AT Now! Conference
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"New Research, New Standards…New Writing Protocol"

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Today's Agendas

Morning Topics	Afternoon Topics

• Overview of the new WP
• Perspectives on writing
• Writing and students with disabilities
• Writing development
• WP Research and procedures
  • Handwriting
  • Keyboarding
  • Spelling
  • Composing
	Evidence based interventions
	• Handwriting
	• Keyboarding
	• Spelling
	• Composing
	• Assistive Technology

Writing is considered to be the most complex literacy skill that all students need to learn
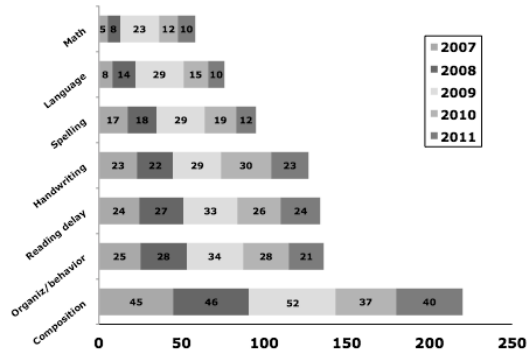
Wendling and Mather (2009)

According to Moats (2005-2006, p.12)

"Even more than reading, writing is a mental juggling act that depends on automatic deployment of basic skills such as handwriting, spelling, grammar, and punctuation, so that the writer can keep track of such concerns as topic, organization, word choice, and audience needs."

Slide 1

Writing is a highly complex skill set, and writing difficulties remain the number one reason for AT referrals

Legend:
- 2007
- 2008
- 2009
- 2010
- 2011

Category	2007	2008	2009	2010	2011
Math	5	8	23	12	10
Language	8	14	29	15	10
Spelling	17	18	29	19	12
Handwriting	23	22	29	30	23
Reading delay	24	27	33	26	24
Organiz/behavior	25	28	34	28	21
Composition	45	46	52	37	40

Slide 2

If this is true, why don't we have...

Writing teachers?
Writing specialists?

Slide 3
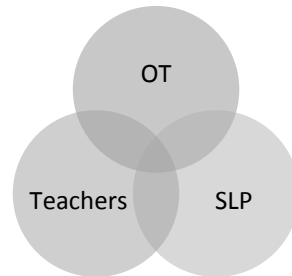
It takes a
village... a school village

Improving writing requires the efforts of multiple disciplines:

- OTs -motor components of handwriting and keyboarding
- SLPs -linguistics that underlie spelling development. Language connections to writing
- General and special educators -process writing development

OT

Teachers

SLP

Slide 4

AT and Writing

- It is essential for professionals in the field of assistive technology to use current knowledge when gathering data and formulating recommendations to support struggling writers.
- We need to stay abreast of the research on writing, and look for new ways to provide equitable, preemptive services for a range of students, consistent with the practices of universal design for learning (UDL).
- There is a wider range of technology available such that mainstream tools should be considered prior to the use of specialized AT
- There is more emphasis on data driven decisions.

The New Writing Protocol

The WP is a protocol designed to:

- capture the various factors that affect writing so that AT strategies can be applied appropriately.
- a formative assessment to help develop a profile of a student's writing skills in order to inform the AT planning process.
- provides the research base to better understand writing development and the basis for

instructional strategies.

A SHORT-COURSE ON WRITING

- Section 1 provides background information on writing perspectives and writing development and summarizes the most recent research on composition, spelling, handwriting, and keyboarding.

- Section 2 provides a restructured protocol for assessing the written productivity of struggling writers.

- Section 3 provides research-based strategies linked to handwriting, keyboarding, spelling, composing, and technology accommodations.

E-book

- Searchable
- Active links in the table of contents
- Forms and directions easily accessible in the Appendices for printing
- $25.00
- Under copyright: 1 back up copy of the e-book plus one print out of the e-book
- $529 for a district-wide license
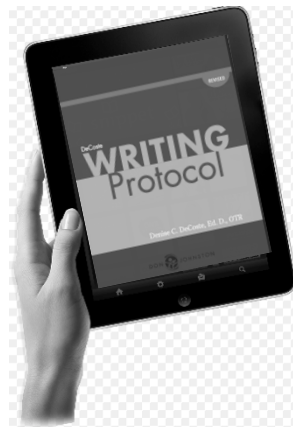
Why revise the 2004 WPP?

- New research provide important background information on writing development for typical students and those with disabilities
- Students are writing more on a daily basis in classrooms (Graham, Berninger, Weintraub, & Schafer, 1998; Graham & Harris, 1994)
- National standards(CCCS) emphasize the importance of daily writing across different "types" of writing
- New national accommodation policies make it imperative that teachers provide evidence of writing deficits for students with documented writing disabilities

Slide 1

1 Timed Handwriting

- Alphabet
- Best sentence copy
- Dictated sentences
- Fast sentence copy
- Composed text

2 Timed Keyboarding

- Alphabet
- Best sentence copy
- Dictated sentences
- Fast sentence copy
- Composed text

3 Spelling

4 runaway
5 advendter

4 Extended Writing

Tomatoes. Tomatoes been my favorite veget: want to talk about my here and about how th scientifically a fruit. Yo

Optional Conditions as Needed

Slide 2

What are the major changes?

There four basic areas of the WPP protocol remain as before.

However, some of the tasks used to analyze student skills have been modified to reflect current research.

Changes procedural changes in the new WP Protocol

- Writing the alphabet unaided from memory
- Fast sentence copying task
- Spelling analysis based on linguistic knowledge
- Extended writing task

Change

Slide 3

Alphabet from memory: A NEW task that measures orthographic-motor integration

OMI measures more than speed of handwriting,

- It requires the child to retrieve letter sequences from memory, then recall and execute the motor production of the letters (Medwell and Wray, 2007) .

Slide 4

The strength of the WP is that it compares the student's productivity across writing tasks based on individual performance data

Who should administer the WP?

Expert Model

Capacity Building Model

AT Specialists

School Team

Modeling/ Mentoring
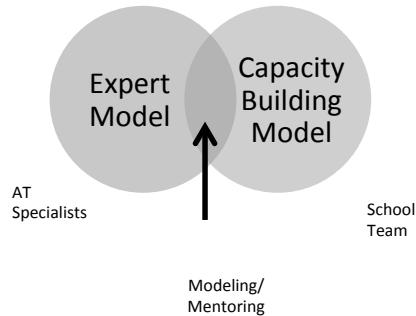
This process promotes ownership of writing accommodation decisions at the school level.

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Which Students are Appropriate?

- To identify which students are appropriate for the WP, you can use two types of preview processes:
  1. criterion-based preview process
  2. data-based preview process

- The former may constitute a quicker preview process, but the latter can provide comparative classroom data.

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Criterion-based Preview Process

Check Yes if this applies	
	Does the student demonstrate handwriting that cannot be read by an unfamiliar reader, where no accommodations are in place?
	Does the student currently have a scribe accommodations listed on their IEP, 504 or ELL plan?
	Is the student's writing achievement below basic on measures of writing proficiency?
	Is the student significantly below grade level on college and career readiness writing standards?
	Will the student still be writing well below grade level if the current writing goals are achieved?

If the answer to any of the above questions for a given student is "yes", then the WP is recommended.

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Additional Criteria to Consider

- Laborious, slow handwriting
- Limited handwriting progress
- Limited keyboarding progress
- Many spelling errors (1 to 2 out of 10 words)
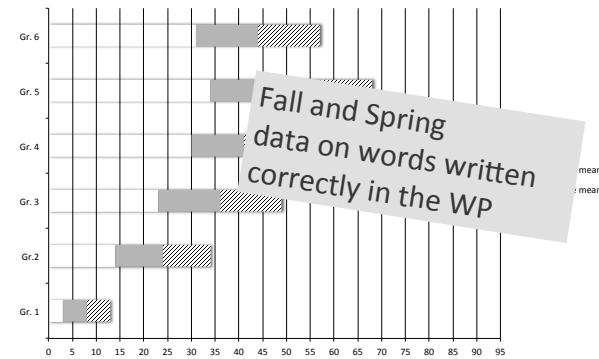
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Data-Driven Process; Writing Probe

A more data-driven preview process is to conduct a writing probe.

- Administering this probe to a general education classroom as a whole provides comparative data for a full range of students at a given grade level.

- Wright (2013) has developed guidelines for curriculum-based measurements for written expression.
  - Use a grade appropriate writing prompt (e.g. story starter sentence or phrase)
  - Students are given one minute to think about the writing prompt and then 3 minutes to write.
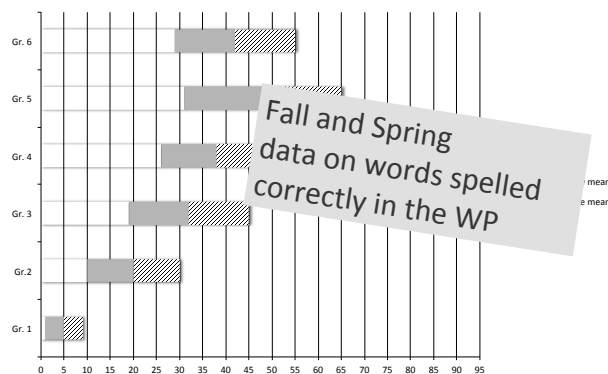

Preview Data for Number of Words Correctly Spelled (Gansle, et al. ,2006)

Fall and Spring data on words written correctly in the WP

Preview Data for Number of Words Written
(Gansle, VanDerHeyden, Noell, Resetar and Williams, 2006)

Fall and Spring data on words spelled correctly in the WP

Getting Started

- Print out the appendixes and assemble into a notebook:
  - The background information form
  - Sentences to be copied
  - Sentences to be dictated
  - Spelling word list
  - Extended writing prompts
  - Extended writing graphic organizer
  - Data collection form
  - Likert graphic

- Download latest versions of
  - 6+1 Traits
  - Common Core Standards or you district's writing standards

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Before administering the DWP

- Select the appropriate sentences to be copied and dictated
- Select the appropriate spelling word list.
- Select the type of extended writing prompt (narrative, opinion/argument, informative).

Arrange A Location

- Pre-arrange a quiet space to administer the WP

- The handwriting and standard keyboarding conditions can be administered in about 20-30 minutes
- The spelling list can be completed in about 15 minutes
- The extended writing task takes approximately 15 minutes.

- The WP can be administered in two sessions if necessary to obtain a student's optimal performance.

Perspectives on writing

Historical perspectives

- 1800s: Writing focused on penmanship in the elementary years. Composition was the purview of the secondary grades and college education.
- Early 1900's: More emphasis on meaningful reading and writing. Instruction on spelling emphasized whole words.
  - Early writing instruction continued to concentrate primarily on forming letters, copying words and sentences with an emphasis on grammar and clarity.
- 1970s and 1980's:
  - Research on how literacy develops in young children
  - There was an increase in federally funded research in support of cognitive models of writing in response to a Newsweek article entitled "Why Johnny can't write."

