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## Teaching Writing to Middle School Students with Disabilities: A MERC Research Brief

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**TEACHING WRITING TO  
MIDDLE SCHOOL STUDENTS  
WITH DISABILITIES**

*a MERC research brief*

# TEACHING WRITING TO MIDDLE SCHOOL STUDENTS WITH DISABILITIES: A MERC RESEARCH BRIEF

David Naff, PhD, Jennifer Askue-Collins, Julie Dauksys, PhD - December 2022

Research suggests that students with disabilities (SWDs) tend to significantly underperform their peers on standardized assessments of writing like the National Assessment of Educational Progress (NAEP) and are significantly more likely to read below grade level.<sup>1</sup> This suggests the need to offer targeted writing support. This includes an understanding of the specific needs of students based on the myriad of disabilities that relate to developing writing skills, such as dysgraphia, dyslexia, learning disabilities, Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), and language delays, among others.

This research brief explores research-based strategies for teaching writing to students with disabilities, particularly in middle school given the unique challenges they face outlined in the literature. It will address barriers that SWDs face in becoming proficient writers while also exploring the prominent teaching strategies highlighted in peer-reviewed literature on this subject. The brief is structured to answer a series of practical questions related to this topic, including why it is important to teach writing, the nature of the challenge in teaching writing to students with disabilities, the interventions highlighted in the research that help facilitate this kind of instruction, and examples from the MERC region of local strategies used.

## Why is it important to teach writing?

Writing is a foundational aspect of academic learning for all students throughout elementary, middle, and high school.<sup>2</sup> While it is a fundamental skill taught in English language arts (ELA) classes,<sup>3</sup> it is also a critical academic skill emphasized across subject areas in prominent curricula and standards adopted across the country, including the Virginia Standards of Learning (SOLs). The SOLs require students to take standardized assessments of their writing in the 8th and 11th grade, which include multiple choice and essay questions. Research shows that enhancing writing skills is associated with the development of stronger reading, presentation, and task completion skills.<sup>4</sup> It also helps facilitate deeper understanding of the content that students learn in school, as well as greater ability to communicate one's feelings and experiences.<sup>5</sup> In higher education, students are expected to be well-versed in writing argumentative essays, critical analyses, and summaries, among other types of writing.<sup>6</sup> Writing is also a useful skill for a variety of professions,<sup>7</sup> and research shows that the majority of positions across industries require

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<sup>1</sup> Ray et al. (2018)

<sup>2</sup> Rodgers & Loveall (2022)

<sup>3</sup> Childs (2020)

<sup>4</sup> Saddler et al. (2019)

<sup>5</sup> Foxworth et al. (2016)

<sup>6</sup> Kroesch et al. (2022)

<sup>7</sup> Saddler et al. (2018)

some degree of writing.<sup>8</sup> Developing strong writing skills is also associated with stronger interpersonal communication or social skill development.<sup>9</sup> It is clear that there are myriad short and long-term benefits to ensuring that students develop strong writing skills.

### **What is the nature of the challenge in teaching writing to middle school students with disabilities?**

Students with disabilities often encounter unique challenges in learning how to write that could limit their access to the demonstrated benefits that it offers, thus meriting targeted support. For example, skills associated with writing like metacognitive strategies or self-regulation may be particularly challenging for students with disabilities, which can compound writing difficulties by making it more difficult to generate ideas or stay on task.<sup>10</sup> The following table outlines evidence from research about specific challenges associated with commonly diagnosed disabilities.

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<b>Learning Disabilities (LD)</b>	<p>This category comprises the largest proportion of students with disabilities.<sup>11</sup></p> <ul style="list-style-type: none"><li>• Students may have difficulties with executive functioning and metacognitive strategies.<sup>12</sup></li><li>• They may be more likely to struggle with cognitive processes central to writing, including planning what to write, transferring those ideas into written words, and editing writing to ensure that it is understandable and meaningful.<sup>13</sup></li><li>• They may pay less attention to processes for planning their writing, or produce writing that is unstructured.<sup>14</sup></li><li>• Additionally, they may have difficulty producing legible handwriting and have higher frequency of spelling and grammatical errors than their non-LD peers.<sup>15</sup></li><li>• Students with delays in the expression of oral language may have challenges with comprehension through listening as well as vocabulary development and syntax.<sup>16</sup></li><li>• They may also exhibit “knowledge telling” behavior in their writing where they write down information that they remember related to a topic but fail to draw connections between them in a coherent narrative.<sup>17</sup></li></ul>
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<sup>8</sup> Graham & Hall (2016)

