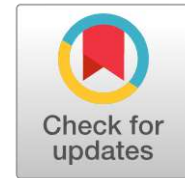


## STRATEGIES FOR TEACHING WRITTEN LANGUAGE TO STUDENTS WITH ATTENTION DEFICITS

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### Abstract

The issue of including students with attention deficits in the educational process is a highly relevant pedagogical challenge due to the high prevalence of these disorders. Attention Deficit Hyperactivity Disorder (ADHD) is the most common condition, but attention deficits can also arise from social causes, such as experiencing psychologically traumatic situations like war. This article presents key strategies for improving written language skills in students with attention deficits of various etiologies and comorbid disorders to facilitate their inclusion in the educational process. Additionally, presented are the results of a two-stage study confirming the practical effectiveness of these strategies.

**Keywords:** attention deficits, neurodevelopmental disorders, dysgraphia, written language teaching strategies, inclusion

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Attention Deficit Hyperactivity Disorder (ADHD) is one of the most prevalent disorders among children and adolescents worldwide. This lifelong neurodevelopmental disorder is often associated with a normal or high level of intelligence (Faraone et al., 2015). In general, intelligence level is not a distinguishing feature of the disorder.

According to the American Psychiatric Association (APA), up to 11% of children and adolescents have ADHD, and around 65% of individuals with ADHD have comorbid learning skill impairments such as dyslexia, dysgraphia, and dyspraxia (impairment of fine motor skills) (APA, 2022). This underscores the importance of appropriate teaching and inclusion strategies for students with ADHD within the educational environment.

Attention problems are also prevalent among other groups of students, including those with neurodevelopmental disabilities and those traumatized by military conflict, such as in Ukraine. This group includes individuals forced to emigrate and internally displaced persons. Ensuring the inclusion of these individuals in both the educational system and society is a critical task faced by a broad range of professionals, including teachers.

Ukraine currently has the highest number of internally displaced people in recent decades of modern European history. These students need to be fully integrated into the educational process, which extends beyond mere academic achievements (Lavrysh et al., 2022).

Teaching native and especially foreign languages to students with ADHD and other attention deficits presents a significant challenge. The neurodevelopmental impairments associated with ADHD are genetically linked to the frontal area of the cerebral cortex, which regulates external behaviours (Martin et al., 2014). This affects the brain's executive functions, such as the ability to make predictions, analyse situations, draw appropriate conclusions, self-organize, sustain attention, and control impulses, as well as motor and verbal activity. Consequently, the primary symptoms of ADHD are hyperactivity, impulsivity, and inattention. The primary cause of ADHD is a genetic dysregulation of two neurotransmitters - dopamine and norepinephrine - in the frontal part of the cerebral cortex (Nigg et al., 2010). In fewer cases, ADHD may result from organic brain damage during the prenatal or early postnatal period (Vorstman & Ophoff, 2013).

The main interventions for managing ADHD and other attention deficits include psychoeducation—educating professionals, students, and parents about the disorder and coping strategies—behavioural therapy, which involves various diagnostic and behavioural correction techniques, and medication in the most severe cases (Chen et al., 2017).

Before initiating the diagnosis and correction of writing skills, we consistently assess students' behavioural issues and develop strategies to correct inappropriate behaviours. This comprehensive approach has proven to be more effective than focusing solely on the correction of specific learning skills, such as writing. Our years of experience support this methodology (Fert, 2019).

The aim of this article is to present the main strategies for improving written language skills in students with attention deficits and comorbid disorders, with the goal of facilitating their inclusion in the educational process.

## **Classroom Management for Students with Attention Deficit.**

### **Pre-Writing (Planning) Strategies**

Impulsive and hyperactive behaviour in students with attention deficits presents a significant challenge for teachers, as such behaviour can distract other students and disrupt the classroom environment. To address this, we consistently utilize the functional-behavioural assessment method and implement positive behavioural interventions to improve student behaviour before beginning to correct specific learning skills such as writing (Fert, 2019).

