Building From the Ground Up: A Writing Assessment Story

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Abstract

This paper describes the process that was used to develop writing expectations for students with significant cognitive disabilities (SWSCD). Using national writing standards and a review of literature, a construct-centered approached examined and identified what complex writing knowledge, skills, and attributes should be assessed on a large-scale summative assessment. The construct of writing was developed to reflect an appropriate expectation of instruction and learning throughout a student's educational experience and incorporated accessibility in the way SWSCD could create written permanent products that demonstrate what students know and can do.

Keywords: Written Expression, Students with Significant Cognitive Disabilities, Student Evaluation, Writing Research, Alternate Assessments

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Researchers acknowledge the importance of writing for communication, problem solving and learning (Koppenhaver & Williams, 2010). Written expression is an essential skill that extends to almost every aspect of individuals' daily life, both as cognitive and social interaction processes. In schools, students use written language to demonstrate their acquisition of academic content (Mercer & Mercer, 2005). Employers want applicants who can demonstrate proficient writing skills upon entry to the workforce (National Commission on Writing, 2004). Social networks now require that members interact via electronic written messages (e.g., e-mail and texts).

While there has been research on developing writing knowledge and skills for students with disabilities (e.g., Harris, Graham, & Adkins, 2014; Harris, Lane, Graham, Driscoll, Sandmel, Brindle, & Schatschneider, 2012), there has been limited research on writing for students with significant cognitive disabilities (SWSCD). The perception that certain skills are necessary before students can learn to write has justified not teaching writing to SWSCD. Many teachers assume that if a student does not possess the mechanical skills of writing (e.g., ability to hold a pencil), he/she is not ready for writing instruction. Given the lack of emphasis on writing for the student with a significant cognitive disability, there is limited research that helps understand what students are capable of doing.

White (1994) argues that taking essay tests is a necessary part of writing instruction. A teacher must provide opportunities for writing, and secondly promote students' success by monitoring their understanding and progress. Assessment is an essential component of effective instruction, and there has been some recent development of progress monitoring writing scales for SWSCD (see Sturm, Cali, Nelson, and Staskowski, 2012). Unfortunately, there continues to

be a need for more evidence-based tools for evaluating student progress in developing literacy skills and applying them to writing tasks (Pennington, 2010). Even more problematic is that the lack of instruction and tools for evaluating student writing may negatively affect writing performance on summative assessments (e.g., alternate assessments), which have high-stake consequences for teachers and schools.

The purpose of this paper is to describe the process that the National Center and State Collaborative (NCSC) used to define the domain of writing that informed the development of an assessment for measuring the writing skills for students who take alternate assessments. NCSC is a project led by five centers and 24 states to build an alternate assessment based on alternate achievement standards (AA-AAS) for SWSCD. The following steps were used to develop writing expectation for SWSCD: (a) review national writing standards for all students, (b) review research on writing for SWSCD, and (c) develop accessible writing expectations for SWSCD.

Review of Writing Standards for All Students

The Common Core Content Standards (CCSS) initiative defined literacy and communication expectations for all students. While the standards are divided into Reading, Writing, Speaking and Listening, and Language strands for conceptual clarification, the processes of communication are connected (CCSS, 2010). Writing is not an isolated skill, but builds upon a broad basis of prerequisite literacy skills. For example, many of the writing CCSS require students to be able to write about what they have read from literary and informational texts, thus demonstrating their comprehension skills. In addition, when editing, students address revision skills (CCSS Writing Standard 5) as well as language standards, which deal with conventions of Standard English.

The College and Career Readiness Anchor Standards provide the broad CCSS writing expectations, with grade-specific standards providing greater specification in defining the skills and understanding that students must demonstrate. The CCSS emphasize three mutually reinforcing writing capacities: writing to persuade, to explain, and to convey real or imagined experience. Since AA-AAS must be aligned to grade-level content standards, CCSS served as the foundation for defining the writing domain and designing the writing assessment for SWSCD. The full description of the standards can be found at http://www.corestandards.org/ELA-Literacy/.

In addition to academic content, the authors of the CCSS wanted to allow for the widest possible range of students to participate fully from the outset and as permitting appropriate accommodations to ensure maximum participation of students with special education needs (CCSS, 2010). For example, for students with disabilities *writing* should include the use of a scribe, computer, or speech-to-text technology. The CCSS provide an historic opportunity to improve access to rigorous academic content standards for SWSCD who typically have a range of expressive communication modes.

Research on Writing for SWSCD

While there has been limited research on writing for SWSCD, what has been done demonstrates that SWSCD can develop written expression skills. Research supports that students can use written expression in daily activities (e.g., calendars), responding to directed reading, spelling activities, and group activities that modeled writing components (Erickson & Koppenhaver, 1995).

