involves a mixture of symptoms from both inattentive and hyperactive/impulsive categories (Mayo Clinic). Children with the combined type of ADHD exhibit a combination of the behaviors mentioned above.

Differentiating ADHD from Typical Development

It is important to recognize that most children exhibit inattentiveness, hyperactivity, or impulsivity at some point. Preschoolers, for instance, typically have shorter attention spans and struggle to focus on one activity for an extended period (Mayo Clinic, 2019). Similarly, children's activity levels vary naturally, with some being more energetic than others. Therefore, it is crucial not to label a child as having ADHD solely based on differences from peers or siblings (Mayo Clinic). Furthermore, children who face academic challenges but demonstrate positive relationships at home or with friends may be dealing with factors other than ADHD. Similarly, children who are hyperactive or inattentive at home but maintain unaffected school performance and friendships may not necessarily have ADHD (Mayo Clinic).

Understanding ADHD and its various forms is vital for teachers to provide appropriate support and accommodations to students with this condition. By recognizing the characteristics of ADHD and distinguishing them from typical developmental behaviors, teachers can play a significant role in helping students with ADHD thrive academically and socially. Early diagnosis and intervention, as well as collaboration with healthcare professionals and parents, can make a substantial difference in the outcomes for children with ADHD.

Diagnosis

Medical Diagnosis Vs Educational Diagnosis

In the world of education, it is important for teachers to understand the differences between a medical diagnosis and an educational diagnosis of ADHD. Families often encounter confusion when they realize that a medical diagnosis alone does not automatically qualify a child for special education services at school. This section aims to clarify these distinctions and guide teachers through the process to ensure that students receive the support they need.

Medical Diagnosis

A medical diagnosis, also known as a clinical diagnosis, is conducted by a healthcare professional, such as a pediatrician, psychologist, or psychiatrist (Feingold, 2021). The diagnosis is based on the criteria outlined in the *DSM-5*, published and updated by the American Psychiatric Association. Elements of the process typically include clinical interviews, normed rating scales, physical exam, considerations of learning disabilities, and comorbid condition evaluation (Maschke, 2023). For children 16-years-old and younger, the *DSM-5* requires six or more symptoms to be present for six months or more, existing prior to age 12; for adults 17-years-old and older, the *DSM-5* requires that five symptoms be present (Maschke). Further, “symptoms interfere with or reduce the quality of social, academic, or occupational functioning,” and cannot be better explained by a different mental disorder (Maschke; CDC, 2022). Parents typically pay for costs associated with the medical testing, although it may be covered by health insurance. The results of the medical diagnosis inform treatment plans and guide the next steps for the family and the interdisciplinary team of professionals supporting the child (Feingold).

Educational Diagnosis

On the other hand, an educational diagnosis, often referred to as a school identification, is conducted by the Individualized Education Program (IEP) team at the school, which includes the parents, as well as several school-based team members (Feingold, 2021). An IEP is regulated by the Individuals with Disabilities Act (IDEA), which “governs all special education services . . . to guarantee special education and related services for those students who meet the criteria for eligibility in a number of distinct categories of disability” (LDOnline, 2023). Further, IDEA guarantees a Free Appropriate Public Education (FAPE), one of the cornerstones of IDEA, for eligible students. The IEP team typically consists of the child's classroom teacher or another general education teacher, a special education teacher, school psychologist, Local Education Agency [LEA]

representative, and other relevant, related service providers. Parents have the right to request an evaluation from the school if they suspect a disability, or school staff may request the parents' permission to conduct an evaluation (Feingold). Unlike a medical diagnosis, educational assessments are conducted at school and do not involve any costs for families.

Feingold (2021) explains that to receive an educational diagnosis of ADHD under IDEA, the following criteria must be met:

1. The child must meet the criteria for one of the 13 categories of disability outlined in the federal Individuals with Disabilities Education Act (IDEA). ADHD is covered under the category of Other Health Impairment, or OHI.
2. The assessments must indicate that the disability significantly hampers the child's ability to learn in a school setting to the extent that the student cannot access education without special services.

If a child qualifies for an educational diagnosis of a disability under IDEA, the IEP team collaborates to develop an IEP (Feingold). The child then receives appropriate special services determined by the team to facilitate productive participation in school, at no cost to the family. It's important to note that this information specifically applies to students in public schools, as students in private schools have different (and sometimes limited) rights (Feingold).

If a child is not eligible for services under IDEA, that individual may still qualify under Section 504 of the Rehabilitation Act of 1973, which is a civil rights statute that "prohibits discrimination on the basis of disabling conditions by programs and activities receiving or benefiting from federal financial assistance" (LDOnline, 2023). Section 504 is more flexible than IDEA as far as eligibility, has "less specific procedural criteria that govern the requirements of the school personnel," but also tends to be less comprehensive than an IEP (LDOnline).

It is worth noting that although a child may receive a medical diagnosis of a disability like dyslexia or ADHD, the individual must also obtain an educational

diagnosis that aligns with one of the 13 disabilities outlined in IDEA. Further, it must be demonstrated that the disability has a significant impact on the child's access to public education in order for special education services to be implemented under the statute (Feingold, 2021). Per IDEA, the school is only required to “consider” an outside medical diagnosis in the evaluation, but it does not determine whether services will be granted.

Medication & Non-Medication Treatment Options

When a child is diagnosed with ADHD, parents and educators often have questions about the most suitable treatment for the child. Managing ADHD involves finding the right approach, while considering individual needs and family dynamics. Collaboration with healthcare providers, therapists, teachers, coaches, and family members is crucial. This section will explore the different treatment options for ADHD to provide teachers with a comprehensive understanding of the available interventions. Classroom accommodations and modifications will be discussed further in section 3.

Non-Medication Options

Psychosocial Treatment Options

Since the late 1990s, there has been strong evidence in support of psychosocial treatment options of ADHD for children and adolescents (Shrestha et al., 2020). Shrestha et al. share some psychosocial treatment options: Behavior management interventions, training interventions, and mind-body interventions as identified below (Shrestha et al., 2020).

