

Accessing Skills Toward Successful Writing Development

Whether a kindergartner scrawls a couple of sentences or an eighth-grader prepares an advanced research report, composing text is a complex academic accomplishment. Because it brings many specialized skills together, writing has been thought of as falling at the top of the language hierarchy (Johnson, 1993). In fact, most children struggle to acquire writing skills. In the 2002 NAEP assessment, only 28% of fourth-graders and 31% of eighth-graders performed at or above the “proficient” level (U.S. Dept. of Ed., 2003). Even though these statistics are not specific to students with disabilities, it logically follows that children with disabilities might face additional difficulties in developing their writing skills, depending on the nature of their disability.

This brief provides background information for teachers; school-, district-, and state-level administrators; and professional development providers who seek overview information on writing development for children with disabilities. The brief discusses the complexity of writing along with the set of skills that goes into successful composition. Writing is described in terms of developmental stages and general avenues for remediation. The brief then focuses on how writing may be viewed in terms of access to the general education curriculum. Finally, the brief discusses why writing may pose particular challenges for students with disabilities and what areas should be the focus for remediation.

Writing: A Unique and Complex Undertaking

Writing is a complex domain to learn and teach because it requires bringing together many skills. Writing can also be applied in many different ways.

Writing has its foundation in oral language, but its unique purpose, form, and function set it apart (Goodman, 1986). Whereas oral communication can rely on immediate verbal and nonverbal feedback, written language is highly decontextualized (Sulzby, 1985; 1986). In other words, writing does not provide a lot of contextual clues to help with the communication process (Bruning & Horn, 2000). Writing requires more specificity and a better sense of an (absent) audience than does communication in the oral domain (Johnson, 1993).

As children come to understand writing’s unique form, they must build and hone their competency in two broad areas: writing mechanics and writing process. Each contains a number of subskills. Writing *mechanics* involve everything from physically producing text to spelling correctly and producing accurate grammar. The writing *process* involves generating and organizing information, of which planning and editing are a part. The chart below illustrates the various tasks involved with writing and the prerequisite skills for each.

Task	Prerequisite skills
Writing Mechanics	
Graphemic realization of writing	<ul style="list-style-type: none"> • Symbolic understanding (symbols have meaning) • Alphabetic principle (letters represent speech segments) • Memory for letters • Visual discrimination
Spelling	<ul style="list-style-type: none"> • Fine-motor skills (handwriting and typing) • Graphemic realization of writing • Sound-symbol connection • Recognition and understanding of spelling conventions and patterns
Vocabulary	<ul style="list-style-type: none"> • Memory for regularly and irregularly spelled words • Linguistic comprehension • Memory for words
Grammar/syntax/semantics	<ul style="list-style-type: none"> • Recognition and understanding of grammatical patterns • Memory for syntactically correct patterns • Understanding and application of semantic conventions
Punctuation/capitalization	<ul style="list-style-type: none"> • Memory for punctuation types and capitalization rules • Understanding and application of punctuation and capitalization
Writing Process	
Acquire knowledge	<ul style="list-style-type: none"> • Auditory, nonverbal, and reading comprehension
Retrieve knowledge	<ul style="list-style-type: none"> • Short- and long-term memory
Plan text	<ul style="list-style-type: none"> • Short- and long-term memory • Translation of cognitive information into language • Understanding of purpose and goals of writing • Knowledge of planning processes and steps • Knowledge of various text structures • Ability to use or invent organizing tools to fulfill writing goals
Construct text	<ul style="list-style-type: none"> • Understanding and application of text conventions <ul style="list-style-type: none"> ○ Words with appropriate inflection ○ Topic-centered sentences and paragraphs ○ Organization of information from broad to specific ○ Situation- and genre-dependent demands
Editing text	<ul style="list-style-type: none"> • Understanding of others' perspective • Application of writing mechanics (above) • Ability to recognize errors or places for improvement • Ability to monitor text construction (above) and monitor content cohesion and revise text accordingly
Regulating entire process	<ul style="list-style-type: none"> • Application of many of the skills above • Knowledge of distinct steps involved in writing • Ability to monitor own progress (executive function)

Writing is different from other academic domains in the way its subskills come together. For instance, in areas such as mathematics or reading, students can benefit greatly from automaticity, in which they gain speed and accuracy as they learn to automatically follow a set of routines or procedures (McCutchen, 1988). Although automatized procedures can be helpful for some writing components (e.g., handwriting, spelling), not helpful for other components because some components of writing must remain more flexible. Word choice, sentence structure, and paragraph organization must change depending on the demands of the writing piece. A writer may need to produce a letter showing appreciation to a friend; a lengthy report on a factual, scientific topic; or an imaginative short story. Because of these changing demands, routinized or automatic procedures must actually be prevented, which results in a high “cognitive cost” to the writer (McCutchen, 1988). As an example, take the related processes of decoding—in the reading domain—and spelling—in the writing domain. To decode successfully, a person need produce only single words and single meanings. To spell correctly, however, that same person must correctly sequence a number of letters, requiring him or her to draw more information from memory (Ehri, 2000). So a successful writer must be the ultimate multitasker to maintain attention to many processes and details at once.