However, the primary academic difficulties for students with ADHD and other attention disorders stem from inattention. When focusing on writing skills, common issues include difficulties with planning and organizing written work, inconsistency in completing written exercises, numerous mechanical mistakes due to attention deficits, a significantly slower pace in completing tasks, untidy handwriting, and poor overall results in written tasks (Rief, 2005).

Creating an appropriate classroom environment is also crucial for success in improving learning skills. Research and our experience confirm that arranging desks in

classic rows, with the student with attention and behavioural problems seated at the front, is most effective. The classroom should be free of many distracting triggers, with neutral-coloured walls and minimal visual distractions, while providing ample visual support for presenting the current lesson topic (Rief, 2005).

Once behaviour is under control and the classroom space is properly organized, we can focus on improving specific learning skills such as writing. We employ several pre-writing techniques that have proven highly effective (ERIC/OSEP, 2002).

### **Pre-Writing Techniques**

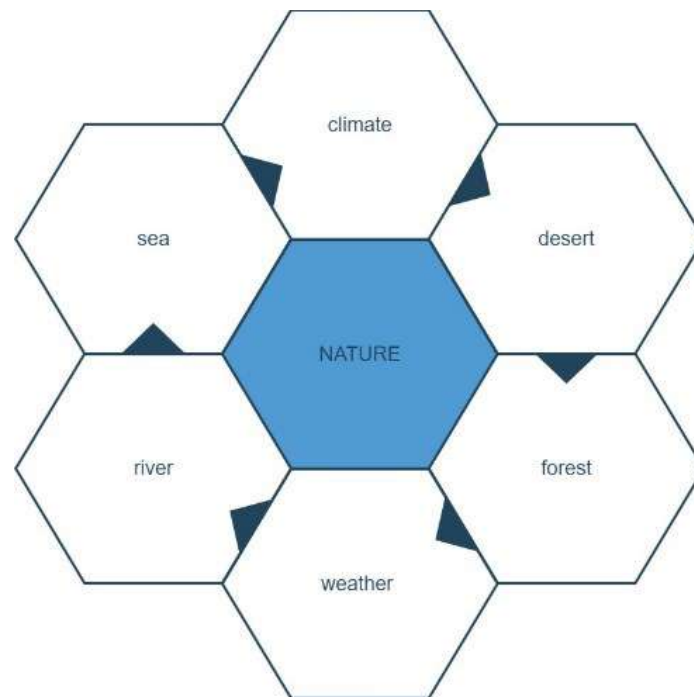
The following strategies are designed to improve students' writing skills by addressing their specific needs, thereby facilitating their inclusion in the educational process.

1. **Brainstorming:** This brief activity, lasting only three to five minutes, involves presenting a theme or topic, with students voicing whatever comes to mind related to the topic. Responses are recorded by the teacher or a designated student (Jensen, 2014). This activity helps sustain attention and concentrate on the topic.
2. **Quick Writes:** Students are given a few minutes to write down everything they can think of related to a given topic.
3. **Questioning:** To increase concentration and organize their writing, students are taught to ask themselves questions during the planning stage, such as "What am I writing about?", "Who am I writing for?", "Why am I writing this?", and "What do I know?".
4. **Verbalization:** For students with an auditory perception preference, using recorders to verbalize their thoughts before transcribing them onto paper can be particularly helpful.
5. **Visual Aids:** Visual aids enhance information retention, especially for students with a visual perception preference (Oxford, 2008). Various visual organizers are used to support pre-writing, including:
  - **Concept Maps:** The main idea or topic is written in the center and surrounded by bubbles containing subtopics or supporting ideas.

- **Writing Frames:** These are templates with blanks to be filled in, helping to structure the writing.
- **Diagrams:** Graphics or circles that compare and contrast different items, such as books, topics, or characters.

**Figure 1.**

*Concept Map*



### **Building Fine Motor Skills, Bypassing Writing Difficulties**

Students with attention deficits often struggle with fine motor skills necessary for writing, leading to messy and illegible handwriting. This difficulty arises due to challenges in controlling movements and speed, spatial relations, force control, and clumsiness. Signs of dysgraphia, a condition impacting writing ability, include unfinished words or letters, inconsistent positioning on the page, and unusual grip or body positions while writing (Synopsis, 2017; Cleveland Clinic, 2022). Teachers who observe these signs should consult with specialists for supportive services.