1990s: A focus on the cognitive demands of writing

- Young children must allocate more <u>cognitive capacity</u> to graphomotor processing, (e.g., handwriting and spelling skills). (Berninger, Vaughan, Abbott, Abbott, Brooks, Rogan, Reed & Graham, 1997)

- Graham and Weintraub (1996), The mechanical demands of handwriting interfere with <u>the higher order processing</u> needed for composing.
  - Children who write slowly, cannot keep pace with the ideas and plans that they hold in their memory, and this interferes with getting those ideas on paper.
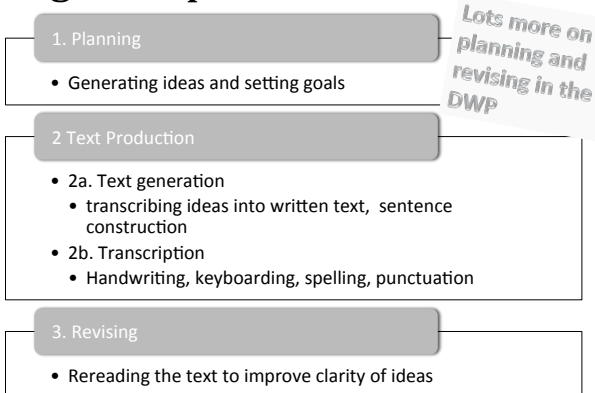
Current Perspectives

Current studies focus on:
- Cognitive processing models
- Language connections
- Reading/writing connections
- Social influences on writing
- The role of the teacher to build students' self-efficacy and self-regulatory skills
- Multiple literacies with the rise of the Internet and the advent of mobile devices
- What goes one in the mind of the learner in literacy and language rich environments

Cognitive processes

Lots more on planning and revising in the DWP

> **1. Planning**
> - Generating ideas and setting goals

> **2 Text Production**
> - 2a. Text generation
>   - transcribing ideas into written text, sentence construction
> - 2b. Transcription
>   - Handwriting, keyboarding, spelling, punctuation

> **3. Revising**
> - Rereading the text to improve clarity of ideas

Hayes and Flower's (1980); Berninger and Swanson (1994)

Language Connections

"Language behavior actually draws on four functional systems in the mind/brain: language by ear (aural), language by mouth (oral), language by eye (reading), and <u>language by hand (writing)</u>" and that "each of these language systems is on its own developmental trajectory, has its own internal organization, and interacts with the other language systems to some degree at different stages of development" (Berninger, Abbott, Abbott, Graham and Richards (2002b, p. 39).
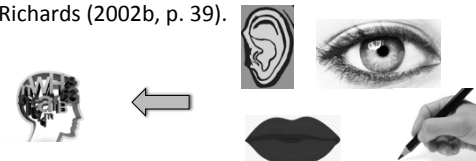
Language Connections

- Research indicates that language abilities are significantly correlated with writing.

- Studies have shown that the number of words, as well as the <u>sophistication of grammar or syntax, is generally higher in oral language as compared to written language in the early grades, but the difference declines with age</u> (O'Donnell, Griffin, & Norris, 1967).

Language Connections

- For children with early oral language difficulties, the research shows that when oral language problems are resolved, written language issues may continue into adolescence (Naucler & Magnusson, 2002)

Language connections speak to the role of the SLP to support writing

Reading and Writing Connections

Reading and writing share similar skills and abilities.

- The <u>interconnectivity of reading and writing</u> are evident even in the emergent literacy years.
- The writing behavior of kindergarteners was found to be predictive of their 1st grade reading achievement even when the effects of measured intelligence were controlled (Shatil, Share, & Levin, 2000).

- In a multi-faceted study of 600 students in grades 1 to 6, Berninger et al. (2002) found that relationships between reading and writing are unidirectional and bidirectional <u>(each influences the other).</u>

Literacy relationships
Berninger et al. (2002)

- Handwriting ➔word recognition in grade 2.
- Word recognition ➔handwriting and spelling at all grade levels.
- Spelling ➔ word recognition at all grade levels.
- Spelling ➔ reading comprehension in most grades.
- Reading ➔spelling at all grade levels; better readers exposed to more words improving spelling
- Reading comprehension ➔compositional fluency and quality; better readers write more
- Compositional Fluency and Quality ➔reading comprehension in grades 4-6

While the interconnectivity between reading and writing is proved, explicit instruction in each is needed.

"Instruction in one or the other is unlikely to be an adequate replacement for the other if the goal is to develop students who can read and write well".

(Shanahan, 2006, p 177)

Computers and Writing

- The National Assessment of Educational Progress (National Center for Education Statistics, 2012), under the auspices of the U.S. Department of Education, conducted the first computer-based assessment for writing in 2011.
- 28,100 8th and 12th grade students from 1200 schools
  - While 24% of students at grades 8 and 12 performed at proficient levels, far more students scored at basic or below.

  - Of the 8th graders assessed, 54% scored at the basic level and 20% scored below basic.
  - Of the 12th graders assessed, 52% scored at the basic level and 21% scored below basic.

College and Career Writing Standards

National Writing Standards

- In 2002, with the federal passage of No Child Left Behind Act of 2001, national and state testing shifted the emphasis to reading (No Child Left Behind [NCLB], 2002).

- Consequently, an analysis of the National Assessment of Education Progress data showed that <u>between 2002 and 2007, the amount and types of student writing decreased</u> (Hruby, Read, & Landon-Hayes, 2011).

Writing standards, whether at national or state levels, are directing more attention to writing than ever before.

Common Core Standards

- The advent of the Common Core State Standards (CCSS) constitutes a <u>major game change for current day writing instruction</u> (National Governors Association Center for Best Practices, Council of Chief State School Officers (2010).

- Explicit writing standards place a renewed emphasis on writing—<u>more time with pen on paper</u> or the use of technology.

Common Core Standards

- In the CCSS, "writing is treated as an equal partner to reading, and more than this, writing is assumed to be the vehicle through which a great deal of the reading work and reading assessments will occur"(Calkins, Ehrenworth, & Lehman, 2012, p. 102).

- These national standards assert the need <u>for explicit writing instruction, opportunities for sustained practice, frequent feedback, and assessment-based instruction</u>.

The national standards <u>specifically address the use of technology</u>, including the Internet, "to produce and publish writing and to interact and collaborate with others"

(National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010, pp. 18, 41).

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College and Career State Standards Emphasis

- The national standards focus on being able to write different <u>types of text</u>, produce and distribute writing, and conduct research to develop and present knowledge.

- The overarching goal for students is to <u>write routinely for long and short periods for a range of tasks, purposes, and audiences.</u>

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Types of Writing (CCSS)

Types of writing include:
- **Narrative**: e.g., personal narrative, fiction, historical fiction, fantasy, narrative memoir, biography, narrative nonfiction
- **Argument/ Opinion**: e.g., persuasive letter, review, personal essay, persuasive essay, literary essay, historical essay, petition, editorial, op-ed
- **Informational**: e.g., fact sheet, news article, feature article, blog, website, report, analytic memo, research report, nonfiction, how-to book, directions recipe, lab report

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College and Career Standards

- There continues to be an emphasis on "process writing" that involves planning, drafting, revising, editing, and rewriting.

- Students are introduced to different types of writing in the primary grades; narrative, opinion and informative writing, shifting more toward argument and informational writing by high school.

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College and Career Standards

- Story writing is more difficult than opinion writing for student in the primary grades (Harris, Graham, Brindle and Sandmel, 2009) .

- Fourth graders are expected to write a minimum of one typed page in one sitting, while fifth graders, a minimum of two typed pages (Calkins, Ehrenworth, & Lehman, 2012). The CCSS does not define the number of words this entails, or the length of a sitting.

- Students are expected to be able to produce text across all types of writing in order to be "college and career ready."

Writing and Students with Disabilities

Writing and Students with Disabilities

- Berenstein (2008) reports that approximately 6% of all school- aged children have disorders in written expression.

- In a recent large-scale study of 5,718 children ages 5 to 19, 6.9% to 14.7% of students demonstrated evidence of writing problems as measured by writing subtest scores and IEP goals

    (Katusic, Colligan, Weaver and Barbaresi, 2012)

Writing and Students with Disabilities

- Around grade four, referrals of student with writing difficulties tend to increase

    (Levine, Oberklaid, & Meltzer, 1981 and Berninger, 2009)

- Writing is considered the most common problem for students with learning disabilities ages 9 to 14

    (Cobb-Morocco, Dalton, & Tivnan, 1992).

- 80% of children with learning disabilities struggle with written language.

    (Morris, Schraufnagel, Chudnow and Weinberg, 2009)

Nature of Writing Difficulties

- Research confirms that early writing difficulties began with transcription difficulties involving handwriting (orthographic coding deficits) and spelling (orthographic plus phonological coding deficits).

- **B**y the end of 2nd grade, children may be impaired in handwriting only, spelling only, or both.

        (Berninger, Abbott, Rogan, Reed, Abbott,

        Brooks, Vaughn and Graham, 1998)

Nature of Writing Difficulties

- Students with learning disabilities show limited metacognitive awareness of the strategies needed to be good writers. (Troia, 2006)

- Students with learning disabilities need more time on writing using individualized and explicit writing instruction. Writing instruction for these students requires the integration of planning, self-monitoring, goal setting and self-evaluation strategies. (Troia, 2006)

Writing Development

Emergent Literacy

Emergent Literacy

- Protowriting (pretend writing) is integrated into a young child's drawing as early as age 2.
- Drawing is combined with protowriting (scribbles and mock letters) when the pictures alone do not convey the child's intended meaning.
- As young as age two to three, children understand that writing and drawing are different.
- Brennemann, Massey, Machado & Gelman (1996) demonstrated that when young children draw, they make wide continuous movements, whereas when they write, the lift their writing instrument off the page more often.
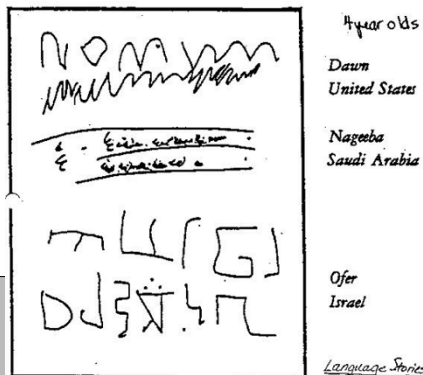
Emergent Literacy

- Young children imitate the writing they see in their environment
- Young children incorporate writing into pretend play routines, and intentionally experiment with writing to convey meaning for different purposes within a social context (Chapin, 2006).
- Name writing, in particular, demonstrates the evolving understanding of:
  - Non-pictoriality
  - Linearity
  - Variety
  - Mulitplicity

(Lavine, 1972)

Early writing development across cultures

Harste, Woodward & Burke, 1984

A word to OTs...

- **Writing activities should be meaningful and developmentally appropriate- not exercises in copying**
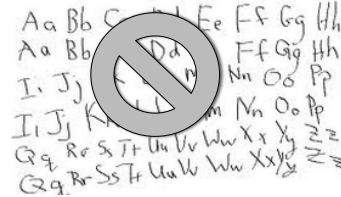
- **In the early years, look at ways to encourage drawing and pretend writing as part of play (letters, grocery lists, etc)**

The Alphabetic Principal

- Over time they begin to comprehend the alphabetic principle that letters "say their names," and that these phonetic elements can be combined to form words (i.e., inventive spelling).