<sup>9</sup> Pennington & Carpenter (2019)

<sup>10</sup> Foxworth et al. (2016)

<sup>11</sup> Saddler et al. (2018)

<sup>12</sup> Kroesch et al. (2022)

<sup>13</sup> Saddler et al. (2018)

<sup>14</sup> Hughes, et al. (2019)

<sup>15</sup> Saddler et al. (2018)

<sup>16</sup> Bahr et al. (2019)

<sup>17</sup> Saddler et al. (2018)

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- Without additional instruction, research suggests that students with LDs are likely to read and write at an elementary grade level through high school.<sup>18</sup>
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**Autism Spectrum Disorder (ASD)**

Students with ASD may be more likely than other students with disabilities to have comorbid intellectual disabilities that compound the challenges that they face with writing. They may also have a lower vocabulary and be less likely to feel motivated by reinforcers utilized by teachers in efforts to encourage writing.<sup>19</sup>

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**Attention Deficit Hyperactivity Disorder (ADHD)**

Students may have similar struggles as their peers with LDs, particularly in the planning and self-regulatory aspects of writing, and may experience particular challenges with sustaining attention on a writing prompt.<sup>20</sup>

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**Intellectual Disabilities (ID)**

In addition to experiencing similar difficulties as students with learning disabilities, these students may also struggle with independence and social engagement that could prove challenging in navigating writing instruction promoting communication or discourse.<sup>21</sup> Intellectual disabilities can also have a negative impact on students' abilities to recall and organize information that they already learned in order to write about it.<sup>22</sup>

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**Dysgraphia**

Students may struggle with producing letters legibly and automatically.<sup>23</sup>

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**Dyslexia**

Students may have trouble with the phonological (speech related), orthographic (spelling related), and pattern detection components of writing.<sup>24</sup>

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In addition to these challenges associated with specific disabilities, research suggests that special education teachers may receive less formal training in how to teach writing than general education teachers, limiting their sense of efficacy in this domain. This indicates the need to ensure that special education teachers receive similar preservice training and ongoing professional development related to writing instruction.<sup>25</sup>

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<sup>18</sup> Schumaker & Deshler (2009)

<sup>19</sup> Pennington et al. (2018), Pennington & Carpenter (2019)

<sup>20</sup> Kroesch et al. (2022)

<sup>21</sup> Rodgers & Loveall (2022)

<sup>22</sup> Pennington & Carpenter (2019)

<sup>23</sup> Bahr et al. (2019)

<sup>24</sup> Bahr et al. (2019)

<sup>25</sup> Graham et al. (2022)

## What interventions help with teaching writing to middle school students with disabilities?

Research suggests that there are several interventions that can help with teaching writing to students with disabilities, and that these can lead to several related benefits like facilitating interpersonal communication skills,<sup>26</sup> enhancing academic achievement,<sup>27</sup> and providing skills that help them obtain higher education<sup>28</sup> or maintain employment as adults.<sup>29</sup> There are several writing skills that research indicates require targeted support for students with disabilities. For example, students need facile **transcription skills like handwriting, keyboarding, or spelling** to be able to devote attention to the process of writing.<sup>30</sup> Understanding the functions of the **parts of speech** and how they relate to each other in a sentence improves sentence construction and combining.<sup>31</sup> SWDs need to develop understanding of **syntax** (how words are organized to express meaning).<sup>32</sup> Fluency in sentence construction allows for higher order text generation such as building paragraphs, stories, and essays.<sup>33</sup> It is important for SWDs to develop **automaticity in letter and word writing** as research shows that this significantly increases the quantity and quality of writing.<sup>34</sup> For SWDs to write independently they have to learn **self-regulation**, which is the ability to direct sufficient attention to attain a goal.<sup>35</sup> Self-regulation involves understanding what is required to complete a task and the skills (self-awareness, self-motivation, and behavior) necessary to carry out the task.<sup>36</sup> Depending on the nature of the disability, SWDs may struggle to learn these key writing skills. In this section we summarize prominent interventions in the literature that help scaffold them.