Behavioral Interventions. Behavioral intervention is an effective treatment option for reducing disruptive behaviors associated with ADHD and improving relationships within the family and peer interactions (CDC, 2022). Behavioral interventions for ADHD focus on modifying behavioral contingencies so that children increase desired behaviors and decrease undesirable ones (Shrestha et

al., 2020). Peer-based interventions for ADHD aim to improve social interactions and relationships among children with ADHD and their peers.

Training Interventions. Psychotherapy training interventions for ADHD target the child's behavior and provide training directly to the child or adolescent by a mental health professional (Shrestha et al., 2020). Cognitive behavioral therapy (CBT), cognitive training, play therapy, and organizational skills training are examples of such interventions.

CBT. CBT is a psychological treatment that focuses on addressing faulty thinking patterns and unhelpful behaviors (Shrestha et al., 2020). It has been effective for various mental health conditions but has shown mixed results for ADHD. Studies involving adolescents receiving CBT found improved parent ratings of ADHD symptoms but limited evidence of functional impairment benefits.

Cognitive Training. Cognitive training aims to improve working memory and often involves computerized training (Shrestha et al., 2020). Programs like Cogmed Working Memory Training (CWMT) and Braingame Brian have been used. Research has shown that CWMT can enhance verbal working memory in adolescents, while the effectiveness of Braingame Brian remains unclear (Shrestha et al.). Parent and teacher ratings of ADHD symptoms did not consistently improve with cognitive training interventions.

Organizational Skills Training. Organizational skills training focuses on developing organization, cooperation, and time management skills in children with ADHD (Shrestha et al., 2020). Techniques such as using daily planners, to-do lists, and breaking tasks into smaller parts are employed. A digital game called Plan-it Commander has been designed for this purpose and has shown positive ratings from teachers and parents regarding time management and working memory skills in children.

Mind-Body Interventions

Meditation. Meditation has shown promise in improving ADHD symptoms, particularly inattention, in children (Shrestha et al., 2020). However, it may not have significant effects on inhibition and working memory in children.

Yoga. Yoga, which combines mental and physical control, has gained popularity and offers strategies to enhance attention and emotion regulation skills. It may activate the prefrontal cortex and improve ADHD symptoms (Shrestha et al.). Yoga has also been associated with increased emotional self-regulation, improved executive function in adolescents, and other physical and mental health benefits.

Mindfulness. Mindfulness, a practice rooted in Buddhist tradition, has gained popularity in the Western world. Neuroimaging studies have shown changes in the brain associated with attention after mindfulness practice (Shrestha et al., 2020). Still, more research is needed to determine the benefits for children with ADHD.

Medication Treatment Options

Medication can be an essential component of managing ADHD symptoms, helping children regulate their behaviors and enhance their functioning in various settings (CDC, 2022). Stimulants and nonstimulants are FDA-approved medications for treating ADHD in children as young as 6 years old. Stimulants are the most widely used medications, with a significant reduction in ADHD symptoms observed in 70-80% of children taking them (CDC). It's important to note that different medications can affect children differently, and they may experience side effects such as decreased appetite or sleep problems (CDC).

Prevalence Rates and Demographics

According to a 2016 study conducted by the CDC, approximately 9.4% of children between the ages of 2 and 17 in the United States have been diagnosed with

ADHD (ADDitude Editors, 2023). This translates to about 6.1 million children with ADHD in the United States. The prevalence of ADHD varies across different age groups, with 2.4% of young children aged 2 to 5 years, 9.6% of school-age children aged 6 to 11 years, and 13.6% of adolescents aged 12 to 17 years being diagnosed with the disorder (ADDitude Editors). Boys are more likely to receive an ADHD diagnosis than girls, with 12.9% of boys and 5.6% of girls being diagnosed (ADDitude Editors). While ADHD is more commonly diagnosed in boys, research suggests that girls may be underdiagnosed due to differences in how their symptoms manifest (ADDitude).

Various demographic factors, such as race, ethnicity, income, education level, and geographic location, can influence the prevalence of ADHD diagnoses as well. For instance, black children aged 3 to 17 years are more likely to be diagnosed with ADHD or a learning disability compared to white and Hispanic children (ADDitude Editors, 2023). Children from lower income brackets and those with parents who have a high school education or less also have higher ADHD diagnosis rates (ADDitude Editors). Moreover, children living in the U.S. South and rural areas tend to have higher rates of ADHD diagnosis (ADDitude Editors). One possible reason for the higher prevalence of ADHD among students of color, researchers suggest, is “that aspects related to the intersection of race, low socioeconomic status, racial marginalization, and discrimination, including racist microaggressions, may exacerbate the symptoms of ADHD” (American Psychiatric Association, 2020).

It is also important to consider the comorbidities of other conditions with ADHD. Nearly 2/3 of children with ADHD have at least one other condition, such as behavioral or conduct problems (51.5%), learning disorders (45%), anxiety problems (32.7%), depression (16.8%), autism spectrum disorder (ASD) (13.7%), and Tourette syndrome (1.2%) (ADDitude Editors, 2023).

Causes

According to the CDC (2022), the exact cause(s) of ADHD are still unknown, but current research suggests that genetics play a significant role in its development. While several genes have been associated with ADHD, no single gene or combination of genes has been identified as the sole cause of ADHD as of yet (American Psychiatric Association, 2022). Still, it is worth noting that ADHD often runs in families. Research has also revealed anatomical differences in the brains of children with ADHD compared to those without the disorder (American Psychiatric Association). These differences include reduced volumes of gray and white brain matter and distinct brain region activation patterns during certain tasks; the frontal lobes, caudate nucleus, and cerebellar vermis have been found to be affected in ADHD (American Psychiatric Association).