To address fine motor skill deficits, various activities can be employed:

- Finger warm-up exercises, such as touching each finger to the thumb quickly.
- Strengthening muscles by squeezing a ball.
- Developing fine movements with puzzles or stringing beads.
- Practicing buttoning and tying.

- Engaging in sorting and picking up small objects like shells or buttons.

One reason children struggle with writing is their difficulty in recalling motor planning skills and muscle movements involved in forming strokes in letters. They may also lack a clear mental picture of each letter's appearance, requiring constant visual modeling (Rief, 2005).

Effective strategies for teaching handwriting and improving legibility include:

- Teaching appropriate pencil grip early on.
- Providing sufficient time to avoid time pressure.
- Using paper with vertical lines to assist in spacing letters and words.
- Ensuring a supply of pens and pencils on the desk.
- Grouping letters by formation and introducing frequently used ones first.
- Discussing differences in letters and encouraging independent practice, circling the best ones.

Implementing these strategies can help students with attention deficits improve their fine motor skills and written expression.

### **Strategies for Building Written Expression**

Written expression poses significant challenges for students with ADHD and other neurodevelopmental and behavioural disorders, such as Autism Spectrum Disorder (ASD), Social Anxiety Disorder, and Separation Anxiety Disorder. Learners with ASD often experience difficulties in language and communication, which may lead them to appear disengaged from social interactions (Brahim, 2022).

These difficulties in writing arise due to the involvement of multiple brain processes simultaneously, including memory, attention, organization, sequencing, and planning. Therefore, students with attention issues require special support and differentiated instructions during the educational process. Teachers can employ various strategies to facilitate the development of written expression in these students.

One effective strategy is to create vocabulary lists of words related to a topic and teach students sentence structure. Additionally, teaching students to write more interesting and expanded sentences can be beneficial. This can involve starting with a

basic sentence and encouraging students to enhance it by adding descriptive adjectives, verbs, and prepositional phrases (Rief, 2005).

Teachers can also generate class and individual lists of descriptive language found in literature and poetry and ask students to create scenes and describe them in vivid detail before writing paragraphs about them (McIntyre & Gregresen, 2012). It's important to teach students words that signal sequences, transitional words and phrases, phrases that indicate the author's point of view, and encourage the use of alternatives to overused words. Providing students with reference materials for these words can be helpful (Fetzer, 2003).

Furthermore, self-monitoring is a crucial strategy for building written expression. Students should continuously ask themselves questions from the perspective of potential readers to ensure clarity, logical flow of ideas, and appropriate word choice. Strategies like the POW strategy (Plan, Organize, Write) by Harris et al. (2007) can be employed for this purpose.

Finally, teachers can ask students to answer the 5W questions (who, what, when, where, why, and how) while writing to ensure that they provide sufficient information for their readers.

### **Method**

To prove the efficacy of these strategies, a two-stage research study was conducted among language teachers.

#### **Stage One - Preliminary Study**

To demonstrate the effectiveness of the written language strategies, we conducted a preliminary study involving seventy-five (75) Ukrainian teachers of native and foreign languages. These teachers implemented the strategies in their work with 120 students, aged 6-10, who had various kinds of attention deficits. These deficits were caused by ADHD, other neurodevelopmental disorders, and war-related trauma among displaced children.

Over a four-month period (January-March 2023), the teachers observed notable improvements:

- **Attention sustainability:** 95% of respondents reported improvement.
- **Handwriting:** 86% of respondents reported improvement.
- **Written expression:** 82% of respondents reported improvement.
- **Academic achievement in English and Ukrainian languages:** 92% of respondents reported progress.

While this was a preliminary study, the results suggest that the strategies can be effectively applied to improve the writing skills of students with attention deficits of various etiologies.

## **Stage Two**

To achieve more in-depth results, we employed a qualitative research method between April 2023 and March 2024. Qualitative research is a type of research that explores and provides deeper insights into real-world problems. Unlike quantitative research, which collects numerical data points or involves interventions or treatments, qualitative research generates hypotheses to further investigate and understand quantitative data (Moser & Korstjens, 2017).