### Self-Regulated Strategy Development (SRSD)

Perhaps the most prominently featured intervention in the literature for supporting the writing skills of students with disabilities is **Self-Regulated Strategy Development (SRSD)**. This is a framework that provides six stages of step-by-step techniques to scaffold writing instruction: 1) **develop** background knowledge, 2) **discuss** the strategy, 3) **model** the strategy, 4) **memorize** the strategy, 5) provide **guided practice** in the strategy, and finally 6) **independent performance** in using the strategy.<sup>37</sup> Research indicates that applying the SRSD framework to individualized, intensive instruction of students with learning disabilities improves text generation, self-regulation during writing, and expanded length

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<sup>26</sup> Pennington & Carpenter (2019)

<sup>27</sup> Rogers & Loveall (2022)

<sup>28</sup> Rogers & Loveall (2022)

<sup>29</sup> Pennington & Carpenter (2019)

<sup>30</sup> Harris et al. (2017)

<sup>31</sup> Smith, et al. (2021)

<sup>32</sup> Smith, et al. (2021)

<sup>33</sup> Smith, et al. (2021)

<sup>34</sup> Bahr et al. (2019)

<sup>35</sup> Hughes, et al. (2019)

<sup>36</sup> Foxworth et al. (2016)

<sup>37</sup> Ciullo et al. (2019), Mason et al. (2017)

and overall quality of writing.<sup>38</sup> There is also specific evidence that SRSD has proven to be effective in supporting writing for students with disabilities across several domains:

- **Argumentative Writing:** In a 2022 study by Kroesch and colleagues, post-SRSD intervention results indicated that on average, SWDs included 12-14 essay components that included a clear topic sentence with multiple reasons for support, two counter reasons, and a concluding sentence. All students demonstrated an increase in essay quality when using SRSD.
- **Persuasive Writing:** In a 2017 study by Mason and colleagues, SWDs who received intervention using SRSD improved the number of persuasive elements and overall word count when compared to those in a control group.
- **Summary Writing:** In a 2018 study by Sadler and colleagues, SWDs' capacity for writing a summary increased significantly after participating in an SRSD intervention.<sup>39</sup>
- **ACT essay writing:** All high school SWDs in Ray and colleagues' 2018 study showed increases in their overall ACT writing score after an SRSD intervention, which included number of elements, words, and transition words used. They were also more likely to plan essays in advance than prior to intervention.
- **Written Expression:** In a 2019 literature review, Pennington and Carpenter identified SRSD as a key strategy for improving written expression in students with ASD or Complex Communication Needs (CCN).

## Mnemonics and Graphic Organizers

Mnemonics are tools that assist students with remembering rules, steps, or other information, and can be designed as a pattern of letters (acronyms), sentences, images, poems or other associations that are linked to the information to be learned.<sup>40</sup> Mnemonic devices are often taught in combination with an SRSD approach to boost effectiveness.<sup>41</sup>

- **POW + TREE** is used for opinion or persuasive writing. It is an acronym for: **P**ick my idea, **O**rganize my notes, **W**rite and say more + **T**opic **S**entence **R**easons **E**xplain **E**nding.<sup>42</sup>
  - **POW** is a reminder to students to consider what they will write about their topic while thinking about the purpose and audience for the writing.
  - **TREE** helps students remember the components of their essay.
  - Research shows that the use of POW+TREE can help to improve the length of essays, the number of persuasive elements used, and the overall holistic quality of essays for students with emotional and behavioral difficulties.<sup>43</sup>

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<sup>38</sup> Kroesch et al. (2022)

<sup>39</sup> Saddler et al. (2018)

<sup>40</sup> literaryterms.net

<sup>41</sup> Kroesch et al. (2022)

<sup>42</sup> Harris et al. (2017)

<sup>43</sup> Mason et al. (2017)