- Around age four, children begin to understand that there is a one-to-one correspondence of speech to text, demonstrating that writing is tied to language

Verbal dictation to an adult is not a substitute

Children must be actively engaged in writing in the developing years in order to force thought on letter-sound correspondence and the 1 to 1 correspondence of speech to text

Writing Development

Primary Grades K-2

Primary Writing

- Kindergarten children ease into formal writing. Talking combined with drawing appears to compliment writing in kindergarten and Grade 1 (Calkins, 1986).
- By grade 2, drawing does not appear to be as necessary, however, discourse with others helps children rehearse what they will write and helps them revise their writing.
- Talk combined with writing helps young writers remember what they want to write, supports speech to text correspondence, and helps them with phoneme to grapheme representation (Bodrova and Leong, 2006)

Writing Genres: Kindergarten

- Kindergarten: While it was once assumed that narrative story writing was the most appropriate form for young writers, research indicated that children engage in writing informational text beginning with labeling, then list-making, then informational statements using inventive spelling as early as kindergarten (Newkirk, 1987; Donovan, 2001)

Writing Genres: 1st grade

- 1st Grade At the start of the year, most writing in the form of labels accompanied drawing, but by the last third of the year, phrases and simple sentences were produced without pictures.
- By the end of the year, the children, on average, produced 3 to 5 distinct clauses during "writing workshop."
- It is now understood that children's understanding of genres is influenced by environment, in that children imitate the writing they see around them in and outside the classroom (Chapman, 1995).

Writing Genres: 2nd grade

- By grade 2, children are able to produce narratives and informational text (Donovan and Smolkin, 2002; Read, 2001)

Newkirk (1987) examined 100 informational texts written by children in grades one to three. He found that only about 15% of first graders wrote more than one paragraph, however, by third grade, nearly half of the students wrote informational texts that were longer than one paragraph.
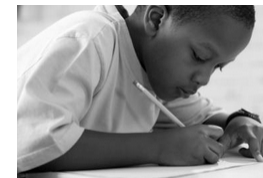
Writing Development
Intermediate Grades: 3-5

In the Intermediate Grades

- By grade 3, writing is an everyday task and students in the upper elementary grades are focusing more on making connections across ideas (Strickland and Townsend, 2011).
- By 5th grade, students perceive that good writing is imaginative, expressive and presents different genres (McCarthey, 2001).
- Their writing is more multidimensional (Strickland and Townsend, 2011).
- In 4th and 5th grades, children begin to read and revise their work, particularly when they discuss their writing with others (Calkins, 1986).

In the Intermediate Grades

- Calkins believes that during the upper elementary years, children shift away from immediately writing ideas down, to using more internal self-talk to consider alternative leads, endings, and viewpoints.

- Vygotsky (1978) believed that children's inner speech helps children think in words and that this self-talk eventually leads to the development of a writer's voice.

Writing Genres

- Research suggests that children in the intermediate grades gain proficiency in narrative and informational writing, then persuasive writing (Scott, 2012), as evidenced by changes in text structures and content.
  - Children with language and learning disabilities have more difficulty achieving this (Scott and Windsor, 2000).

- Narratives (e.g., stories) are event-based, whereas informational text (e.g., description, compare/contrast) is more logic-based (Chapman, 2006).

Writing Genres

- By 5th grade, children are able to produce well-formed narratives (Hidi & Hildyard, 1983)

- The CCSS expects that 35% of the assignments at the elementary level will be spent on informative/ explanatory tasks.

- While there is evidence that children in the intermediate grades produce text structures that characterize informational text, there is insufficient research on how this emerges across the elementary years.

Writing Genres

- Children produce <u>more complex text structures</u> associated with writing genres, when they write about familiar topics. (Donovan and Smolkin, 2006)

- However, overly simplistic writing tasks constrained students' abilities to demonstrate their writing skills. (Donovan and Smolkin, 2006)

Writing Genres

Persuasive text is challenging.

- Some studies suggest that by age 10, students can produce texts with evidence for a particular claim, but are just beginning to include language that can convince a reader to accept such claims (Golder and Coirier, 1994).

- Currently, there is a paucity of research that documents how different types of writing develop, particularly when one considers that students may not have been exposed to various type of writing on a regular basis.

Writing Development
Middle and High School

Research on Secondary Writing Practices

- Applebee **(1981)** found that while students, on average, were writing 44% of the observed time, only 3% of that time involved writing a paragraph or longer.

- Based on 209 secondary classroom observations, Applebee also documented the length of time allocated to prewriting was about three minutes

- Only about 1/3 of the teachers required more than one draft, and teacher feedback focused more on mechanics, less on ideas

Research on Secondary Writing Practices

By 2002, Hillocks found some significant changes
- Teachers discussed multi-paragraph compositions even at elementary school levels, often using the five-paragraph approach.
- Students were writing more than before.
- More prewriting activities (e.g., studying models of writing, analyzing characters, brainstorming and organizing ideas).
- More use of peer responses to provide feedback to the writer
- Did not find that more time was allocated to revision.

Middle School Writing

- By the time students reach middle school, they are using <u>writing to express understanding across academic disciplines.</u>
- Students show increased engagement in writing when they were given more ownership to choose writing genres, styles, and length (Abbott, 2000).

- By middle school, at the age of 11 or 12, students are able <u>to write more complex sentences that have as many as five or six clauses</u>(Bermin and Nir, 2010)

Middle School Writing

Middle school students are using <u>multimodal literacies</u>
- O'Brien, Beach, and Scharber (2007) conducted a 2-year study of 7th and 8th graders and found that students found digital media to be more engaging than traditional literacy instruction.
- Jacobs (2008) asserts that students need to be able to communicate using formal and informal patterns of language.

- Plester, Wood & Bell, (2008) did not find texting to be correlated with weak written language skills.

High School Writing

- In the <u>2011</u> Nation's Report Card, of the 28,100 12th grade students from 1200 schools who were evaluated,
  - 52% scored only at the basic level
  - 21% scored below basic. (National Center for Education Statistics (NCES), 2012)

- More than half of the high school student population was not writing at proficient levels.

High School Writing

Bean and Harper (2011) speak to the impact of changing demographics on classroom instruction.

- Currently, high school student populations are <u>more racially, culturally and ethnically diverse,</u> due in part to immigration and globalization.
- If the demographic predictions are realized by 2020, 2 in 5 students will be foreign-born or have one immigrant parent.
  - This will further widen the range of English proficiency and further increase the heterogeneity in high school classrooms (Jimenez & Teague, 2009).

Secondary teachers <u>must attend to the full range of students' literacy skills, and design instruction and content that takes into account the cultural and learning diversity in their classrooms.</u>

"At the very least the teaching of basic literacy is no longer considered the exclusive responsibility of the elementary school teacher"

Bean & Harper, 2011, p. 63

Secondary Writing Genres

<u>Narrative Writing</u>

- Typical 6th and 7th grade writers are able to write about experiences that occur at different times and in different situations and then interpret these experiences based on character traits (McKeough, 2013)

- 8th and 9th grades, typical students include more character traits and mental states, including internal conflicts within characters. (McKeough, 2013)
- In the high schools years, students add more layers of psychological complexity, employ varying perspectives and alternatives, and include paradoxes, metaphors, foreshadowing, and flashbacks.

Secondary Writing Genres

Informative Writing

- Informative writing requires students to "create their own texts from other texts" and "analyze, synthesize, and integrate other's ideas" into their own writing (Newell, VanDerHeide & Wilson, 2013).

- By middle school, the CCSS expects that students <u>can employ classification, compare/contrast, and cause/effect strategies,</u> use graphics and multimedia to increase understanding, and craft language to clarify claims, reasons, and evidence.

- By high school, the CCSS expects that students can <u>organize more complex ideas, concepts and information</u> to articulate differences or associations.

Secondary Writing Genres

<u>Argument</u>

The CCSS focuses on writing opinion pieces in the elementary grades, but then <u>introduces argumentation in middle school</u>.

- 9th and 12th graders include more argumentative writing features than 6th graders.

- The ability <u>to handle claims and counterclaims backed by credible sources, using logical reasoning to create a cohesive composition</u> increases across the secondary grades (National Governors Association Center for Best Practices, Council of Chief State School Officers (2010).

WRITING PROTOCOL PROCEDURES

Handwriting

"Handwriting is not just about training the hand; it is about training the memory and hand to work together to generate the correct mental images and patterns of letters and translate these into motor patterns of letters—automatically and without effort!"

Medwell, Strand and Wray (2009) p. 330

Handwriting Facilitates Writing

- Writing involves "language by hand."

- The motor construction of writing words results in tactile sensations which help children link letters to written words, in the same way that speaking letter sounds helps children combine phonemes in words (Richards, Berninger, Stock, Altemeier, Trivedi, & Maravilla, 2011).

General Info on Administering the WP

- Verbal instructions -delivered in <u>a friendly manner.</u>
- <u>Minor modifications</u> are acceptable to allow for a more natural presentation, but essentially should be delivered in the same manner across conditions.
- If the student begins to fatigue, it may be best to <u>take a break or complete the WP in two sessions</u>
- The student should complete the WP tasks using <u>the writing tool that is most often available to the student</u> (e.g., type of keyboard or other writing devices).

Step 1: Timed Handwriting

The student:
- Handwrites the alphabet from memory for 1 minute.
- Handwrites a copied sentence for 1 minute.
- Handwrites a sentence from dictation for 1 minute.
- Handwrites a copied sentence quickly for 1 minute.
- Composes and handwrites text, measured in one minute intervals.
- Indicates on a Likert scale his or her feelings about handwriting.

Alphabet Task

abcdefghijklm
nopqrstuvwxyz

- In the original WPP, the alphabet writing task was designed primarily to look at a child's ability to construct all the letters of the alphabet, and so examiners were encouraged to tell the student what letter came next in the alphabet.
- In the revised WP, in keeping with current research, the timed alphabet writing must be completed from memory.

Alphabet Task

abcdefghijklm
nopqrstuvwxyz

The timed alphabet writing task has been found to be a strong predictor of orthographic-motor integration which contributes to writing fluency when using either handwriting or keyboarding (Christensen, 2004; Christensen & Jones, 2000; Medwell et al., 2009).

Alphabet Task

- Students are instructed to continue to write the alphabet in the correct sequence for one full minute.
- No help is provided on the sequence of the letters.
- If the student completes the alphabet in less than one minute, have the student write the alphabet again until the one-minute mark.
- Be prepared to note the following: Pencil grip, posture, attitude, frustration, refusals, anxiety, persistence, self-monitoring strategies, and overall engagement.

- Count the number of discernable, correctly sequenced letters produced in one minute.
  - For example, in the sequence 'abcdfeghi' , the 'e' would not count.
  - In the sequence 'adcbefgh', the 'd' and 'b' would not count.
  - No penalty for missing letters. Record the number of letters written in one minute.