Ideal Writing Outcomes

The International Reading Association and the National Council of Teachers of English (1996) developed 12 broad, overarching standards to highlight ideal language and literacy outcomes. According to these standards, literacy instruction should develop students’ skills so that they can generate ideas and questions and then gather, evaluate, and synthesize data from a variety of sources to communicate. Instruction should allow students to adjust their writing for a variety of audiences and a number of different purposes. In addition, students should be enabled to use writing for their own exchanges, enjoyment, and learning as they participate as knowledgeable, reflective, and critical members of literacy communities.

While writers build their capability to fulfill such diverse applications, they must also develop overall self-regulation or self-monitoring skills to complete the process by themselves. Literacy goals, in general, are facilitated when students (1) have general knowledge about the strategies needed to accomplish learning tasks; (2) understand particular task demands and select, monitor, and evaluate strategy use accordingly; (3) use real-world knowledge in conjunction with literacy tasks; and (4) demonstrate motivation to put their knowledge to use (Palincsar, David, Winn, & Stevens, 1991). Writers, in particular, are more self-reliant and have an easier time writing when these skills are in place. A truly self-regulated writer flexibly uses internalized processes and strategies—ones that may have once been available to them only through external modeling or monitoring (e.g., Baker, Gersten, & Graham, 2003; Palincsar, et al., 1991). The issue then becomes how to guide a student to this advanced stage.

Writing at Developmental Stages

Early childhood

As teachers and researchers recognize, children who struggle to acquire literacy skills early on are often later identified for special services (Burns, Griffin, & Snow, 1999). Thus, helping children gain emergent literacy skills is crucial. Emergent literacy focuses on knowledge, strategies, and attitudes that children attain before learning to read and write conventionally (Teale & Sulzby, 1986; Labbo & Teale, 1997). This perspective acknowledges that children can build literacy knowledge well before they enter school (Morrow, 1990). Children may, however, vary widely in the degree to which they are exposed to literacy before they begin formal schooling (Teale, 1986; Schiefflin & Cochran-Smith, 1984).

Children go through a period of socialization in which they learn about the features of written language. They must learn to distance themselves and describe or understand things as they happen to others (e.g., Teale, 1982). They must come to understand the dual graphic and linguistic features of writing (Dyson, 1985; Smith 1979) and exactly what writing system can record (e.g., Tolchinsky-Landsmann, 1988, 1991). In addition to being directly taught knowledge about language and literacy, children learn as they participate and interact in literacy-related activities (e.g., Griffin & Cole, 1999; Rogoff & Toma, 1997).

Children learn a great deal about written language as they see and interact with print in their environment (e.g., books, street signs, newspapers, billboards), and they typically learn the *use* of writing before they learn its *form* (Parker & Morrow, 1989). Before their writing can be conventionally understood, children may use graphic representations in contextually appropriate ways, such as making a “list” or writing a “letter.” Even though children’s early writing may not be discernable or mechanically correct, they experience an advantage when they practice writing and do it for authentic purposes (e.g., Sulzby 1992).

Middle childhood

As children reach school age, they begin to receive formal instruction. Children need continued guidance in understanding the print domain. Because reading is integral to writing, children glean knowledge about writing as they learn to read and are read to (Sulzby, 1990). They can begin receiving instruction for the various mechanics aspects of writing, listed above. To actually physical produce writing, many children will need explicit instruction in handwriting, which may reinforce children’s orthographic understanding of writing (Edwards, 2003), and integrated phonemic awareness training and instruction in phonetic patterns to help with spelling. Children can also be introduced to basic writing processes, such as planning and revising text.

As children get older, teachers should continue to emphasize and reinforce the mechanics aspects in addition to introducing process-oriented aspects of writing to the children’s repertoire. In general, students need to be provided with structures, questions, information, and organizational frameworks that help them approach new literacy concepts (Gallimore & Sharp, 1999). They should not be expected to directly learn or memorize mature examples; rather, over time, they come to internalize mature writing processes—with examples serving as something to learn *from* (Cazden, 1988). Slowly, students acquire the skills to self-improve their own system (Clay & Cazden, 1999), allowing them to participate in and think about language and literacy in new ways.