- SRSD with POW+TREE has been shown to be effective in increasing words written and number of response parts for secondary students with LDs.<sup>44</sup>
- **POW+STACS** is used in narrative writing.<sup>45</sup>
  - For this mnemonic, POW is slightly revised: POW (**P**ick my genre then idea, **O**rganize my notes, **W**rite and say more) + STACS (**S**etting, **T**ension, rising **A**ction, **C**limax, **S**olution)
  - Foxworth and colleagues (2016) found that secondary SWDs' narrative writing improved in number of story elements and length of writing after using POW + STACS within SRSD.
- **POW + WWW+ What=2, How=2** is used for planning and writing stories and narratives.<sup>46</sup>
  - POW + **W**ho is the main character? **W**hen does the story take place? **W**here does the story take place? **W**hat does the main character do or want to do; what do other characters do? **W**hat happens then? **W**hat happens with other characters? **H**ow does the story end? **H**ow does the main character feel? **H**ow do other characters feel?
  - Research shows that this strategy has helped SWDs with increasing the completeness and length of stories and personal narratives.<sup>47</sup> It was also found to be effective in improving the quantity and quality of story writing in students with intellectual disabilities and non-disabled peers in an inclusive classroom.<sup>48</sup>
- **TWA + PLANS** is a strategy for writing summaries:
  - **T**hinking Before Reading, **W**hile Reading, **A**fter Reading; **P**ick goals, **L**ist ways to meet goals, **A**nd, make **N**otes, and **S**equence notes. This strategy has been shown to increase the number of summary elements and quantity of writing in students with emotional and behavioral disabilities.<sup>49</sup>

## Technology-Based Assessments and Interventions

There are several technology-based supports profiled in the research that can prove helpful in supporting writing skill development for SWDs.

- **Spelling Performance Evaluation for Language and Literacy (SPELL-2)** is a diagnostic and prescriptive tool for spelling errors based on inadequate phonemic awareness, orthographic awareness, morphological awareness, semantic awareness, and/or mental graphemic representations.<sup>50</sup>

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<sup>44</sup> Kroesch et al. (2022)

<sup>45</sup> Foxworth et al. (2016)

<sup>46</sup> Zaien (2021)

<sup>47</sup> Lushen et al. (2012)

<sup>48</sup> Güler Bülbül & Özmen (2021)

<sup>49</sup> Saddler et al. (2019)

<sup>50</sup> Bahr et al. (2019)



- **Components of Spelling Test (CoST)** systematically assesses the phonological, orthographic, and morphological aspects of Standard English spelling.<sup>51</sup>
- **WE GO RIITE - Writing Efficiently with Graphic Organizers – Responsive Instruction while Implementing Technology Effectively** provides scaffolds and supports for students writing persuasive, argumentative or narrative drafts by providing prompts where students use the various parts of the writing process in drop-down menus and includes a table-to-text feature.<sup>52</sup>
- **Commas, Punctuation, and Capitalization Strategies Programs** provide computer-based individual instruction that teaches SWDs about the use of commas, punctuation, and capitalization, each through six distinctive rules provided through modules that offer the opportunity for guided practice.<sup>53</sup>
- **Assistive Technologies** help SWDs as they express themselves through writing. They include handwriting tools (e.g. pencil grips), keyboards for touch screens that assist when using a paper or pencil proves difficult, **speech-to-text** or **text-to-speech** dictation tools, **word prediction softwares**, and spelling and grammar checks (that are often embedded in word processing systems). Research suggests that the use of these technologies can not only improve writing skills but also motivation in SWDs.<sup>54</sup>

### **What strategies are utilized in the MERC region for teaching writing to middle school students with disabilities?**

The authors of this brief invited representatives from MERC divisions to share about their approach to teaching writing to students with disabilities. Key strategies include:

- Using a writer’s workshop framework allowing teachers to confer with students in small groups or scaffold instruction for individual support for SWDs
- Providing explicit instruction to SWDs in how to use graphic organizers as well as assistive technology devices like speech-to-text and word prediction
- Providing explicit instruction in idea development as well as structural patterns and sequencing
- Offering direct instruction in phonemic awareness and letter sound knowledge to support spelling skills as a foundation for writing
- Instructing SWDs in language skills for verbal summarizing of information
- Providing explicit instruction to SWDs in prewriting activities, sentence writing, revising, and editing
- Pre-teaching vocabulary to ensure that SWDs have a stronger writing foundation
- Specific strategy instruction such as **LEARN**: **L**ist what you know, **E**xplore what you want to know, **A**ccess information, **R**eflect on what you’re learning, **N**ow make connections

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<sup>51</sup> Bahr et al. (2019)

<sup>52</sup> Hughes, et al. (2019)

<sup>53</sup> Schumaker et al. (2021)

<sup>54</sup> Svensson et al. (2021)



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