In addition to genetics, scientists are investigating other potential causes and risk factors associated with ADHD. These include brain injury, exposure to environmental risks such as lead during pregnancy or at a young age, alcohol and tobacco use during pregnancy, premature delivery, low birth weight, and significant stress during pregnancy (CDC, 2022; American Psychiatric Association, 2022). It is important to note that research does not support common beliefs that ADHD is caused by factors like consuming excessive sugar, watching too much television, parenting style, or social and environmental factors like poverty or family chaos (CDC). While these factors may exacerbate symptoms, particularly in certain individuals, there is not enough strong evidence to conclude that they are the primary causes of ADHD (CDC).

Section 1 Key Terms

Attention-Deficit Hyperactivity Disorder (ADHD) - A neurodevelopmental condition characterized by a persistent pattern of inattention, hyperactivity, and impulsivity that interferes with functioning or development.

Comorbidity - Refers to the presence of two or more mental disorders or medical conditions in an individual at the same time.

Individualized Education Program (IEP) - A legally binding document developed by a team of education professionals, parents, and sometimes the student, to provide specialized instruction and support for students with disabilities. The IEP outlines specific goals, accommodations, modifications, and services tailored to the individual student's needs.

Individuals with Disabilities Act (IDEA) - A federal law in the United States that ensures children with disabilities have access to a free and appropriate public education (FAPE).

Section 504 - A federal law that prohibits discrimination against individuals with disabilities in programs and activities receiving federal financial assistance. Unlike IDEA, which specifically focuses on educational services for students with disabilities, Section 504 applies more broadly to various settings, such as schools, colleges, workplaces, and public facilities.

Section 1 Discussion Questions

1. How has the understanding and terminology of ADHD evolved over the years? How does this impact your perception and support of students with ADHD?
2. In your experience as an educator, how have you seen the different subtypes of ADHD (inattentive, hyperactive/impulsive, combined) manifest in the classroom? How do these presentations impact students' academic performance and social interactions?
3. Reflecting on the differences between a medical diagnosis and an educational diagnosis of ADHD, what challenges might arise for students and their families during the evaluation process? How can teachers

collaborate with parents and healthcare professionals to ensure a comprehensive understanding of the child's needs?

4. When it comes to the treatment of ADHD, what are your thoughts on the effectiveness of non-medication options such as behavioral interventions, training interventions, and mind-body interventions? How might these interventions complement each other in supporting students with ADHD?
5. How can psychosocial treatments, such as behavior management interventions, training interventions, and CBT principles, be integrated into the classroom?

Section 1 Activities

1. Reflecting on Bias: Reflect on your own biases or misconceptions about ADHD. Consider how these biases may influence your interactions with students who have ADHD and what steps you can take to overcome them. Share your thoughts in a reflective essay or discuss them with a colleague or mentor.
2. Case Study Analysis: Review the following case study and analyze the symptoms and characteristics described. Identify whether the student falls under the predominantly inattentive, predominantly hyperactive/impulsive, or combined type. Discuss strategies you might implement in your classroom to support this student's learning needs.
 - a. Alex is a 7-year-old student in the second grade. He has been exhibiting difficulties with attention, impulsivity, and hyperactivity at school. Alex's parents have noticed similar behaviors at home. Alex often struggles to stay seated during lessons, frequently fidgeting or squirming in his seat. He finds it challenging to wait his turn, repeatedly interrupting conversations or activities. Alex's impulsivity is evident in his abrupt responses and difficulty inhibiting his actions.

He frequently blurts out answers without raising his hand and struggles with self-regulation.

3. Collaborative Support Plan: Think about a student that you have, or imagine one who exhibits significant inattentive symptoms of ADHD but has not been diagnosed or received appropriate support. Develop a collaborative support plan that involves working with the student, the parents, and other school staff. Outline strategies for fostering understanding, addressing the student's needs, and promoting success in the classroom.
4. Identifying ADHD Symptoms: Create a checklist or worksheet that outlines the symptoms of ADHD, including both inattentive and hyperactive/impulsive behaviors. Use reliable sources such as the Mayo Clinic or DSM-5 to ensure accuracy. Discuss the checklist with your colleagues, sharing strategies for recognizing and differentiating ADHD symptoms from typical developmental behaviors.

Section 2: Behavioral and Learning Challenges

As teachers, it is crucial to understand the unique needs and experiences of students with ADHD, as they often face various difficulties in academic settings. ADHD affects children's ability to regulate attention, manage impulses, and control hyperactive behaviors, which can be problematic in the classroom. These challenges can significantly impact their learning, social interactions, and overall well-being. This section will explore the common behavioral and learning challenges associated with ADHD and discuss strategies and interventions that can support students with ADHD in the classroom, fostering an inclusive and effective learning environment.

Behavioral Challenges

Behavioral challenges exhibited by children with ADHD in the classroom can often be misunderstood and misinterpreted. While tantrums and defiance are not symptoms of ADHD itself, they are often a result of underlying ADHD symptoms (Miller, 2023). Children with ADHD may struggle with inattention and impulsivity, making it difficult for them to tolerate repetitive or boring tasks (Miller). As a result, they can become overwhelmed with frustration, leading to impulsive outbursts such as throwing objects, pushing, or yelling (Miller). It is important to note that these behaviors are not driven by malicious intent but rather a difficulty in managing powerful emotions without an outburst (Miller). Additionally, some children with ADHD develop negative behavior patterns over time due to consistent conflict with adults (Miller). This can be particularly challenging for teachers. Understanding the reasons behind these behaviors is essential in creating a supportive and inclusive classroom environment for students with ADHD.

The behavior exhibited by children with ADHD can be better understood by considering their history of growing up with ADHD (Miller, 2023). Children with ADHD are often wired to be attracted to stimuli outside the expected bounds of behavior, leading to conflicts with parents and caregivers from a young age (Miller). This attraction to novelty and impulsivity does not stem from malicious intent but rather the hyperactive and impulsive symptoms of ADHD (Miller). Children with ADHD may struggle to stay seated, constantly seek new experiences, or impulsively engage in activities that catch their attention (Miller). This can create a cycle of negative interactions and lead children to internalize negative beliefs about themselves or react aggressively toward those who criticize their behavior (Miller).