- Comparing beginning to end-of-year performance may be of particular interest to occupational therapists as it provides a measure of writing automaticity.

- To avoid practice effects, this WP task should not be a frequently practiced therapeutic activity.

Across writing tasks

- Select the sentence to be copied based on the student's grade level.
  - For studenst with cognitive impairments (modified; not being held to grade level standards), you may want to select the sentence based on reading level.

- The student is encouraged to <u>not</u> spend time erasing (you may want to use a pencil without an eraser), and instead, cross out errors and keep writing.

- Count all discernable letters even if poorly formed for the one-minute interval. Do not count spaces or punctuation marks, nor penalize the student for omitted or incorrect letters. Record the number of letters written in one minute.

Across writing tasks

- Letters per minute should be measured in one-minute intervals.

- Start timing when the student begins to handwrite. Stop timing at the 1-minute mark and note the last letter in the word that was written.

- If you want to see the finished sentence, you can allow the student to finish the task, but do not count these letters unless they reach another 1 minute mark.

- In cases where the student completes the writing task in less than 1-minute, the student is instructed repeat the task until he/she has reached the one minute mark.

Calculating Words Per Minute

Dividing the number of letters by 5 to reach a WPM score

This is a common formula. The mean written word length in general news publications is five letters.

Dunn & Reay, 1989

Pisha, 1993

Rogers & Case-Smith, 2002
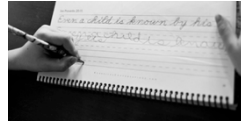
Best Sentence Copy

- Sentence copying tasks have been used by many researchers as a way to <u>measure handwriting speed</u> (Wallen, Bonney, & Lennox, 1996; Connelly, Gee & Walsh, 2007).

- Copied sentences <u>demand less working memory, and do not require composing or spelling</u> (Barnett, et. al, 2009).

- The *best copying* task should reflect the student's best effort to produce his or her usual handwriting or keyboarding.

Best Sentence Copy

- In order for the sentences to reflect *copying*, rather than memorized writing, additional sentences that include all the letters in the alphabet are included

- The student is instructed to copy the sentence using his or her best handwriting.

Sentences for Best and Fast Sentence Copying Tasks

Figure 2.7.   Sentences for Best and Fast Sentence Copying Tasks

Sentences for Copying Tasks	Grade Levels
The quick brown fox jumps over the lazy dog. (33 letters)	1-3
The five boxing wizards jump quickly. (31 letters)	2-4
Six big juicy steaks sizzled in a pan as five workmen left the quarry. (56 letters)	3-5
A mad boxer shot a quick, gloved jab to the jaw of his dizzy opponent. (54 letters)	5-8
The public was amazed to view the quickness and dexterity of the juggler. (60 letters)	6-8
While making deep excavations we found some quaint bronze jewelry. (56 letters)	8-12
No kidding, Lorenzo called off his trip to visit Mexico City just because they told him the conquistadores were extinct. (99 letters)	10-11

Pangrams Source: http://www.rinkworks.com/words/pangrams.shtml

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Dictated Sentence

- When handwriting (or keyboarding) sentences from oral dictation, reading and higher order thinking to compose is factored out (Horne, Ferrier, Singleton and Read (2011), <u>while spelling is factored in</u>.

- Sentences with words at different reading levels have been created.

- Select a dictation sentence that would be typical for the grade-level of the student from the Appendix.

- The sentence should not be too difficult for the student, but should also include some words that provide a reasonable spelling challenge.

Dictation Sentences for Intermediate Grades

| CORE WORDS | Grade 3 | Grade 4 | Grade 5 |

1. The talented acrobats amazed the crowd with their exciting and dangerous leaps and flips through flaming hoops. (17 words – G3: 4, G4: 3, G5: 2)

2. Observers were astonished when the magician appeared to make a volunteer from the audience vanish into thin air. (19 words – G3: 3, G4: 2, G5: 3)

3. The English soldiers could not avoid defeat and capture once they ran out of ammunition following a heated battle. (19 words – G3: 2, G4: 4, G5: 2)

4. The tourists flung their coins into the ancient fountain hoping their dreams of travel and adventure might come true. (20 words – G3: 3, G4: 2, G5: 3)

5. The early astronauts are considered to be the first pioneers to explore the mysterious spaces beyond the atmosphere of Earth. (20 words – G3: 2, G4: 4, G5: 2)

Dictated Sentence

- Read the dictation sentences to the student. Then speak each word of the sentence carefully one word at a time, keeping pace with the student's handwriting. When he or she has completed a word, supply the next word in the sentence.

- Instruct the student to write the sentence as quickly as possible without making mistakes.

- Do not provide a visual model of the sentence.

- Do not stretch or over articulate words such that the word is phonetically disassembled.

Dictated Sentence

- Typically, students will write dictated sentences at a slightly slower rate (1 to 2 WPM slower) when compared to their copying rates.

- The student is not penalized for spelling errors. Misspellings, however, offer an additional opportunity to examine the linguistic knowledge that contributes to spelling.

Fast Sentence Copy

- Research (Weintraub & Graham, 1998) on transcription that indicates that students are able to modify their speed to complete different task
- The *fast copying* task should follow the dictation task, and reflect the student's ability to write as quickly as possible without making mistakes.
- Comparing the student's performance on best and fast copying tasks across conditions provides information on the student's ability to increase his or her speed relative to writing demands.

Composed Text

- Composing sentences requires the student to integrate transcriptions skills with some measure of higher order thinking.
- The student needs to generate ideas, activate working memory, and formulate written language.
- The evaluator should engage the student in conversation about a topic that is of interest to him or her.
- After one to two minutes, once the student has verbally generated some ideas, the student is asked to write some sentences about these ideas.
- Do not visually or verbally model sentences.

Composed Text

- Encourage the student to write as many sentences as he or she can.
- Start timing when the student begins to handwrite. Note the last letter in the word that was written at one-minute intervals until the student has completed the task.

- This task is looking at a student's ability to compose a brief writing response. For this task, the student must integrate transcription and written language skills.

Likert Scale

- Use the Likert graphic to ask the student how he/she likes to write by hand. Be sure the student is not responding to the content of each task, but to the use of handwriting.

1	2	3	4
I really do NOT like it.	I did not like it much.	I liked it a little.	I really like it.
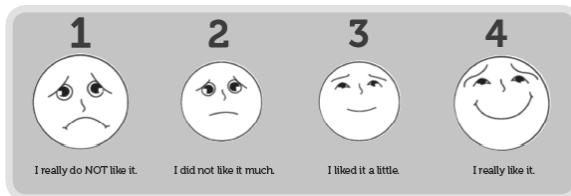
Handwriting
Current Research

Handwriting

- Handwriting is formally introduced in kindergarten.
- By the end of 1st grade, students are expected to print all upper and lowercase letters.
- Handwriting proficiency typically increases across grades one to three.
- By 4th grade, today's students are expected to be able to handwrite for longer periods
- By the middle school, speed of production is more of an issue and students must balance speed with legibility as they write for extended periods of time.

Do we need cursive?
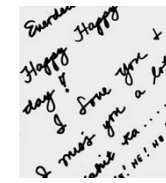
- Cursive styles are needed for signatures and personal notes.
- Exposure to cursive is needed to be able to read cursive writing.
- Today, there are other faster tools for communication, such as email and social networking.
- Style of handwriting is not the central issue; it is more important that students have some form of fluent transcription, whether it is manuscript, cursive, a combination of the two, or keyboarding

Cursive vs manuscript

- Graham (2010) recommends that teachers begin with manuscript because children more often enter formal schooling knowing how to make some manuscript letters
- There is evidence that:
  - manuscript is easier to learn than cursive
  - once mastered it can be as fast as cursive
  - may facilitate reading development in the early grades since it more closely resembles the text found in books.

Children ultimately develop their own personal style of handwriting, which is often a combination of manuscript and cursive writing with strokes that are modified or eliminated.

Prevalence of Handwriting Difficulties

- A large-scale survey of primary school children in the U.K. showed the number of children with handwriting difficulties to be around 12% (Barnett, Stainthorp, Henderson, & Scheib, 2006).
- Prevalence is generally higher for children in the primary grades compared to upper grades.

- Overvelde and Hulstijn (2011) assessed handwriting development in the fall and spring of the school year across grades 2 and 3,
  - students who scored as dysgraphic decreased from 37% to 17% by the end of grade 2,
  - and further decreased to 6% by grade 3.

Teacher Perceptions on Handwriting

- In a national survey on handwriting instruction in grades one to three (Graham, 2010).

  - Only 39% of teachers classified their students' writing as adequate
  - 46% reported that their students' handwriting kept pace with classroom demands.

  - Only 12% of teachers reported receiving adequate training on how to teach handwriting

Grip and grasp patterns

- Legibility varies depending upon the writing task (Graham, Struck, Santoro & Berninger, 2006).
- Pinch strength/ fatigue contributes to legibility for longer writing tasks in young children with dysgraphia Engel-Yeger & Rosenblum (2010) .
- Non-standard pencil grasp did not influence handwriting speed or legibility in 120 typical fourth graders (Schwellnus, Carnahan, Kushki, Polatajko, Missiuna, & Chau, 2012)
- Graham (2010) states that grasp needs to be comfortable, but not perfect.

OMI and Automaticity

- Automatic letter writing is the single best predictor of length and quality of written composition in the primary grades (Graham, Berninger, Abbott, Abbott & Whitaker, 1997) and in the secondary years (Peverly 2006, Connelly et al., 2006).
- Improving students' abilities to produce letters with more automaticity allows them to attend to other writing processes by freeing up cognitive resources (Christensen & Jones (2000) .
- Automaticity develops in early childhood, but continues to develop into the secondary years.

OMI Speeds

Mean letter per minute scores for students ages 9-16 writing the alphabet from memory. (Barnett, Henderson, Scheib and Schulz, 2007)

Figure 1.6

Age	Mean LPM
9	42.04
10	47.32
11	54.76
12	55.44
13	67.73
14	70.45
15	73.45
16	75.08

OMI Speeds: Young Adults

Mean letter per minute scores for young adults writing the alphabet from memory. (Barnett, Henderson, Scheib and Schulz, 2011)

Figure 1.7

Age	Mean LPM
17-18 years	79.60
19-21 years	86.71
22 -25 years	88.77

Handwriting Speed

- Writing fluency, which involves speed plus legibility, are considered the two most important elements of handwriting performance (Feder &Majnemer, 2007).
- Legibility contributes to readability, speed allows students to keep pace with writing assignments.
- Children can adjust the speed of writing to various tasks, and that when asked to write faster, legibility declines (Graham, et al. (1998a).
- Data on handwriting speed prior to the 1990s is less reliable today as it likely does not reflect changes in writing demands in current school environments (Graham, Berninger, Weintraub, & Schafer, 1998).

Handwriting Speed Data

The most recent study of handwriting speed was conducted by Barnett, et al. (2007) in the U.K.

Reliability and validity were established with 546 racially and socioeconomically diverse children ages 9 to 16.