A review of practices on teaching writing by Katims (2000) suggested that most writing instruction has been functional in nature with students learning to write for a specific purpose such as addressing envelopes or writing checks. Pennington, Delano, and Scott (2014) reported

similar findings noting that most interventions used basic writing skills, such as spelling (Stromer, Mackay, Howell, McVay, & Flusser, 1996; Stromer, Mackay, McVay, & Fowler, 1998), sentence writing (Yammomoto & Miya, 1999), and adjective use (Rousseau, Krantz, Poulson, Kitson, & McClannahan, 1994). Knight, Browder, Agnello, and Lee (2010) provide a limited review of academic writing instruction for students with severe disabilities, but noted that research in writing lags behind research in reading and mathematics for SWSCD

Early research demonstrated that students with autism spectrum disorders (ASD) could make requests by using cards depicting written texts (LaVigna, 1977) and improve the quality of conversations when they typed their responses (Forsey, Bird, & Bedrosian, 1996; Schairer & Nelson, 1996). Stromer, MacKay, Howell, and McVay (1996) demonstrated that individuals with ASD could generalize spelling skills to handwritten responses using computer-assisted instruction (CAI) and delayed word construction procedures. Kinney, Vedora, and Stromer (2003) reported that the computer presentation of video clips depicting an adult modeling correct spelling responses was effective in teaching a female student with autism to spell trained and untrained words. The use of a sentence-combining technique increased the use of adjectives (Rousseau et al., 1994), increase the number of words used and, peer interactions and revisions made during joint writing activities. Using augmentative communication devices, story maps, storyboards, and adult modeling, students were able to improve their narrative writing skills.

Basil and Reyes (2003) evaluated the effects of a computerized software package (i.e., *Delta Messages*) on sentence construction skills and found that students can acquire targeted responses, demonstrate additional gains in handwritten responses and show measures of phonological awareness. Yamamoto and Miya (1999) also used CAI to teach sentence construction tasks to students with ASD, with results indicating that students can acquire

computer-based target responses, but also demonstrated generalized gains across handwritten and vocal topographies. Trela (2008) examined the use of *I Write NOW* strategy on writing opinion paragraphs. After instruction, students could compose opinion-based paragraphs that progressed in a logical order.

In a study that examined more complex writing skills, Pennington et al. (2010) used an intervention for modeling, self-monitoring, prompting, and feedback on cover-letter writings for individuals with mild and moderate ID and found that individuals increased writing performance when provided systematic instruction. This study demonstrates that individuals with intellectual disabilities are able to create written products that require more complex writing skills.

A special issue of *Topics in Language Disorders* (October/December 2012) challenged the field to provide interventions and activities that emphasized meaning instead of a print-component-focused instruction to writing. Sturm et al. (2012) provided readers with descriptions of writing strategies and use of the Developmental Writing Scale (DWS) for beginning writers that supports formative and summative assessment. In a qualitative study, Staples and Edmister (2012) described the composing process and communication of young writers with developmental disabilities and demonstrated evidence of two theories of writing (cognitive and social-interactive) as students engaged in authorship. Sturm (2012) provided a description of the Enriched Writers Workshop, an approach that provides a framework for comprehensive high-quality writing instruction for students with developmental disabilities.

For writing to be fully accessible to the students, traditional views of writing may need to be expanded to include the use of assistive technology, stamps, or pictures to develop a permanent product (Knight et al., 2010). New technologies are available for emergent writers that provide alternative methods that students can communication (see Koppenhaver & Williams,

2010; Camahan, C.R., Williamson, P.S., Hollingshead, A., & Israel, M., 2012). Pennington (2010) reviewed literature on use of CAI (Computer-Aided Instruction) to teaching academic content to students with ASD and concluded that CAI was effective teaching a limited set of academic skills. Given the increase in technologies, more research has started to investigate the use of technologies with this student population.

The continued development of understanding about research-based instructional practices and a focus on their effective implementation will help improve access to writing standards for all students, including those with significant cognitive disabilities (SCD). How the CCSS are taught and assessed is of the utmost importance in reaching this diverse group of students.

Developing Accessible Writing Expectations for SWSCD

SWSCD present challenges relative to the teaching, learning, and assessment of academic content. This student population also challenges assessment designers to develop systems that adequately and reliably show what students know and can do (Browder et al., 2004). Indeed, it is the sheer variability in this target student population abilities, the assumptions about measuring their achievement, and the variability of design implementation procedures (use of portfolios, checklists, and performance tasks with individual administration) that make traditional approaches to instruction and assessment inapplicable without some reformulation (Gong & Marion, 2006).