### ***Sampling***

The study sample consisted of fifteen (15) foreign language teachers who taught seventeen (17) students aged 6-10 years in general education schools in Lviv, Ukraine. All students were officially diagnosed with ADHD. Over the course of one year (April 2023 - March 2024), all teachers implemented the specified written language strategies in their classrooms.

### ***Data Collection Tool***

To achieve the aims of the study, a structured questionnaire was administered to fifteen (15) foreign language teachers who taught seventeen (17) students aged 6-10 years in general education schools in Lviv, Ukraine. The data collection instrument consisted of two (2) sections, each containing four (4) elements accompanied by multiple-choice answer options.



- **Section One:** This section focused on the sustainability of students' attention and their academic achievement.
- **Section Two:** This section was dedicated to the quality of the students' written tasks.

### Data Analysis and Interpretation

**Table.1**

The results of teachers' questionnaire.

Statements	Agree %	Disagree %	Neutral %
<b>Axis 1: Attention sustainably and academic achievement</b>			
1. More attention during written tasks.	90.33	9.67	0
2. Children demonstrate positive differences in performance of written tasks.	94.67	5.33	0
3. Children do more written work during the lesson.	80	3.34	16.66
4. Marks for the written work got better	100	0	0
<b>Axis 2: Quality of written tasks.</b>			
5. Improvement of preparation to written tasks.	77	14.67	8.33
6. Improvement of written expression	67.67	16.00	16.33
7. improvement of legibility	91.66	0	8.34
8. Improvement of handwriting.	93.33	0.34	6.33

The results of the study demonstrated significant improvements in both sections and all indicators according to the responses of the participants. Particularly in Section One, there was a notable increase in marks for written works (100%), a demonstration of positive differences in performance of written tasks (94.67%), and improvement in sustaining attention in general (90.33%). In Section Two, the best results were achieved in the process of improving handwriting (93.33%) and legibility (91.66%).

This two-phase study confirms the effectiveness of the proposed methods for improving writing skills, and it suggests that these tools can be recommended to a wide range of educators. Additionally, it highlights the importance of continuing this research topic in quantitative studies with a larger sample of respondents, as well as involving parents of children with attention deficits.

## Conclusions

The issue of effectively including children with various neurodevelopmental disorders remains a significant challenge. Common diagnoses such as Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), and other behavioural impairments, including those associated with wartime trauma, are increasingly prevalent. These disorders often manifest with attention deficits, leading to academic difficulties across various areas, including writing. Dysgraphia, a comorbid disorder, is frequently observed in students diagnosed with ADHD, exacerbating their writing challenges.

Drawing from our teaching experience and existing literature, we have formulated key strategies for improving writing skills. These strategies encompass classroom management tailored to students with attention deficits, pre-writing techniques such as planning, methods for improving handwriting, and approaches for fostering written expression.

The effectiveness of these strategies is contingent upon adequately assessing student behaviour and organizing the learning environment accordingly. We conducted a comprehensive two-stage research study involving 75 teachers initially, who worked with children exhibiting various forms of attention deficits. In the second stage, we specifically focused on 15 teachers who were instructing children diagnosed with ADHD. Through qualitative research methods, we aimed to evaluate the effectiveness of our methodological tools in addressing the needs of these students.

The findings from both stages of the study were unanimous: the methodological tools implemented were highly effective in enhancing attention sustainability, improving handwriting, written expression, and overall academic achievement in the students. This affirmation from teachers underscores the practical viability and impact of our strategies in real classroom settings.

These results provide valuable insights into the tangible benefits of tailored approaches for students with attention deficits, reaffirming the importance of targeted interventions in facilitating their educational progress and inclusivity within mainstream classrooms.

While this article addresses the critical aspect of improving writing skills for students with attention deficits, it acknowledges that it does not comprehensively cover the broader issue of fully integrating such students into the educational process. Nonetheless, enhancing writing proficiency stands as a crucial aspect of the broader goal of inclusive education for students with special needs.

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