- Copy Best
- Alphabet Writing
- Copy Fast
- Graphic Speed
- Free Writing

Handwriting Speed Data
(Barnett, Henderson, Scheib and Schulz, 2007)

Result provided evidence that:

- Children tended to reach the maximum performance on the *copy best* task at around age 15-16

- The *copy fast* task and the *free writing* task showed room for improvement beyond age 16.

- Gender differences showed girls writing faster than boys.

Best and Fast Copying Data
(Barnett, Henderson, Scheib and Schulz, 2007)

Age	Copy Best Median WPM	Copy Fast Median WPM
9	12.00	16
10	13.75	20
11	17.50	24
12	19.50	26.00
13	20.00	27.50
14	21.50	29.50
15	23.25	30.50
16	23.00	31.50

Additional data on copying speeds in the WP

* Median scores= middle score less skewed by outlier scores

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Young Adult Handwriting Speeds
Barnett, Henderson, Scheib, & Schulz (2011).

Examined the handwriting of 393 students ages 17-25. Students who reported a disability or those receiving special needs support were included.

Age Group	Copy Best Mean WPM	Copy Fast Mean WPM
17-18	24.31	32.98
19-21	26.73	35.57
22-25	28.21	36.19

Writing speeds continue to increase somewhat after age 16, leveling out around age 25.

Free Write Task (Extended writing task)

O'Mahoney, Dempsey & Killeen (2008) :

- Extended writing tasks provide a way to make inferences about a student's ability to manage writing assignments and examinations that take a longer amount of time.
- A longer writing task may also provide an opportunity to observe self-regulation skills.

Barnett et al. (2007)

- Free writing tasks were consistently slower than the *copy fast* task across all ages, condfirming that free writing is more demanding than copying.

Ferrier, Horne & Singleton (2013)

- "average speed of free writing in secondary school is largely a function of the cognitive load imposed on the task" (p. 4).

Copying 7 Free WritingData
(Barnett, Henderson, Scheib and Schulz, 2007)

Age	Free Write Median WPM
9	11.45
10	13.90
11	17.10
12	18.60
13	21.50
14	22.70
15	23.30
16	23.60

* Median scores= middle score less skewed by outlier scores

While normative data can provide perspective, performance comparisons across multiple tasks for an <u>individual</u> student are more useful for adjusting instruction and progress monitoring.

Handwriting Quality

Lack of legible handwriting is correlated with a number of findings (Barnett et al, 2007; Connelly et al., 2006).
- Difficulties with handwriting lead children to avoid writing and <u>see themselves as less competent</u> writers.
- Poor handwriting is <u>correlated with underachievement and low self-esteem.</u>
- Handwriting deficits are <u>highly correlated with other learning disabilities.</u>
- Lower marks are more often assigned to students with poor handwriting quality.

Writing Quality plus Automaticity

Tucha, et al. (2008) contend that an over emphasis on neatness during instruction can have a negative effect on fluent writing production.
- Based on their research, they concluded that today's handwriting instruction focuses more on well-formed handwriting and <u>neglects speed of handwriting and orthographic automaticity.</u>
- Instruction on handwriting quality is important for young writers and students with handwriting deficits; however, instruction <u>must also address automaticity</u>.

A focus on neatness is not sufficient

- Handwriting practice that focuses more on letter formation and neatness may not constitute a best practice.

- Medway et al. (2009) studied a school where all the 5th grade students had unexpectedly high neatness scores, but low composition scores. Students in this school had used a handwriting program that stressed neatness of letter formation for 10-15 minutes per day for two years.
- Handwriting practice did not lead to higher composition scores.

Handwriting and Disabilities
(Van Waelvelde, Hellincix, Peersman & Smits-Engelsman, 2012)

- 603 students ages 7-12 from regular, mainstream schools and 259 children from special school settings.
- All students had an IQ greater than 70 with no physical or sensory disabilities.
- Students receiving special education in the early elementary grades tend to make gains in handwriting speed at a similar trajectory, but score lower than their typically developing peers.

Impact of Language Impairments
Connelly, Dockrell, Walter & Critten (2012)

Writers typically generate text in bursts (i.e., the number of words produced between pauses).
- Students age 11 with language impairments
- Burst lengths vary by language skill level, and are hampered by spelling and handwriting fluency.

Measure	Speech Language impaired	Chronological Age matches	Younger language skill matches
Total number of words	52.0	76.4	51.7
Total number of bursts	12.8	12.3	13.6
Average burst length in words	4.2	6.9	3.9
Total number of spelling errors	5.1	2.4	5.7

Dyslexia and writing bursts

Sumner, Connelly and Barnett (2013) examined the handwriting of 9 year olds with dyslexia using a digital handwriting tablet
- Found no difference in sheer motor speed, but they wrote fewer words per minute when composing text compared to same age peers.
- Found that when matched to younger children by spelling ability, children with dyslexia paused at comparable rates.
  - The authors concluded that pausing when composing may be related to more to spelling difficulties rather than motor deficits for these students with dyslexia.

WRITING PROTOCOL PROCEDURES

Keyboarding

Keyboarding is often introduced in elementary school and is not solely used for academics, but also as a life skill for college and careers.

Keyboarding can be more than just another form of transcription

- Keyboarding along with word processing allows students to legibly generate and record their ideas, to correct spelling or grammatical errors, to edit and make revisions.

- Research shows that word processing can have a positive effect on composing skills for typically developing children (Morphy and Graham, 2012), as well as children with disabilities (Cochran-Smith, 1991; MacArthur, 2009b).

Keyboarding: Expectations

- The CCSS (National Governors Association Center for Best Practices, Council of Chief State School Officers (2010) state:

- In the 4th grade:
  - Students should develop sufficient "command of keyboarding skills to type a minimum of 1 page in a single sitting,"

  By the 5th grade
  - to type 2 pages in a single sitting.

- There are no clear elementary standards for font size, margins, or line spacing that would clarify the expected number of words written per line to produce a page of text.
- Schools are expected to design a means of building keyboarding skills into the elementary curriculum
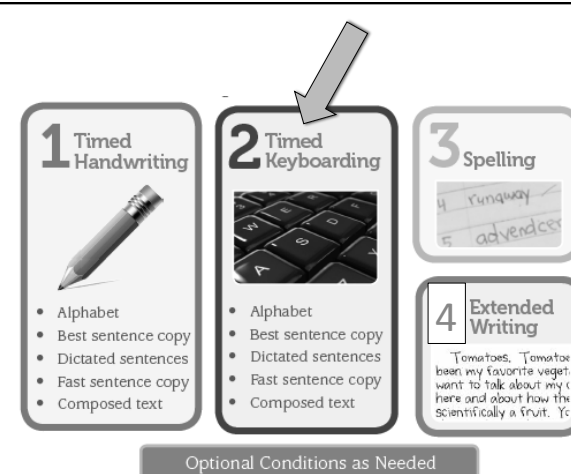
Protocol for WP: Keyboarding

- Use the keyboard that is most often used by the student in the classroom (e.g., computer keyboard, portable word processor, tablet).
- Open a word processing document. Save the file with the student's name and date.
   - (keyboard_smith_9_16_13)
- Note the following:
  - Style of keyboarding (use of one or two hands, fingering, use of vision),
  - comfort level with computer functions
  - attitude, frustration, refusals, anxiety, persistence, self-monitoring strategies, and overall engagement.

Step 2: Timed Keyboarding

The student:
- Types the alphabet from memory for 1 minute.
- Types a copied sentence for 1 minute.
- Types a sentence from dictation for 1 minute.
- Types a copied sentence quickly for 1 minute.
- Composes and types text, measured in one minute intervals.
- Indicates on a Likert scale his or her feelings about using a keyboard.

Directions similar to handwriting tasks

Alphabet Task

abcdefghijklm
nopqrstuvwxyz

- In the revised WP, in keeping with current research, the timed keyboarding of the alphabet must be completed from memory.

- The timed alphabet task has been found to be a strong predictor of orthographic-motor integration which contributes to writing fluency when using either handwriting or keyboarding (Christensen, 2004; Christensen & Jones, 2000; Medwell et al., 2009).

Alphabet Task

- Students are instructed to continue to type the alphabet in the correct sequence for one full minute.
- No help is provided on the sequence of the letters.
- Save the file.

- Comparing beginning to end-of-year performance may be of particular interest to occupational therapists as it provides a measure of keyboarding automaticity.
- To avoid practice effects, this keyboarding task should not be a frequently practiced therapeutic activity.

Best Sentence Copy

- Use the sentence that was used for "best copying" when handwriting.
- The *best copying* task should reflect the student's best effort to produce keyboarding while <u>copying</u> a sentence.
- Save the file.

Sentences for Best and Fast Sentence Copying Tasks

Sentences for Copying Tasks	Grade Levels
The quick brown fox jumps over the lazy dog. *(33 letters)*	1-3
The five boxing wizards jump quickly. *(31 letters)*	2-4
Six big juicy steaks sizzled in a pan as five workmen left the quarry. *(56 letters)*	3-5
A mad boxer shot a quick, gloved jab to the jaw of his dizzy opponent. *(54 letters)*	5-8
The public was amazed to view the quickness and dexterity of the juggler. *(60 letters)*	6-8
While making deep excavations we found some quaint bronze jewelry. (56 letters)	8-12
No kidding, Lorenzo called off his trip to visit Mexico City just because they told him the conquistadores were extinct. (99 letters)	10-11

Pangrams Source: http://www.rinkworks.com/words/pangrams.shtml

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Dictated Sentence

- Use the same dictation sentence that was used when handwriting.
- When using a word processor, turn off auto correct and the spell checker, or instruct the student not to use the spell checker.
- Save the file

Dictation Sentences for Intermediate Grades

| CORE WORDS | Grade 3 | Grade 4 | Grade 5 |

1. The talented <u>acrobats</u> <u>amazed</u> the <u>crowd</u> with their exciting and <u>dangerous</u> <u>leaps</u> and <u>flips</u> through <u>flaming</u> <u>hoops</u>. (17 words – <u>G3:</u> 4, <u>G4:</u> 3, <u>G5:</u> 2)

2. <u>Observers</u> were <u>astonished</u> when the <u>magician</u> <u>appeared</u> to make a <u>volunteer</u> from the <u>audience</u> <u>vanish</u> into <u>thin</u> air. (19 words – <u>G3:</u> 3, <u>G4:</u> 2, <u>G5:</u> 3)

3. The <u>English</u> <u>soldiers</u> could not <u>avoid</u> <u>defeat</u> and <u>capture</u> once they ran out of <u>ammunition</u> following a <u>heated</u> <u>battle</u>. (19 words – <u>G3:</u> 2, <u>G4:</u> 4, <u>G5:</u> 2)

4. The <u>tourists</u> <u>flung</u> their <u>coins</u> into the <u>ancient</u> <u>fountain</u> hoping their <u>dreams</u> of <u>travel</u> and <u>adventure</u> might come true. (20 words – <u>G3:</u> 3, <u>G4:</u> 2, <u>G5:</u> 3)

5. The early <u>astronauts</u> are <u>considered</u> to be the first <u>pioneers</u> to <u>explore</u> the <u>mysterious</u> <u>spaces</u> <u>beyond</u> the <u>atmosphere</u> of <u>Earth</u>. (20 words – <u>G3:</u> 2, <u>G4:</u> 4, <u>G5:</u> 2)

Fast Sentence Copy

- The *fast copying* task should follow the dictation task, and reflect the student's ability to type as quickly as possible without making mistakes when copying.