As many of the NCSC states have committed to working with a common set of standards (e.g., CCSS), NCSC needed a clear definition of SWSCD expectations in writing. Content experts, special educators, and state partners met to review the CCSS and literature review. CCSS writing standards were reviewed to help determine emphasis across the grades. It was important to note the embedded assumptions in the CCSS related to student prerequisite skills

related to writing, such as how to form letters, spell, construct sentences, organize paragraphs, and use conventions of grammar.

The following considerations were used to guide the discussion of writing for the student population with SCD:

- For writing to be fully accessible to this population, traditional views of writing will need to be expanded to include the use of assistive technology, stamps, or pictures to develop a permanent product. In addition to alternative pencils and software, SWSCD may benefit from expressing ideas through pictures, sentence frames that incorporate multiple choice words or pictures, matching, dictating, or pictures or written words, a switch, or an augmentative communication device to generate ideas.

- It is important that students are making a connection to the writing by promoting personal relevance (e.g., students select the topic to write about or use personal photos).

- Teachers will need to prioritize which steps of the writing process students participate initially. As mastery occurs, students may be able to participate in more of the steps.

- Time expectations for writing projects may need to be extended and/or project expectations may need to be compressed.

- Writing for this population may require teachers to think anew to come up with strategies that will allow students to participate in the writing process (content and physical aspects).

Based on the examination of existing content definitions in general education curriculum, the content, concepts, terminology, and tools of the writing domain, the limited body of extant research, and the CCSS, a definition of writing and related skills was established. These content

area definitions in writing, language, and research became central to the development of assessment items.

- Writing (different text types and production): Generating a permanent product to represent and/or organize ideas or thoughts so messages can be interpreted by someone else when the writer is not present. Symbols (e.g., picture symbols, objects) that represent and assistive technology that produce text may be used.

- Language (writing and reading comprehension): (a) Recognizing and using conventions of Standard English (grammar, capitalization, punctuation, and spelling) within writing, speaking or other accepted communicative methods (e.g., American Sign Language, Braille). This may be represented to the student or produced by the student in text, picture supports or tangible symbols. (b) Acquiring vocabulary understandings within context through listening, reading, and print media and use within the production of a permanent product and/or speaking or produced communication.

- Research (incorporated within writing in CCSS): Gathering information on a topic or subject to obtain information. Analyzing and/or reporting the information using permanent products and non-written communication is also possible. Information can be represented, gathered and organized using a variety of media, visual and tangible supports (e.g., using picture symbols within graphic organizers).

After defining writing for SWSCD, the NCSC team prioritized the writing standards based on the needs of the students and reducing the number of content standards found in the CCSS. The following rules and procedures were defined by the NCSC writing team: (a) prioritize three standards (referred to as Core Content Connectors, CCCs) per grade level; (b)

vary the number and type of writing modes at each grade level; (c) determine "sister" prioritized reading and writing CCCs across grade levels; and (d) make Reading/Writing connection.

Next, the NCSC content claims were articulated. The NCSC claims represent the essential content and skills that students should acquire after instruction with research-based practices in teaching SWSCD. Measureable evidence or student work products, in turn, should support claims. This evidence was determined via examination of the CCSS and Learning Progression Framework (LPF; Hess, 2011). Content experts, state, and center partners worked together to lay out what the assessment is intended to measure across the different grade levels (3rd – 8th and 11th grades). After full NCSC partner review, the following writing claim was approved:

> The student can write effectively by generating a permanent product to represent and organize ideas, drawing evidence from literary or informational text or other media sources across genre types applying grammatical strategies and conventions of standard English.

The prioritization of the writing CCCs was informed by the student model of learning as well as understanding how writing progresses in the CCSS. Understanding how the CCSS differ from previous standards—and the necessary shifts they call for—is essential to implementing the standards well. A key shift in writing is the ability to write logical arguments based on substantive claims, sound reasoning, and relevant evidence, which serves as the cornerstone to the CCSS writing standards (CCSS, 2010). Thus, the goal of the prioritization was to ensure the writing assessment supports instruction of grade-specific skills and concepts and higher expectations for students towards the learning of the academic content necessary to make further gains and work towards college, career and community readiness.

Based on the prioritization procedure and an understanding of SWSCD learning processes, the NCSC state partners decided upon three CCCs per grade-level to support the writing claim. An example of a prioritized Core Content Connector (CCC) and its corresponding CCSS is provided in Table 1.