When faced with tasks that are repetitive, boring, or require significant effort, children with ADHD can display resistance and engage in behaviors such as tantrums, arguing, defiance, and power struggles (Miller, 2023). These avoidance

strategies often lead to task demands being changed or tasks being made easier, reinforcing the behavior through a pattern of repetition (Miller). To effectively address these behavioral challenges, children with ADHD often benefit from increased structure, clearer instructions, and proactive discipline strategies (Miller). Providing external regulation of behavior through scaffolding and teaching acceptable behaviors while emphasizing positive relationships and praise can help manage disruptive behavior and promote self-regulation (Miller). Section 3 will go into great detail about instructional and behavior management strategies that are effective for students with ADHD.

Self-regulation, the ability to manage emotions and behavior according to situational demands, is commonly impaired in children with ADHD (Miller, 2023). Difficulties with inhibition, planning, and delay of gratification contribute to poor self-regulation skills, making it challenging for children with ADHD to resist emotional reactions, calm themselves down, adjust to changes, and handle frustration without outbursts (Miller). The behavior problems exhibited by children with ADHD can also affect their relationships with peers (Miller). Factors such as high distractibility, impulsivity, and difficulty delaying gratification can lead to challenges in maintaining pace with conversations, interrupting others, and directing impulsive speech toward peers (Miller). Consequently, children with ADHD may experience difficulties in establishing and maintaining friendships. Research has shown that boys with ADHD, after only a few hours of interaction, are more likely to be disliked and rejected by their peers compared to boys without a diagnosis (Miller). Similarly, girls with ADHD may experience even higher levels of peer rejection due to behavior patterns that deviate from gender norms (Miller).

Learning Challenges

ADHD, although not classified as a learning disability, can significantly impact various aspects of learning for students. While some symptoms of ADHD may resemble those of a learning disability, it is essential for teachers to understand

the distinct characteristics and challenges associated with ADHD in order to provide effective support and accommodations for students in the classroom (Villines, 2021).

One of the primary ways in which ADHD can impact learning is through reduced executive function. Executive functions are cognitive processes that help individuals plan, organize, and coordinate their thoughts and actions (Villines, 2021). Students with ADHD may struggle with initiating tasks, meeting assignment deadlines, and regulating their emotions, which can affect their academic performance and overall engagement in the learning process. (Villines).

Disorganization is another challenge that students with ADHD may face in their learning. The difficulty in organizing and prioritizing tasks can hinder their ability to study effectively, meet deadlines, and stay on top of schoolwork (Villines). As a result, their grades may suffer, and they may experience feelings of frustration and overwhelm.

Hyperactivity is another characteristic of ADHD that can have implications for learning. Students with ADHD may find it challenging to sit still, wait their turn, or remain quiet, leading to difficulties in the classroom environment (Villines, 2021). This hyperactive behavior can also affect their relationships with peers and teachers, further impacting their learning experience (Villines). Impulsivity is another element of ADHD that can have consequences for learning. Students with ADHD may engage in impulsive behavior, leading to disruptions in the classroom and potential disciplinary issues (Villines, 2021). Additionally, their impulsivity may result in questionable decisions, such as neglecting to study or complete homework assignments. Oftentimes, teachers mistake hyperactivity and impulsivity associated with ADHD for noncompliance, which negatively impacts the student-teacher relationship, and can lead to unfair disciplinary issues.

Trouble paying attention is a well-known symptom of ADHD that can significantly impact a student's ability to learn. Students with ADHD may struggle to maintain focus during lessons, leading to difficulties in processing and retaining information

(Villines, 2021). This attention deficit can manifest during tests and assessments, even when the student possesses knowledge of the material (Villines).

Distractions can prevent them from completing tasks accurately or understanding the questions fully. Furthermore, students with ADHD may struggle with paying attention to detail. They may rush through tasks, overlook important instructions, or have difficulty focusing on the finer points of an assignment (Villines). These challenges can impact their accuracy and understanding of academic tasks, potentially leading to errors or incomplete work.

By understanding the specific learning challenges associated with ADHD, teachers can implement appropriate strategies and accommodations to support students with ADHD in the classroom. Providing structured routines, clear instructions, frequent reminders, and opportunities for movement breaks can help students with ADHD better manage their symptoms and engage in the learning process effectively. Creating an inclusive and supportive learning environment that emphasizes strengths and encourages positive relationships can also contribute to the academic success and well-being of students with ADHD. Section 3 will provide a number of detailed strategies to utilize in the classroom.

Section 2 Key Terms

Executive Functions - Cognitive processes that help individuals plan, organize, and coordinate their thoughts and actions

Hyperactivity - Excessive and abnormal levels of physical restlessness, fidgeting, and an inability to remain still or quiet for an extended period.

Impulsivity - A core symptom of ADHD characterized by acting without forethought or consideration of consequences, often leading to impulsive behavior, hasty decision-making, and difficulty controlling immediate reactions.

Inattention - A core symptom of ADHD characterized by difficulties in sustaining attention, being easily distracted, and having trouble focusing on tasks or instructions.

Self-regulation - The ability to manage one's emotions, behavior, and impulses in accordance with the demands of a particular situation.

Strengths-Based Approach - A perspective that focuses on identifying and leveraging the unique strengths and abilities of individuals with ADHD, rather than solely emphasizing their challenges and deficits.

Structured Routines - Establishing predictable and consistent daily routines and schedules to help students with ADHD better manage their time, tasks, and transitions.

Section 2 Discussion Questions

1. How can you differentiate between behavior driven by ADHD symptoms and intentional misbehavior in students with ADHD? How might this understanding influence your approach to addressing challenging behaviors? How does this understanding affect your relationships with students?
2. How do you already, or how can you support students with ADHD in developing and maintaining positive relationships with their peers, considering challenges such as distractibility, impulsivity, and difficulty delaying gratification?
3. Reflect on your current practices in supporting students with ADHD. Are there any changes or adjustments you can make based on the information provided to better meet their needs?
4. How can you involve parents or guardians in supporting students with ADHD both academically and behaviorally? How can you collaborate to

ensure consistency across home and school? What are some challenges associated with parent/guardian collaboration?