- Use the sentence that was used for "fast copying" when handwriting.

Composed Text

- The evaluator should engage the student <u>in new conversation</u> about a topic that is of interest to him or her.
- After one to two minutes, once the student has verbally generated some ideas, the student is asked to write some sentences about these ideas.
- Save the file.

Likert Scale

- Use the Likert graphic to ask the student how he/she likes using a keyboard. Be sure the student is not responding to the content of each task, but to the use of the keyboard.

| 1 | 2 | 3 | 4 |
| I really do NOT like it. | I did not like it much. | I liked it a little. | I really like it. |
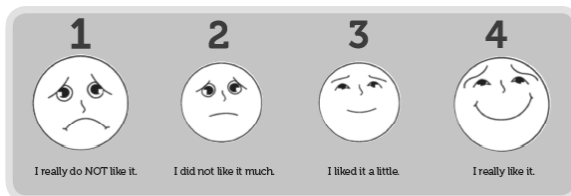
Optional Conditions to Consider

OPTION	CONSIDERATIONS	PURPOSE
On-screen keyboarding	When the student is more often using a tablet with an on-screen keyboard	To document a baseline using an on-screen keyboard
Text-to-Speech with word processing	When the student struggles to monitor or edit spelling and written language.	To determine if the student benefits from having text-to-speech feedback when spelling and composing
Speech-to-Text (Speech recognition)	When handwriting, nor keyboarding are possible given physical disabilities, or when there are persistent, severe spelling deficits	To develop a baseline or document the usefulness of speech-to-text to more independently produce writing
Word Prediction	When the student has persistent spelling deficits, but can spell at least at a phonetic level; or when motor deficits affect the ability to type efficiently	To gauge whether word prediction is useful in that it increases spelling and writing independence.

Keyboarding

Current Research

OMI and Keyboarding

Christensen (2004) conducted research to confirm whether OMI applied to keyboarding.

- Christensen concluded that, like handwriting, students must <u>achieve a level of orthographic-motor integration</u> relative to keyboarding, in order to devote cognitive resources for ideation, organization of ideas, spelling, and grammar.

- The results of this study confirmed the relationships between handwriting quality and fluency, but indicated an even <u>stronger correlation for quality and fluency when writing is produced using a computer.</u>

Keyboarding automaticity is a necessary condition, but by itself does not guarantee more sophisticated text production.

Explicit writing instruction is still needed to support composition.

Keyboarding should be at or above handwriting speeds

- "For touch typing to be useful, the process must be automatic and students must reach a typing speed that is at least equivalent to their handwriting speed" (Balajthy, 1988, p 41).

- Dunn and Reay (1989) confirmed this in a study of 52 students age 12 to 13 years old.
  - The reverse of this was also demonstrated in that when students' keyboarding speeds were less than their handwriting speeds, they demonstrated less proficiency when word processing.

Keyboarding vs Handwriting Speeds

- Accepting the premise that students should be able to keyboard at least as fast as they can handwrite, Freeman et al. (2005) contend <u>that handwriting speed norms are more useful</u> than keyboarding speeds for estimating target speeds.

- They caution that these decisions should be based on the <u>individual profile of student needs</u> since some students may not be able reach comparative speeds, but will require an alternative to handwriting due to significant legibility deficits.

Keyboarding vs Handwriting Speeds

- There is a wider range of speeds when using keyboarding compared to handwriting

- The top letter-per-minute rates for keyboarding are higher than that of handwriting.

  Freeman, MacKinnon and Miller's (2005) meta-analysis

Keyboarding in the Early Primary Grades

- Kindergarten and 1st grade children took as much time to decide what letter to type as they did to find it on the keyboard, indicating that for young children, touch typing instruction was not warranted as a child's ability to generate text was more dependent on the ability to determine how to spell words rather than locate keys (Kahn and Freyd, 1990)

- Shorter (2001), Nichols (1995) and Pisha (1993) share the viewpoint <u>that keyboarding instruction for children in the early primary grades (K-2) may not constitute an optimal time for achieving keyboarding fluency.</u>

Keyboarding and Disabilities
Pisha (1993)

- Age is a factor when introducing keyboarding as older students in <u>grades 5 and 6 developed keyboarding skills more rapidly than younger students in grades 3 and 4.</u>
- Students receiving special education services started out with a lower baseline of keyboarding skills compared to typical students, and that while there was a similar upward trend in progress, speeds of those receiving services lagged behind that of their same age peers.

- <u>Handwriting quality is not correlated with keyboarding ability</u> such that students with poor handwriting can learn keyboarding. (Pisha, 1993; Rogers and Case-Smith, 2002; Horne et al., 2011)

Keyboarding in the Elementary Years

- <u>In the absence of keyboarding instruction, handwriting may be more effective at elementary levels</u>, particularly when students are producing higher-level writing tasks.

  Berninger, Abbott, Augsburger & Garcia (2009)

  Connelly, Gee, and Walsh (2007)

- The authors conclude that in the absence of keyboarding instruction, handwritten essays will likely prevail in the elementary grades as students have more experience with handwriting.
- Without keyboarding instruction that results in fluent keyboarding, essay writing using keyboarding could potentially hinder writing quality.

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Handwriting and Keyboarding Speeds at Elementary Grades
(Connelly, Gee, and Walsh (2007)

- Based on a copying task
- No prior keyboarding experience

- Figure 1.14

Grade	Handwriting LPM (WPM)	Keyboarding LPM (WPM)
Kind.	16 (3.2)	7 (1.4)
1	33 (6.6)	12(2.4)
2	33 (6.6)	13 (2.6)
3	45(9.0)	24 (4.8)
4	57 (11.4)	31 (6.2)
5	65(13.0)	47 (9.4)

Handwriting and keyboarding speeds using a dictated writing task at MS and HS levels
Horne et al. 2011

- Compared handwriting to keyboarding speeds in 952 students ages 11 -17, randomly selected from 19 schools. (<u>Prior keyboarding experience was not reported.</u>)
- Passages were not copied but were dictated via the computer's digitized speech.

- Their results showed keyboarding speeds generally increased with age in the middle and high school years.

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Handwriting and keyboarding speeds using a dictated writing task
Horne et al. 2011

Keyboarding begans to surpass handwriting speeds toward the end of middle school.

Figure 1.15

Grade equivalent	Handwriting (WPM)	Keyboarding (WPM)
6th	16	14
7th	18	16
8th	20	20
9th	22	24
10th	22	25
11th	23	26
12th	24	27

Young Adult speeds
(Weintraub, Gilmour-Gill, & Weiss, 2010)

- A recent study indicated average speeds for 63 adults, who used computers daily with a mean age of 25,
  - ranged from 17 WPM for slow keyboarders
  - to 33 WPM for fast keyboarders

- Keyboarding and handwriting speed was measured using a copied paragraph and a dictated paragraph.

- Only 2 of these adults used touch-typing, while the vast majority used their vision to mediate keyboarding.

- Adults who were fast keyboarders reported spending more hours on the computer compared to slow keyboarders.

- The researchers also affirmed that speed of handwriting is not a predictor of keyboarding speed for slow young adult keyboarders.

- When you compare these adult speeds to the Horne et al. (2011) study, most high school students' keyboarding speeds exceeded or were close to adult speeds.

Direct keyboarding instruction

- Direct keyboarding instruction has been shown to be important for older students to achieve keyboarding proficiency that leads to increased speed and quality of writing
- In Christensen's (2004) research, the researchers assessed the essays of 35 8th and 9th grade students identified as having slow typing speeds.
- Half of these students received 8 weeks of keyboarding instruction for 20 minutes per day. The remaining students constituted a control group engaged in daily journal writing on the computer without keyboarding instruction.

Direct keyboarding instruction

- Students receiving keyboarding instruction were able to type as fast or faster than their handwriting speeds at post-testing.
- The results also showed that slow keyboarders receiving keyboarding instruction scored higher on typing and on the quality of typewritten text compared to the control group.
- This study confirmed that the quality of essay writing using a word processor could improve once keyboarding can keep pace or exceed handwriting speeds.

Christensen's (2004)

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Allow students to use the writing modality with which they are most fluent on high stakes tests.

- Russell (2000) conducted a second study of roughly 200 8th grade students.
- Data were collected on students' keyboarding speeds and computer experience.
- Students who could keyboard at 20 WPM or above performed much better on the computer.
- Students with slower keyboarding speeds did not perform as well on the computer.
- This speaks to the importance of keyboarding fluency and identifying the modality that works best each student.
- A study with 4th, 8th and 10th graders had similar results.

Keyboarding challenges

While keyboarding offers advantages over handwriting, it also superimposes additional challenges to achieve fluency with accuracy.

Without sufficient instruction to reach fluency, keyboarding is an accommodation that does not rise to the level of proficiency that will potentially free up the higher cognitive resources needed to improve writing quality.

2005 literature review on keyboarding for students with handwriting difficulties (Freeman et al., 2005)

General conclusions:

- Students should be able to keyboard at least as quickly as they can produce handwriting
- Keyboarding is best introduced in the upper elementary grades
- Touch typing is an appropriate method
- Keyboarding instruction is critical to reach proficiency, needing as much as 25-30 hours of instruction
- Students with handwriting difficulties may need customized goals and strategies.

Relationship between transcription mode and spelling abilities
Berninger et al. (2009)

- 4th grade students with handwriting and spelling deficits did not produce more written language, nor produce written language faster when using a keyboard.
- Composing using a keyboard is not a guaranteed solution for handwriting difficulties.
- The keyboard alone, without additional instruction, may not ameliorate difficulties with spelling and handwriting.
- For students with significant legibility issues, keyboarding as an accommodation may be necessary, but it may not be sufficient unto itself.

Slide 1:

What is most important, to the extent possible, is that students have some form of fluent transcription in order to reduce the cognitive load and allow for the development of higher-level writing skills.

Graham (2010)

Slide 2:

SPELLING

Slide 3:

1 Timed Handwriting
- Alphabet
- Best sentence copy
- Dictated sentences
- Fast sentence copy
- Composed text

2 Timed Keyboarding
- Alphabet
- Best sentence copy
- Dictated sentences
- Fast sentence copy
- Composed text

3 Spelling
4 runaway
5 advances

4 Extended Writing
Tomatoes, Tomatoes been my favorite veget: want to talk about my here and about how the scientifically a fruit. Yo

Optional Conditions as Needed

Slide 4:

Standardized vs. Formative Spelling Assessments

- Standardized" summative" educational tests such as the Woodcock-Johnson III spelling subtests (Woodcock, McGrew, & Mather, 2007), and the Test of Written Language, 4th edition spelling subtest (Hammill & Larsen, 2009) allow educators to compare a student's performance to a normative sample.