The prioritized CCCs are used to evaluate student status relative to the claim. All of prioritized writing CCCs consists of the writing knowledge, skills, and abilities which will allow students across all grades to demonstrate:

- The ability to generate a permanent product to represent and/or organize ideas or thoughts so messages can be interpreted by someone else when the writer is not present;

- The ability to respond to a writing prompt to produce a Literary/Narrative, Informative/Explanatory, or Persuasive/Argument permanent product; and

- The ability to include grade-specific writing skills specific to a writing mode related to organization; language and vocabulary; idea development; and conventions.

Table 1

Prioritized 3ʳᵈ Writing CCC and Targeted CCSS

CCC	CCSS
Include text features (e.g., numbers, labels, diagrams, charts, graphics) to enhance clarity and meaning.	-Write informative/ explanatory texts to examine a topic and convey ideas and information clearly. -Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.

To demonstrate the ability to write effectively, meaningfully, clearly, and coherently, students will apply writing skills for a specific purpose and text type: (a) narrative, (b) informative/explanatory, or (c) argument. For all text types at all grades, students will demonstrate use of the conventions of standard English grammar and usage and of capitalization and end punctuation when generating a permanent product for narrative, informative/explanatory

or argument text. The criteria and expectations for the permanent product varied for each of the text type.

Narrative text. To apply writing skills to develop narrative texts, students will organize ideas sequentially using transition words and phrases and provide a logical conclusion. Students will use relevant descriptive details and sensory language to convey experiences. To produce original, coherent narrative texts, students will set up a context, sequence events, use description and dialogue, and provide a conclusion.

Informative/explanatory text. To apply writing skills to develop informative/explanatory text, students will identify a category to group related facts together for explanatory text. Students will include text features (e.g., labels, diagrams, charts, graphics) to enhance meaning and use formatting (e.g., headings) to convey meaning about topics. Students will use an organizational structure that logically groups information (e.g., compare/contrast) to support a paragraph focus for a specific audience and support the topic or focus with relevant facts, examples, and information. Students will provide concluding statements to support information. Student will use an organization structure that logically groups information (e.g., compare/contrast) to support a paragraph focus for a specific audience and support the topic or focus with relevant facts, examples, and information. To produce original, coherent informative/explanatory text, students will organize ideas and information (e.g., cause/effect) to aid comprehension. Students will introduce the topic and develop the topic with relevant facts and details. Students will summarize the information by providing a conclusion.

Argument text. To apply writing skills to develop arguments, students will logically group ideas to support claims and gather relevant information to support argument. To produce original, coherent arguments, students will introduce a claim and produce an argument by

providing reasons. Students will use words or phrases to clarify the relationship between reasons and student-generated facts and examples. Students will write a conclusion that supports the argument.

Conclusion

If the goal of writing instruction is to engage students in the practice of literacy skills, then the goal of a writing assessment is to measure student progress in developing literacy skills and applying them to writing tasks. Assessment of writing is integral to the effective teaching of writing to students.

NCSC has worked out an approach to a writing assessment that has the following characteristics:

- It links the test design to a clear understanding of each NCSC state's target student population for the AA-AAS, based upon data collected related to learner characteristics.
- It is structured to support each CCSS text type (narrative, expository, and argument).
- It makes use of assessments with a supported, scenario-based structure.
    - The structure of the items, the way they are sequenced, and the provided models work together as supports to which a range of writers, from novice to skilled, can create a written product.
- It is designed to capture the array of skills that writers need to acquire (fluency, content, conventions, and vocabulary).

This work is in a relatively early stage with limited empirical data to support the efficacy of NCSC's work. NCSC is still engaged in trying out items and piloting. Data from the first administration of the AA-AAS will be available the summer of 2015. Even in this admittedly early stage, however, results are promising. Student products can discriminate novice writers

from skilled writers by evaluation of establishment of topic focus, strengths and weaknesses in organization and idea development, and use of standard English conventions..

However, if students are not able to write well, they may do so for many reasons. As Pennington (2014) notes, writing deficits have been consistently more pronounced for students with disabilities. An important step in turning around the current situation, then, is to make sure that all students are taught how to write using effective practices. It is especially important that students get off to a good start in writing. Waiting until later grades to address literacy problems that have their origins in the primary grades is not successful (Slavin, Madden, & Karweit, 1989). As students move towards high school and graduation, the teaching of writing becomes more complex.

Imagine what could happen when students are taught to write well beginning in kindergarten and all the way through high school. All students, including SWSCD, have the potential to become skilled practitioners when they are given numerous opportunities throughout their educational experiences to acquire a broad variety of literacy skills, to learn how to coordinate them effectively, and have thereby achieved the skills they need to participate in a literate community.

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