Section 2 Activities

1. Conduct a self-reflection: Think about a specific student with ADHD in your class and reflect on that student's behavioral challenges.
 - a. Consider the underlying reasons behind the behaviors and how these behaviors might be related to their ADHD symptoms.
 - b. What strategies have you implemented so far, and how effective have they been?
 - c. Are there any new insights or approaches you gained from reading this section that you could apply?
2. Collaborate with colleagues: Engage in a discussion with your colleagues about their experiences in supporting students with ADHD.
 - a. Share challenges, successes, and strategies that have been effective in their classrooms.
 - b. Discuss ways to create a supportive and inclusive school environment that addresses the unique needs of students with ADHD.
3. Seek student perspectives: Arrange a conversation with one or two students who have ADHD (with student consent, guardian consent and appropriate support).
 - a. Ask them about their experiences in the classroom, their strengths, challenges, and any suggestions they may have for improving their learning environment.

- b. Reflect on the insights gained from these conversations and consider how you can integrate their perspectives into your teaching approach.
- 4. Explore resources and professional development opportunities: Research available resources and professional development opportunities focused on supporting students with ADHD.
 - a. Identify at least three resources or opportunities that you find interesting and relevant to your teaching practice.
 - b. Write a brief summary for each resource, including how it could enhance your understanding and support for students with ADHD.

Section 3: Instructional & Behavior Management Strategies

When it comes to supporting students with ADHD in the classroom, effective instructional and behavioral strategies play a crucial role in maximizing learning potential and overall well being. As educators, it is essential to understand the unique challenges that students with ADHD may face and to employ strategies that address their specific needs. By implementing instructional techniques and behavior management approaches that cater to their learning style and needs, promote engagement, and support self-regulation, teachers can create an inclusive and supportive learning environment that empowers students with ADHD to thrive academically and develop essential skills for success. This section will explore a range of evidence-based instructional and behavior management strategies designed to optimize learning outcomes for students with ADHD, providing teachers with practical tools and techniques to effectively support these students in their educational journey. It is crucial to recognize that each child with ADHD is unique, and as a result, there is no one-size-fits-all educational program, practice, or setting that will be optimal for all children (Lombardi, 2019).

Effective programs designed for children with ADHD typically incorporate three key elements: Academic instruction, behavior management strategies, and classroom accommodations (Lombardi).

Effective Instructional Strategies for Students with ADHD

Students with ADHD may encounter difficulties in focusing, remembering directions, and managing impulsive behaviors in the classroom. However, as teachers, there are several effective instructional strategies that can be employed to support the academic and behavioral success of students with ADHD, as well as benefit all students in the classroom. These include the following (Vierstra, 2023):

Classroom Practices

Give transition warnings: Transitioning between activities can be challenging for students with ADHD. Providing advance notice and using nonverbal signals, such as tapping on their desk, can help students prepare for what comes next.

Establishing time limits for activities can also help with transitions, as well as with maintaining engagement. Use timers to visually display the time remaining in an activity or until a break. Online classroom timers or physical timers projected on a document camera can help students better manage their time.

Give feedback with respectful redirection: Since managing emotions can be challenging for students with ADHD, it is important to provide immediate, calm, direct and concise feedback. Respectful redirection is a positive behavior strategy that allows for in-the-moment feedback without drawing unnecessary attention. Addressing issues privately and promptly helps maintain a positive learning environment.

Break directions into chunks: Students with ADHD may struggle with following multi-step directions. Breaking down directions into manageable chunks can alleviate confusion and frustration. Invest a little extra time upfront to review the purpose, materials, and clear instructions for each step of an activity or project.

Use checklists and schedules: Time management and organization can be challenging for students with ADHD. Providing checklists and schedules can assist students in staying organized and completing tasks on time. Sharing organization printables with families can also promote consistent organization strategies at home.

Take brain breaks: Extended periods of sitting can be difficult for students with ADHD. Implementing brain breaks allows students to switch activities for a few minutes. Brain breaks can involve physical movement, mindfulness exercises, sensory activities, or other strategies to help students recharge and refocus. While brain breaks might be essential for children with ADHD, they are also beneficial for students without attention deficits.

Use wait time: Students with ADHD may rush to answer questions or respond impulsively. Incorporating wait time, such as a pause of three to seven seconds after asking a question, allows students to process information and carefully consider their responses. This strategy supports thoughtful engagement and encourages students to take their time.

During Lessons

Introducing Lessons

To create a conducive learning environment for students with ADHD, teachers should structure academic lessons carefully. This involves explaining the objectives of the current lesson and connecting them with previous lessons. According to Lombardi (2019), several effective teaching practices can facilitate this process:

Outline the lesson and activities: Begin the lesson by summarizing the sequence of activities planned for the day. This helps students understand the flow of the lesson, such as reviewing the previous lesson before introducing new information and incorporating group and independent work. It is also helpful to keep these steps projected or written on the board, to remind students what they will be doing next.

Review previous lessons: Take time to review pertinent information from previous lessons related to the current topic. This helps reinforce prior knowledge and creates connections.

Set learning expectations: Clearly state what students are expected to learn during the lesson. For example, explain that a language arts lesson will involve reading a story about butterfly migration and identifying new vocabulary words in the story.

Set behavioral expectations: Describe and model the expected behavior during the lesson. For instance, inform students that they can engage in quiet conversations with their neighbors while working on seatwork or raise their hands to get your attention.

State needed materials: Identify all the materials required for the lesson to ensure students are prepared. For example, specify that students need their journals and pencils for journal writing or crayons, scissors, and colored paper for an art project.

Explain additional resources: Guide students on how to seek help when struggling with the lesson. For instance, direct them to a specific page in the textbook that provides guidance on completing a worksheet. Writing specific page numbers or where to find resources on the board is also helpful, so students can check back as needed.