- Neither of these provides "formative" information to guide instruction nor monitor progress. Neither test is designed to delineate a student's level of linguistic knowledge (Masterson & Apel, 2010).

- Masterson and Apel's research (2010) found that linguistic scoring was better able to detect changes in spelling ability and provided more specific information on changes in students' linguistic knowledge.

Stage Theory Reconsidered

While there is general agreement that spelling progresses developmentally (Schlagal, 2013), the linguistic "repertoire" model accounts for the uneven, overlapping spelling development skills that children demonstrate as their writing skills progress.

"The repertoire theory of spelling suggests that from kindergarten through adulthood, spellers access and utilize the various linguistic factors underlying spelling across time" (Apel, Masterson, and Neissen, 2004b, p. 647).

Linguistic Knowledge

- Linguistic knowledge addresses:
  - **phonological** awareness (sounds within words)
  - knowledge of **orthography** (patterns of letters within words)
  - **vocabulary** (word meaning)
  - **morphology** (i.e., suffixes, prefixes, base words, and word roots)
  - **mental orthographic representations (MGRs)** (words stored in an individual's long-term memory after repeated exposure to them in print.)

Linguistic Approaches to Spelling

- The evaluation of the developmental progression of spelling abilities employing a more linguistic approach is widely accepted.

- Spelling from a dictated inventory of words with a variety of linguistic patterns, as well as words that demand MGRs, provides insight into children's spelling development.

Linguistic Approaches to Spelling

- Authentic writing tasks also can provide insight into spelling development, however, children may choose to use words they perceive that they can spell when generating writing and avoid those they cannot spell with ease.

- Together, the analysis of misspellings using dictated word lists and writing samples can help educators analyze students' current levels of spelling abilities based on linguistic knowledge (Masterson & Apel, 2010).

SLPs

The input of speech language pathologists trained in linguistics may be particularly helpful to classroom teachers seeking assistance translating linguistic-based spelling assessment data in an effort to adjust instruction.

WRITING PROTOCOL PROCEDURES

Spelling

Spelling Word List

- The spelling word list was developed by Dr. Jan Wasowicz.
- It includes a range of grade-appropriate words that can be used to screen linguistic knowledge.

- For most students, including students with mild disabilities who are being held to college and career readiness standards, use the list that matches the student's grade level.

- In some situations, you may be evaluating students with cognitive impairments using modified materials. In this case, you may want to consider using the level commensurate with the student's reading level.

Lists of Spelling Words

Primary Grade (K-2) Spelling Words	Upper Elementary (3-5) Spelling Words	Middle and High School Spelling Words
hen	fruit	trounce
jog	place	enough
was	city	distinct
thing	knife	whistling
choke	flavor	appealing
raid	bottle	statue
call	grudge	misheard
where	caught	spectator
truck	their	criticize
switch	climbed	changeable
bushes	calves	reinforcement
shopping	squinting	indefinite
cries	voyage	edition
biked	measure	chlorinated
said	misspell	irreversible
	guilty	predetermination
	friendliest	permissibility
	magician	disciplinary
	majority	commercialism
	continuous	expeditious

Mode of Spelling

- For students in grades 2 to 6, spelling by hand did not differ significantly from spelling by keyboard (Masterson & Apel, 2006).

- Earlier research by Vaughn, Schumm, and Gordon (1992, 1993) determined that 3rd and 4thgrade students with and without learning disabilities were able to learn to spell new words when writing, typing, tracing or moving letter tiles.

- Because modality has no apparent effect on the outcomes of spelling assessment, computers can be used to evaluate spelling.

Keyboard or Handwritten Spelling Test?

- Using a keyboard is preferable because it allows the examiner to more easily analyze misspellings and also provides a way to check on the usefulness of spell checkers.
- Words from the list that are misspelled can be more easily checked using the spell checking tools of a word processor to see if they appear on the suggested spelling list.
- Likewise, using a word prediction application, you can check to see whether word prediction will suggest intended spellings, and therefore, gauge the potential of word prediction for a given student.
- However, if the student is unfamiliar with the keyboard, then the student can handwrite.

Procedures for the Spelling List

- This is an untimed task.
- Open a new word processing document. Turn off spell check and autocorrect in the word processing program, or instruct the student to not use right click, nor spell check. Save the file with the student's name and date. (spelling_jones_9_16_15).

- Hold the list of spelling words in a way that the student cannot see the words. Use the words at the grade appropriate level.

- When presenting each word on the spelling list, the examiner should
  - speak the targeted spelling word
  - verbally present the targeted word in the context of a sentence, and
  - speak the targeted word once again.
- Save the file.

Likert Scale

- Use the Likert graphic to ask the student how he/she feels about spelling.
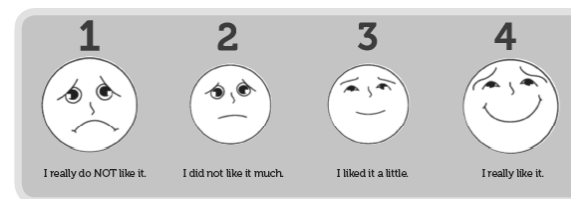
Scoring

- After completing the WP, analyze the spelling errors using the charts in Figure 1.3 to 1.5.

- You can also copy and paste the student's spelling into a new word processing file. Calculate the percentage of correctly spelled words.
- You can also determine the percentage of words that could be spell checked using "right click".

Figures 1.3 to 1.5

Early Elementary Spelling Word List

Figure 1.3. Early Elementary (K-3) misspellings that may reflect a deficit within each of these five areas of language

		Deficit in Phonological Awareness	Deficit in Orthographic Knowledge	Vocabulary Deficits	Deficit in Morphological Knowledge	Deficit in Mental Graphemic Representation
1	hen	hn henu han hne	hon henn	N/A	N/A	N/A
2	jog	jg joga jug goj	yog jogg gog	N/A	N/A	N/A
3	was	ws wasa wos saw	yas whas uas	N/A	N/A	N/A
4	thing	thng thingng thin thnig	hing theng	N/A	N/A	N/A
5	choke	chk cho chokes shoke chkoe	joke chock tchoke	N/A	N/A	N/A

Linguistic Development Expectations

- At the kindergarten level, you can expect that students are attempting to spell words using primarily their phonological and orthographic pattern awareness (mostly alphabetic principle), with some MGRs for high frequency words.
- At the 1st grade level, you can expect that students are demonstrating more mastery of their phonological and orthographic awareness with more MGRs for high frequency words.
- At the 2nd grade level, you can expect that students are demonstrating more orthographic patterns within words and more MGRs for common words. They also are using some morphological awareness, typically for inflectional morphology (e.g., –s, -ing).
- By the end of third grade, we expect most students to correctly spell these words.

What do misspellings tell you

1. Look at misspelled words
2. What does it tell you that the student does know?

   a. Does the word have a logical letter that represents each sound? (phonological knowledge)

   b. Does the spelling suggest knowledge of letters patterns? (Orthographic knowledge)

   c. Does the student own the MGR for this word?

1. What does it tell you the student did not know?

Spelling Analysis Practice

wuz (was)
chok (choke)
were (where)
trock (truck)
curis (cries)
said (said)

Correctly spelled?

Phonological awareness errors?

Orthographic awareness errors?

Vocabulary knowledge errors?

MGR errors?

Spell check potential

- red -
- trock +
- swetch +
- bushs +
- shupping +
- chok +
- bikd+
- curis -
- were -
- wuz +

Words that could be picked up by "right click" spell check if the student could recognize the correct spelling

The WP spelling lists are a screening tool

- Use the WP spelling list <u>only for screening</u>, to assist you with determining if linguistic-based spelling problem may be present.
- There is a limited number of words in the word lists provided.
- To evaluate the the full range of spelling errors, further assessment of a student's linguistic skills may be warranted.
- A comprehensive, valdity tested method of spelling error analysis is implemented in the SPELL software assessment program (Masterson, Apel, & Wasowicz, 2006: Learning By Design, Inc. Evanston, IL).

Spelling is but one component of writing instruction.

"The worst outcome occurs when students so restrict their writing, due to low spelling ability and confidence, that their teachers never know the richness of their thoughts, and the students never discover the sense of accomplishment that comes through writings one's thoughts well"

(Bailet, 2004, p. 675).

COMPOSITION

Composition is defined as "the conscious and explicit development of students' writing in formal education, from preschool to higher education."

(Russell, 2006, p. 243)

Composition is a cognitive sociolinguistic process that requires the integration of lower level transcription with the higher order skills of retrieving knowledge and then transforming this into written text across a variety of purposes for different audiences.

WRITING PROTOCOL PROCEDURES

Composing: Extended
Writing Task

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Extended Writing Task Procedures

- This task provides evidence of a student's ability to write on demand, and it offers a longer writing sample for the examination of writing traits.

- It can also be an opportunity to reflect on the degree to which grade-level college and career readiness language arts standards are being met.

- One writing sample, however, may not be sufficient. It is advisable to examine additional extended writing tasks that have been completed in class without adult edits or revisions.

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Extended Writing Task Procedures

- The extended writing task was added because the overarching goal for today's students is to <u>write routinely for long and short periods</u> for a range of tasks, purposes, and audiences, beginning in the primary grades (National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010).

- As with the previous version of the WPP, a writing traits rubric is used to gauge writing strengths and weaknesses.

- <u>Writing rubrics</u> continue to be recommended in the literature as a guide for teachers to monitor students' writing performance

  (Moore, Moore, Cunningham & Cunningham, 2011; Olinghouse and Wilson, 2012, Honigsfeld & Dove, 2013).
  (NEW 2014 6 +1 Traits aligned with CCSS)

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Extended Writing Task Procedures

- Students with severe writing deficits may have difficulty completing this task. Nonetheless, whenever possible, the extended writing task should be administered to establish a baseline writing sample that allows educators to look at the achievement of writing standards, and various aspects of the writing process.

- If the student is unwilling or unable to attempt the task, then request recent examples of the student's independent writing to analyze.

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Slide 1

Extended Writing Task Procedures

- Given the national emphasis on writing structures, <u>three different prompts</u> are provided for three types of writing in the revised WP.
- Evaluators should select the type of writing that is being emphasized as part of the student's classroom writing instruction.
- Select a topic that will engage the writer. Writing prompts were designed to be open-ended enough to allow for sufficient generation of text at elementary and secondary levels (In the Appendices)

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Slide 2

Elementary		
Type of writing:	**Topic Titles**	**Prompt**
Narrative	My life at home	Tell about an important event that happened to you at home.
	My life at school	Tell about an important event that happened to you at school.
	My community	Tell about an important event that happened to you out in your community.
Opinion	Should kids have chores?	Provide facts and reasons to support your opinion on this topic
	Should kids have homework?	Provide facts and reasons to support your opinion on this topic
	Should kids have recess everyday at school?	Provide facts and reasons to support your opinion on this topic
Informative	All about sports or hobbies	Describe a sport or hobby that you know a great deal about. Provide facts, definitions, and details that would help someone new to this sport or hobby learn more about it.
	All about animals	Describe an animal that you know a great deal about. Provide facts, definitions, and details that would help someone who is not an expert with the animal learn more about it.
	All about a special place	Describe a place or location that you know a great deal about. Provide facts, definitions, and details that would help someone who has never visited this location learn more about it.