Adolescence

As adolescents, students need to master the self-regulation of writing. They begin to internalize structures, questions, and organizational methods that had previously been provided as guidance (Gallimore & Sharp, 1999). Such self-regulatory skills help children plan their writing carefully and to monitor and sustain their own efforts (Graham & Harris, 2000). A regulation process, complete with multiple stages of planning, content generation, and revising, is believed to be both productive (in helping students generate and improve text) and motivating (in building students’ willingness to write and self-efficacy in doing so) (Graham & Harris, 2000). Research shows that adolescents who use different types of self-regulatory processes write more effectively: they produce more information in their papers, they write more organized pieces, and they receive higher grades in writing (Zimmerman & Risemberg, 1997).

Writing and Access to the General Education Curriculum for Students with Disabilities

Because of the complex nature of writing skills and applications, writing can be a challenging task to students with disabilities. Two broad matters should be emphasized:

- Access to the general education writing curriculum can and should be promoted for students with disabilities.
- Helping students with disabilities meet high writing standards can help facilitate their access to other curriculum areas.

The special education field is increasingly focusing attention on issues of curriculum access, including ensuring that students with disabilities are actively engaged in learning the content and skills that define the general education curriculum. At the Access Center, “access” is envisioned as a multidimensional and dynamic process that involves a combination of instructional practices and supports. As teachers apply the Access Center’s general instructional indicators to writing, they should consider five important points in designing writing instruction for students with disabilities.

Key Elements

1. Clear instructional and learning goals that operationalize the general education writing curriculum
2. Instructional methods and practices that have a track record of helping students with disabilities learn writing skills and processes
3. Materials and media that have documented effectiveness in helping students with disabilities learn writing skills and processes
4. Supports and accommodations that have a track record of helping students with disabilities learn writing skills and processes
5. Assessment with appropriate tools and procedures to track whether students with disabilities are meeting high standards and writing goals

Writing and Particular Disabilities

Depending on the nature of the disability, students may have difficulty in either mechanics or writing process—or both. Some students may have the requisite subskills but have trouble integrating and bringing them together.

Children with specific learning disabilities (LD) may have difficulties with both the mechanical and process-oriented aspects of writing. In one empirical study that looked at expository text, children with learning disabilities tended to have more irrelevancies, redundancies and mechanical errors and less organization when compared with both same age and younger peers without learning disabilities (Newcomer & Barenbaum, 1991). With narrative writing, students with LD tended to show less skill in planning, had difficulty maintaining story structure, had difficulty connecting and transitioning among sentences, and were less likely to revise their writing (Roth, 2000). Having a learning disability may also affect executive function, or the skill needed to plan and oversee task management, a key component for successful writing. Writing by hand may also be slow and laborious for students with learning disabilities. Students with reading-related learning disabilities likely also experience difficulty with their writing. Not only does reading help children build writing-related skills, such as vocabulary and syntax, but a broader linguistic deficit may underlie both reading and writing difficulties (Johnson, 1993). For example, phonological processing is a key skill for spelling and also predicts children’s ability to decode in reading (e.g., Blachman, 1991; Ehri, 2000).

Students with other types of disabilities may also find writing difficult. Students with visual, orthopedic, or health impairments may find writing by hand physically difficult or even impossible. Children diagnosed with hearing impairments or expressive and receptive language impairments may have language-processing deficits that affect writing. For instance, research shows that students with auditory comprehension difficulties have writing samples that contain limited and repetitive vocabulary and faulty syntax and do not contain spatial and temporal transition words (Johnson, 1993).

Students with attention deficits may have trouble regulating the many facets of the writing process, maintaining their attention to a particular task, or both. Because children often navigate the world of writing socially (e.g., Dyson, 1993), any disability that affects children's ability to interact freely with teachers and peers may also impede aspects of writing (e.g., autism, serious emotional disturbance).

Providing Writing Instruction for Children With Disabilities

Assistance for students with different types of disabilities needs to be systematic and precisely targeted to help children (1) *learn* new skills and better processes at all levels in the writing domain and (2) *cope* with any obstacles that get in the way of composing text. Students need to receive explicit and systematic instruction on both mechanics and process-oriented skills. Teachers need to facilitate instruction in both areas by providing appropriate accommodations. Incorporating individualized, specialized instruction in the classroom is essential for all students to learn. This type of instruction, however, does not always occur to the degree it should. In one survey, a large number of teachers reported making no or few adaptations for struggling writers (Graham, Harris, Fink-Chorzempa, & MacArthur, 2003). In contrast, teachers who are regarded as "excellent" typically tailor the common curriculum for individual students (Pressley, Rankin, & Yokoi, 1997; Graham et al., 2003).