Simplify instructions, choices, and scheduling: Keep instructions and expectations simple and straightforward for ADHD students. This improves their comprehension and ability to complete tasks efficiently. This same strategy is also beneficial for English Language Learners (ELLs) and students with learning disabilities.

Conducting Lessons

To conduct productive lessons for students with ADHD, effective teachers employ various strategies to engage students, manage transitions, and assess

understanding. Lombardi (2019) offers the following strategies to assist in conducting effective lessons:

Use multisensory materials: Utilize a range of multisensory materials to present academic lessons. Multisensory learning is a Universal Design for Learning (UDL) principle, as well as a brain-based strategy. “Neuroimaging studies indicate that multisensory learning activates larger parts of our brains, therefore increasing the chances of improved neural connections . . . Basically, the more of our brain we use, the better chance we have of remembering things later and connecting new knowledge to things that we already know” (Anderson, 2019). Some multisensory teaching strategies include:

- **Visual aids:** Utilize visual materials such as charts, graphic organizers, diagrams, graphs, maps, and illustrations to reinforce concepts. Visual aids help students visualize and make connections between ideas, improving comprehension and retention.
- **Kinesthetic activities:** Incorporate movement and hands-on activities into lessons. For example, students can act out a historical event, perform a science experiment, or use manipulatives like blocks or objects to solve math problems. Kinesthetic activities engage students physically, promoting active learning and deeper understanding.
- **Auditory elements:** Use auditory cues and resources to support learning. For instance, you can read aloud instructions, provide verbal explanations, or use educational songs, chants, or mnemonics to reinforce key concepts or vocabulary. Listening to audio recordings or having class discussions also enhances auditory learning.
- **Multimedia presentations:** Incorporate multimedia elements such as videos, animations, interactive websites, and educational software into lessons. Multimedia presentations provide a combination of visual and

auditory stimuli, making the content more engaging and accessible to different learning styles.

- **Mnemonics and memory aids:** Teach students mnemonic devices or memory aids that involve multiple senses. For example, using acronyms, rhymes, or visual imagery to remember information. This technique helps students associate the content with vivid mental images or cues, enhancing memory and recall.
- **Manipulatives and sensory tools:** Provide students with manipulatives and sensory tools like counting blocks, textured objects, stress balls, or fidget toys. These tools offer tactile stimulation and can be used to represent and manipulate abstract concepts, improving understanding and retention.

Ask probing questions: After posing a question, allow students sufficient time to work out the answer before probing for the correct response. Encourage follow-up questions that give students opportunities to demonstrate their knowledge.

Perform ongoing student evaluation: Continuously monitor student comprehension and identify those who require additional assistance. Look for signs of lack of understanding, such as daydreaming or visible frustration, and provide extra explanations or peer tutoring opportunities. Low-stakes, formative evaluations work well for this, including:

- **Quick quizzes or polls:** Use technology tools or classroom response systems to create short quizzes or polls with multiple-choice or true/false questions. Students can answer the questions anonymously, allowing the teacher to assess their understanding in real-time and adjust instruction accordingly. This can be done using poll options in Nearpod, Plickers, Socrative, or Formative. EdPuzzle is also a great option for formative assessments while watching a video.
- **Think-pair-share:** Pose a question or problem to the class and give students a few moments to think individually about their responses. Then, have

students pair up and discuss their thoughts with a partner. This process encourages active engagement and gives students an opportunity to articulate their ideas before sharing with the whole class.

- **Thumbs up/down or hand signals:** Use simple hand signals or thumbs up/down gestures to quickly gauge student understanding. For example, you can ask a yes/no question or ask students to rate their confidence on a scale of 1 to 5 by displaying the corresponding number of fingers. This method provides immediate feedback on student comprehension.
- **Whiteboard or sticky notes:** Give each student a small whiteboard or sticky notes and ask them to write or draw their response to a question or problem. This method allows for individual responses and can be easily reviewed by the teacher to gauge student understanding.

Help students correct their own mistakes: Teach students how to identify and correct their own mistakes. Encourage them to check their calculations in math problems or remind them of challenging spelling rules to avoid common errors. Error analysis activities can also help to hone in on these skills.

Ending Lessons

Lombardi (2019) explains that effective teachers conclude their lessons by conducting closure activities and preparing students for the next activity:

Closure Activities: Review completed assignments for some students to assess their understanding and gauge the readiness of the class for the next lesson.

Preview the next lesson: Instruct students on how to prepare for the upcoming lesson. For example, inform them to put away their textbooks and gather at the front of the room for a large-group spelling lesson.

Behavior Management Strategies for ADHD

Behavior management strategies for students with ADHD are essential in creating a positive and productive learning environment. Verbal reinforcement of appropriate behavior, particularly through specific praise, is a highly effective strategy (Lombardi, 2019). Teachers should praise students with ADHD frequently, and specifically highlight the positive behavior they exhibit; it's important to define the behavior being acknowledged and give immediate and varied statements of praise (Lombardi). Consistency and sincerity in providing praise are crucial to ensure its effectiveness.

Instead of focusing on punishment, effective teachers prioritize positive reinforcement (Lombardi, 2019). Negative consequences may temporarily change behavior but rarely lead to long-term attitude and behavior changes; punishment often rewards misbehaving students with attention, potentially increasing the frequency and intensity of inappropriate behavior (Lombardi). On the other hand, positive reinforcement, such as praise, shapes a student's behavior over time by promoting a positive attitude.

Lombardi (2019) dives deeper into additional behavior management strategies that are effective for kids with ADHD:

Be predictable: Structure and consistency are crucial for students with ADHD. Minimize the number of rules and choices, providing clear expectations and consequences. Predictability helps students understand what is expected of them.

Selectively Ignore Inappropriate Behavior: Selective ignoring involves disregarding certain inappropriate behaviors that are unintentional, unlikely to recur, or aimed at gaining attention without disrupting the classroom or others' learning (Lombardi). By not providing attention or reinforcement for these behaviors, teachers can diminish their occurrence.