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Slide 3

| Middle and High School Grades		
Type of writing:	**Topic Titles**	**Prompt**
Narrative	A perfect day	Describe your perfect day. Include well-chosen details that help describe the events of the day and why it was so perfect.
	My worst day	Describe your worst day. Include well-chosen details that help describe the events of the day and why it was so awful.
	A day in the life	Describe a day in the life of your pet (or someone else's). Include well-chosen details that help describe the events of the day from the animals' perspective.
Argument	Dress codes	Do you believe that schools should have a dress code? Why or why not? Provide facts and reasons to support your stand on this.
	Snacks at school	Do you believe that schools should sell sodas and sugary snacks at lunch or after school? Why or why not? Provide facts and reasons to support your stand on this.
	Mobile phones at school	Should students be able to use mobile phones in school? Why or why not? Provide facts and reasons that support your stand on this.
Informative	School activities	A new student has come to your school. Describe the types of extra-curricular activities that they can get involved in. Provide facts and details that would help them choose some clubs or groups to join.
	A pet for the family	Your family wants to get a pet. Describe some options for pets that they might want to consider. Provide facts and details that will help them choose one.
	My town	Your hometown is being featured in a magazine. Describe your town to the magazine editors. Provide facts and details that will allow them to learn about your town before they come to visit it.

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Slide 4

Extended Writing Task Procedures

- Efforts were made to design writing tasks that tap into everyday experiences.
- Just as teachers would do in a classroom when introducing a writing topic, it is acceptable to briefly present the topic and engage in some general conversation about the topic.
- Students are encouraged to plan before writing

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Extended Writing Graphic Organizer

Topic
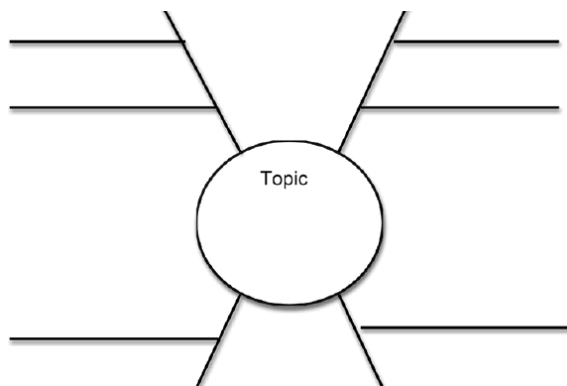
Extended Writing Task Procedures

• The student is given one minute to plan what he or she wants to write. Because this is an extended writing task and because you will be examining the degree to which the student organizes and presents details, graphic organizers are provided in the Appendices.

• For students in grades 2 or under, students who are reluctant writers or reading below 2nd grade, you can use questions to prompt ideas.

• You can help the student as needed to transcribe his or her ideas onto the graphic organizer or draw a picture on the graphic organizer to represent the student's idea.

Extended Writing Task Procedures

• Make a note of the word that was written at the end of each 1-minute interval. You can allow the student to finish his or her sentence, but do not count the words completed beyond 10 minutes.

• If the student ceases to write for one full minute, stop the task.

• Save the file.

• Then the student should read aloud what he or she wrote in order to check on words that are unclear.

Likert Scale

Use the Likert graphic to ask the student how he or she feels about writing. Be sure the student is reflecting on writing to express ideas, and not on the topic alone.

1	2	3	4
I really do NOT like it.	I did not like it much.	I liked it a little.	I really like it.
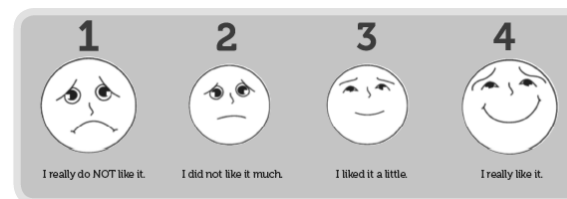
Scoring

- To score WPM speeds, count and record the number of words for each one-minute interval, including misspelled words, crossed out words, and partial words. After completing the WP, count the total number of words written and divide by the number of one-minute intervals to get a mean WPM score.

- Use the 6+1 Writing Traits rubric <u>specified</u> in Appendix X to gauge the quality of the students writing abilities. This data combined with data from classroom writing tasks is intended to help identify instructional writing needs.

- Optionally, you can also examine spelling in the context of generative writing. You can calculate the percentage of misspelled words. You can also analyze linguistic knowledge based on misspellings.

Copying 7 Free WritingData
(Barnett, Henderson, Scheib and Schulz, 2007)

Normative perspectives

Age	Free Write Median WPM
9	11.45
10	13.90
11	17.10
12	18.60
13	21.50
14	22.70
15	23.30
16	23.60

* Median scores= middle score less skewed by outlier scores

Scoring

You can also calculate the following:
- The mean word-per-minute rate for the extended writing task

You can use the extended writing task to:
- Analyze Spelling Errors
- Review College and Career Readiness Standards

Using the 6 Traits Rubric

Scoring

- The 2010 revised 6+1 Traits rubric for grades 3-12 can be downloaded from the Education Northwest website at http://educationnorthwest.org/sites/default/files/new-rubrics-3-12.pdf Read the student's text carefully to evaluate each writing trait.

- For students in the primary grades, or for students with cognitive impairments using modified materials, you will want to use the 5-Point Beginning Writer's Rubric for K-2, which can be found at http://educationnorthwest.org/sites/default/files/new-rubrics-k-2.pdf

---

Traits Rubric for Ideas: Grades 3-12

Key question:
Does the writer engage the reader with fresh information or perspective on a focused topic?

	Not proficient			Proficient		
	1 Beginning	2 Emerging	3 Developing	4 Capable	5 Experienced	6 Exceptional
	Does not reflect a main idea or purpose; includes content that is off topic	Has a main idea that begins to emerge, but author's direction is unclear	States or implies a main idea, but is unclear, unfocused, inaccurate, and/or underdeveloped	Conveys a a clear, focused, and accurate main idea with adequate development and/or support	Produces a clear, focused, accurate, and complex main idea with convincing development and/or support	Conveys a clear, focused, accurate, and significant main idea and includes unique, substantial insights that are fully developed and supported
A. Main idea	Does not convey a main idea or topic	Focuses on a general topic but does not suggest a main idea	Suggests a main idea, but the direction of the piece is still unclear	Has a clear, focused main idea	Conveys a clear, focused, and substantive main idea	Conveys a clear, focused, substantive, and original main idea that drives the piece
B. Details and support	Does not develop or support a main idea	Attempts to develop or support the main idea with limited, repetitious, faulty, and/or unclear information and/or details	Provides incidental support of the main idea with information that lacks specificity and relevance and may be inaccurate; may include some generic details	Develops the main idea with generally accurate and relevant supportive information and/or details. In A/O writing at grade 7+, addresses one or more counterclaims	Develops the main idea with specific, relevant, accurate information and/or some vivid details. In A/O writing at grade 7+, addresses and thoroughly examines counterclaims	Develops the main idea with convincing, supportive information and/or concrete details that go beyond the obvious. In A/O writing at grade 7+, thoroughly examines counterclaims and addresses them in original ways that enrich the author's claim
				In A/O writing at grade 7+, includes one or more counterclaims that are acknowledged but not addressed		
C. Reasoning/ thinking	Does not show author's thinking in developing or connecting ideas	Generalizes about the topic without providing logical connections among ideas, or uses connections that are faulty	Begins to develop supporting ideas, some of which lack clarity or obvious logical connection	Presents useful information that helps the reader understand the author's reasoning, logic, or perspective	Presents useful, fresh information or perspective with logical reasoning that clarifies complex ideas	Conveys fresh, useful information using higher order thinking skills and convincing reasoning to provide unique insights into complex ideas

---

- **Type of Writing: Informative**
- **Writer: elementary**

I like mi gramas dog. She is funny and crazey. I like mi dog. She is cool. Her fur is wearm as a <u>fireplace</u>. She is fun and weerd I love her. And she love's me to. She is nice and frenly. And she is prite.

(Underlined word provided by teacher)

- For scoring information and practice using the writing traits rubric, and to view scored examples at selected grade levels, refer to the Education Northwest website at:
http://educationnorthwest.org/traits/61-trait-writing-scoring-practice

- For information on how the Common Core State Standards intersect with 6 +1 Writing Traits, refer to:
- http://educationnorthwest.org/traits/traits-and-common-core

New Focus on Writing

- The National Commission on Writing report (2005) and the Writing Next report (Graham & Perin, 2007b) commissioned by the National Carnegie Corporation of New York elevated the importance of writing proficiency.

- In a 2012 practice guide published by a panel of experts for the U.S. Department of Education, Institute of Education Sciences, research paired with writing experts resulted in four recommendations for elementary educators, all of which are appropriate or can be modified for students with disabilities.

  (Graham, Bollinger, Booth Olson, D'Aoust, MacArthur, McCutchen & Olinghouse, 2012)

Teaching elementary schools students to be effective writers: A practical guide
(Graham et al., 2012) (NCES 2012-4058)

Four Recommendations:
1. *Provide daily time for students to write.*
2. *Teach students to use the writing process for a variety of purposes.*
   - *2a. Teach students the writing process.*
   - *2b. Teach students to write for a variety of purposes.*
3. *Teach students to become fluent with handwriting, spelling, sentence construction, typing, and word processing.*
4. *Cultivate an engaged community of writers.*

Renewed Interest In Secondary Literacy Instruction

There is renewed interest in secondary literacy instruction (Lesley, 2014) brought about by:
- Less than stellar writing scores (National Center for Education Statistics, 2012),
- A publication on adolescent literacy (Wise, 2009) that highlighted concerns regarding:
  - adolescent illiteracy rates,
  - graduation rates that are lower than reported
  - and that one third of students who enter college must take remedial courses.

Secondary Instruction

- Prior to entering middle school, students are expected to have established a strong foundation of writing skills in order manage more complex writing tasks

- Wise (2009) states that policymakers have presumed that this strong foundation would carry students into the secondary years.
- Wise contends that ongoing literacy instruction at the secondary level is critical for all students and should not be relegated solely to English teachers, who are often not trained in the teaching of literacy.

- Secondary writers are expected to continue to advance their writing skills across discipline-specific content areas in order to "write to learn" and be college and career ready (Bean, Readence & Baldwin, 2011).

The ability to convey meaning artfully across different types of writing, for different audiences is the long-term objective of writing instruction. For many struggling writers, the lack of solid lower order foundational skills competes with the ability to compose text.

The goal is not to simply have students who can write neatly and spell accurately, but to have students who can manage these lower order skills sufficiently to free up the resources to focus on the higher order aspects of writing.

It is not uncommon that students with identified disabilities struggle with transcription in the primary grades. Overtime, some students make gains with handwriting, keyboarding or spelling, but what remains is a lack of progress with higher order writing.

The WP was created to parse out which factors are presently affecting writing proficiency in order to make decisions on strategies to support struggling writers.

Give it a try
And
Throw out your old blue manuals!