Because students already juggle the multiple components of writing and the challenges of their disabilities, the assistance that students receive must truly be helpful and not just one more distraction or thing for them to balance. It is also important that any individualized writing instruction or procedure not limit struggling writers' development or opportunities in some way. Some adapted instruction tends to prioritize one part of writing at the expense of another, for instance, emphasizing writing mechanics over writing process (Graham et al., 2003).

Conclusion

Composing text is an advanced academic accomplishment, one that all students, particularly those with disabilities, may not develop successfully without dedicated instruction and assistance. This brief has highlighted milestones that occur at various developmental stages and areas that may need attention for students with particular disabilities. It has also emphasized that careful instruction in writing must take into account students' unique needs. Although teaching and learning good writing strategies are complex tasks, effective strategies can help students with disabilities access successful writing; successful writing will in turn help them access other areas of the curriculum. At stake is the opportunity for all students to convey information and communicate understanding.

Additional Web-Based Resources on Writing

Learning Disabilities in Writing: Descriptions and Prevention

http://www.ldonline.org/ld_indepth/writing/prevention_intervention.html by S.

Graham, K. Harris, and L. Larsen

- This paper details six principles designed to prevent writing difficulties while building writing skills.

http://www.ld.org/LDInfoZone/InfoZone_FactSheet_Dysgraphia_QuickLook.cfm at National Center for Learning Disabilities

- This fact sheet details the effects of dysgraphia on a student's learning process and also provides the warning signs by age group.

<http://www.schwablearning.org/articles.asp?r=759&q=1> at Schwab Learning

- This guide offers parents an overview of dysgraphia, the warning signs associated with it, and strategies that will help students become successful writers.

<http://www.schwablearning.org/articles.asp?r=615&q=2> at Schwab Learning

- This article, designed for both parents and teachers, offers games and methods to encourage and motivate struggling writers.

Instructional Strategies

http://www.ncld.org/Research/ncld_writing.cfm by R. Gersten and S. Baker

- This report synthesizes recent findings of research on expressive writing. This report also provides pedagogical recommendations for students with learning disabilities.

<http://ericec.org/osep/recon10/rc10sec1.html>

- This digest examines the research-base for strategy instruction, assistive technology, and the use of collaborative spaces.

<http://www.vanderbilt.edu/casl/srsd.html> by K. Harris, S. Graham, and L. Mason

- This article explains why reading and writing interventions often fail to meet the needs of students with disabilities and gives an overview of self-regulated strategy development (SRSD) research and the resources available on the Center for Accelerating Student Learning Web site.

http://www.ldonline.org/ld_indepth/writing/ERIC_E590.html by R. Gersten, S. Baker, & L. Edwards

- This article offers three components that have reliably and consistently led to improved outcomes in teaching expressive writing to students with learning disabilities. It is based on a meta-analysis of the research literature.

<http://www.schwablearning.org/articles.asp?r=720&q=2> interview with K. Feldman

- The transcript explains how older students can improve their writing skills through excellent instruction, age-appropriate practice, and parental support.

http://www.ldonline.org/ld_indepth/writing/reluctant_writer.html by R. Richards

- This guide offers an overview of the different strategies and methods that are used to help motivate struggling writers.

http://www.ldonline.org/ld_indepth/writing/writing_made_easier.html by R. Richards

- In this article, the process of developing automatic sound-symbol correspondences to improve the writing process is discussed.

http://www.idonline.org/ld_indepth/writing/harris_writing.html by K. Harris, T. Schmidt, & S. Graham

- This report discusses an integrative approach to writing instruction for students with diverse abilities and backgrounds in the elementary and middle grades.

http://www.idonline.org/ld_indepth/writing/handwriting_club.html by M. Keller

- This article details the steps and materials necessary to organize and conduct a handwriting club and discusses students who have sensory integration problems.

Technology

<http://www.schwablearning.org/articles.asp?r=442> at Schwab Learning

- This article offers ideas and strategies on how to implement low-cost solutions to writing issues through the use of low-tech writing tools.

<http://www.cast.org/udl/TimelyandRelevantFeedback607.cfm> at Center for Applied Special Technology

- With an overview of text-to-speech (TTS) technology, this brief also touches on a program that helps students at all levels increase their writing skills.

<http://www.cast.org/udl/SectionIII1842.cfm> at Center for Applied Special Technology

- This CAST article provides information on research studies and the challenges that students with disabilities face when learning keyboarding skills. See also <http://www.cast.org/udl/SectionI1840.cfm>.

<http://www.cast.org/udl/VariedSupports606.cfm> at Center for Applied Special Technology

- This article explores technological supports, including spell checkers, word recognition software, and voice recognition software.

Assessments

[Helping Students with Disabilities Succeed in State and District Writing Assessments](#) by C. Warger

- This digest recommends methods to help prepare students with disabilities for writing assessments, including test preparation, assistive technology, and appropriate accommodations.

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