Provide Calming Manipulatives: While some objects can be distracting, some students with ADHD benefit from having access to objects that can be quietly

manipulated. These manipulatives help provide sensory input and assist students in focusing on the lesson while keeping their hands occupied.

Allow for Breaks: Permitting students with ADHD to take short breaks from class, such as running an errand or returning a book to the library, can be an effective way to settle them down and enable them to return to the classroom ready to concentrate. These brief moments outside the classroom can serve as a reset and help students regain focus.

Activity Reinforcement: Activity reinforcement involves allowing students to engage in a less desirable behavior before participating in a preferred activity. For example, a teacher may allow a student to take a short break or participate in a preferred activity after completing a less preferred task (Lombardi). This technique can motivate students by providing them with a reward or incentive.

Hurdle Helping: Hurdle helping involves offering encouragement, support, and assistance to prevent students from becoming frustrated with a challenging assignment. Teachers can provide additional materials or information, enlist peer support, or break down complex tasks into smaller, more manageable steps. By offering assistance, teachers help students overcome obstacles and maintain their motivation.

Parent Conferences: Involving parents as partners in planning for the success of students with ADHD is crucial. This includes seeking parental input in behavioral intervention strategies, maintaining frequent communication between parents and teachers, and collaborating in monitoring the student's progress. Parent conferences provide a platform for discussing strategies, sharing observations, and aligning efforts between home and school.

Nonverbal Prompts: Provide discrete cues to help students with ADHD stay on task and offer advance warnings before calling on them. Avoid drawing attention to differences between students with ADHD and their peers, and refrain from using

sarcasm or criticism. Some examples of discrete cues to help with on-task behavior include:

- **Proximity control:** When communicating with students, moving closer to where they are standing or sitting helps them focus and pay attention to the teacher's instructions.
- **Visual cues:** Use a non-verbal cue, such as a hand signal to discreetly remind the student to refocus or pay attention. For example, touching your nose, raising a finger, or tapping on the desk could be signals that mean "stay focused" or "pay attention."
- **Gestural cues:** Use subtle gestures to redirect students' behavior without drawing unnecessary attention to them. A simple nod or eye contact can communicate a message like "get back on task" or "listen attentively."
- **Personalized cues:** Develop individualized cues based on the student's preferences or agreed-upon signals. This could involve a specific gesture, touch, or word that has a mutually understood meaning between the teacher and the student.

Self-Regulation and Self-Management: Some students with ADHD benefit from instruction and support to develop self-regulation skills. This involves teaching students how to manage their own behavior and make appropriate choices. Strategies for self-regulation may include:

- **Problem-solving sessions:** Engage students in discussions to help them resolve social conflicts. Teachers can facilitate discussions between students involved in a conflict and encourage them to find mutually agreeable solutions in a supervised setting.
- **Behavioral contracts and management plans:** These should be individualized plans that outline specific academic or behavioral goals for the student with ADHD. They identify target behaviors and strategies for

responding to inappropriate behavior. The plans should be created collaboratively with input from both the teacher and parents, ensuring that the goals are meaningful and important to the student.

- **Self-management systems:** Gradually shift responsibility to students to monitor and evaluate their own behavior. In these systems, the teacher and student establish a rating scale for target behaviors, and students are able to self-monitor their behavior. Students then earn points or rewards based on their self-ratings, promoting self-awareness and self-regulation.

Accommodations and Modifications

IEPs and 504 Plans are legal documents that require certain accommodations and modifications for students. For students with ADHD, common accommodations include extra time on tests or assignments, positive reinforcement and feedback, the use of assistive technology, sensory breaks, and changes to the environment to limit distractions (preferential seating, seating away from windows, etc.) (CDC, 2022). Still, teachers can provide accommodations for students with ADHD, even if they do not have an IEP or 504 plan. Children and Adults with Attention-Deficit/Hyperactivity Disorder [CHADD] (2023) provides the following tips and strategies to accommodate students with ADHD:

Seating:

- Seating accommodations might include optimal seating arrangements, such as arranging desks in U-shapes or rows to minimize distractions and promote focus.
- Seating the student near the teacher or responsible peers can also be helpful. Proximity to the teacher allows for focused attention and clarifying directions; seeing others engaged in tasks can serve as a cue for students to return to their own tasks.

Organization:

- Provide an assignment notebook to help students track and remember assignments, and teach them how to use it effectively.
- Offer a backup way to obtain assignments, such as providing a digital copy through the classroom website. Students who struggle with organization may need alternative strategies to access and complete their assignments effectively.
- Notify parents/guardians of important due dates. Regular communication with adults at home about assignment deadlines and important information ensures everyone can support the student's organization.

Classroom Management:

- Teach and reinforce good listening skills. Provide specific instructions on what to do, and model such behaviors regularly.
- Establish procedures and routines. Practice, monitor, review, and reteach classroom routines until they become habitual. Consistency and repetition help students with ADHD navigate the classroom environment more effectively.
- Provide positive feedback. Offer at least three times more positive feedback than negative feedback to motivate and reinforce desired behavior. Specific praise helps students understand which behaviors to repeat.

Information Delivery:

- Combine written or pictorial directions with oral instructions. Students with ADHD may miss parts of oral directions, so providing written or visual instructions helps fill in the gaps and enhance comprehension.
- Use graphic organizers and outlines for note-taking. Presenting information with visual aids improves understanding and retention for students.
- Incorporate multisensory instruction.

- Give instructions one step at a time. Students with ADHD may struggle with memory, so breaking instructions into smaller, manageable steps and repeating them helps improve understanding and retention.
- Break down large projects into smaller tasks with deadlines. Students with ADHD may find it challenging to tackle large projects without guidance. Breaking them into smaller, manageable tasks with clear deadlines helps promote organization and prevents last-minute rushing.

Student Work:

- Match independent assignments to the student's ability. Adjust the complexity of independent assignments based on the student's skill level; this ensures that the individual can complete tasks successfully and maintain engagement.
- Shorten assignments when necessary. To account for the time it takes for students with ADHD to complete tasks, consider reducing the number of problems or shortening spelling lists.
- Reduce reliance on handwriting. Allow students to focus on providing answers rather than spending excessive time and effort on handwriting tasks. This can be achieved by providing alternatives such as allowing students to type their answers on a computer or use a word processor, or even dictating their responses to a parent or a scribe (CHADD, 2023).

Section 3 Key Terms

Multisensory materials - Utilizing a range of materials that engage multiple senses to present academic lessons. These may include visual aids, kinesthetic activities, auditory elements, multimedia presentations, mnemonics, manipulatives, and sensory tools.

Nonverbal prompts - Using discrete cues, such as proximity control, visual cues, gestural cues, or personalized cues, to help students with ADHD stay on task and refocus.

Universal Design for Learning (UDL) - An educational framework that aims to provide all students, regardless of their individual learning needs and abilities, with equal opportunities to learn, engage, and succeed in the classroom.

Verbal reinforcement - Providing frequent and specific praise to students with ADHD for exhibiting positive behavior.

Section 3 Discussion Questions

1. How do you currently support students with ADHD in your classroom?
 - a. Are there any specific instructional or behavior management strategies that you already implement?
 - b. How effective do you find these strategies?
2. Reflect on the use of positive reinforcement versus punishment in your classroom.
 - a. How have you prioritized positive reinforcement?
 - b. Have you observed any long-term changes in student attitudes and behavior as a result? Share an example of how positive reinforcement has shaped a student's behavior over time.
 - c. What are some of the challenges associated with using positive reinforcement over punishment?
3. Think about the challenges students with ADHD may face in your classroom.
 - a. How do these challenges impact their learning potential and overall well-being?

- b. How can you address these challenges through instructional and behavior management strategies?
4. Consider the importance of creating an inclusive and supportive learning environment for students with ADHD.
 - a. How can you tailor your instructional techniques and behavior management strategies to cater to their unique needs? What adjustments can you make to promote engagement and support self-regulation?
5. Reflect on the behavior management strategies discussed in the section.
 - a. Which strategies resonate with you the most?
 - b. How can you implement these strategies in your classroom to support students with ADHD?
 - c. How can you collaborate with colleagues or seek professional development opportunities to enhance your knowledge and skills in behavior management for students with ADHD?

Section 3 Activities

1. **Reflection Activity:** Take some time to reflect on your current instructional and behavior management strategies for students with ADHD.
 - a. Consider the strengths and weaknesses of your approach and identify areas for improvement.
 - b. Write a reflection journal entry or create a mind map to organize your thoughts.
2. **Transition Planning:** Develop a checklist or template of transition warnings and a detailed plan for smoothly transitioning between activities in your

classroom, taking into consideration the specific needs of students with ADHD.

- a. Include strategies such as using visual cues, timers, and nonverbal signals to facilitate smooth transitions and minimize disruptions.
 - b. Share your checklist with colleagues, use it in your own classroom, and make it available in your subplan folder.
3. Design a brain break activity guide: Compile a list of brain break activities that can be used in the classroom to provide students with ADHD short breaks to recharge and refocus.
- a. Include a variety of activities involving physical movement, mindfulness exercises, and sensory stimulation.
 - b. Provide step-by-step instructions for each activity and consider creating visual aids or cards to accompany the guide.
4. Research and Reflect: Explore the concept of Universal Design for Learning (UDL) and its application to students with ADHD.
- a. Read articles or watch videos that explain the principles of UDL and how it can benefit students with diverse learning needs.
 - b. Write a short essay, or create bullet points on how you can incorporate UDL principles into your instructional practices.
5. Closure Activity Resource: Create closure activities for your lessons that promote reflection and review of key concepts.
- a. Develop a list of short activities, questions or prompts that encourage students to summarize what they have learned and enable them to make connections to previous lessons.

- b. Implement these closure activities in your lessons and evaluate their impact on student understanding.
- 6. Wait-Time Support: Design a set of wait time cards or signals to incorporate in your classroom.
 - a. Create a set of visually appealing wait time cards that can be easily displayed or distributed in the classroom.
 - i. Each card should represent a specific duration of wait time, such as 5 seconds, 10 seconds, or 15 seconds.
 - ii. Design the cards using bright colors, clear fonts, and engaging visuals to capture students' attention and make them easily recognizable.
 - iii. Experiment with different wait time intervals and non-verbal cues to promote thoughtful engagement and give students with ADHD more time to process information.
 - b. Evaluate the effectiveness of your wait time strategy and make adjustments as needed.

Conclusion

Imagine a classroom where every student is fully engaged, where learning is tailored to meet the needs of each individual, and where the challenges faced by students with attention deficits are understood and addressed with compassion and expertise. By exploring various strategies tailored to the classroom environment, teachers are now prepared to create inclusive learning spaces that cater to students with ADHD. Armed with knowledge about the causes, assessment, and behavioral challenges associated with attention deficits, educators can adapt their instructional and behavior management techniques to effectively support these students. With these newfound skills, educators are well-

equipped to make a positive impact on their teaching practice and create a supportive environment where all students can thrive.

Case Study

Sarah is a 10-year-old student in Mrs. Lychee's 5th grade class. She has been displaying consistent difficulties with attention and focus in the classroom, which has raised concerns for Mrs. Lychee and other teachers. Sarah's parents report similar challenges at home, and they have recently requested an evaluation. Sarah frequently daydreams during lessons and often fails to complete assignments or follow instructions. Mrs. Lychee noticed that she struggles to sustain her attention, particularly during tasks that require prolonged mental effort or organization. She often seems forgetful, misplaces her belongings, and frequently loses important materials such as textbooks, notebooks, and pencils. Sarah's academic performance is inconsistent, with occasional moments of brilliance but overall underachievement. Mrs. Lychee will provide input for the evaluation and will begin implementing strategies with Sarah to help support her academic and behavioral success and to help her self-monitor and self-regulate. She will also collaborate with her colleagues and Sarah's parents to determine the best plan of action.

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