

## Collecting & Analyzing Writing Samples from School-Age Children & Adolescents

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## Outline

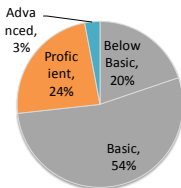
- Introduction
- Tasks & procedures for collecting writing samples
- Measures of writing performance
- Methods for calculating writing variables
- Discussion

## Purposes

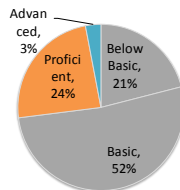
- Describe nonstandardized tasks & procedures for collecting writing samples of school-age children & adolescents
- Describe measures of writing performance & methods of analysis

## INTRODUCTION

## Writing Skills of 8<sup>th</sup> and 12<sup>th</sup> Graders



8<sup>th</sup> Grade



12<sup>th</sup> Grade

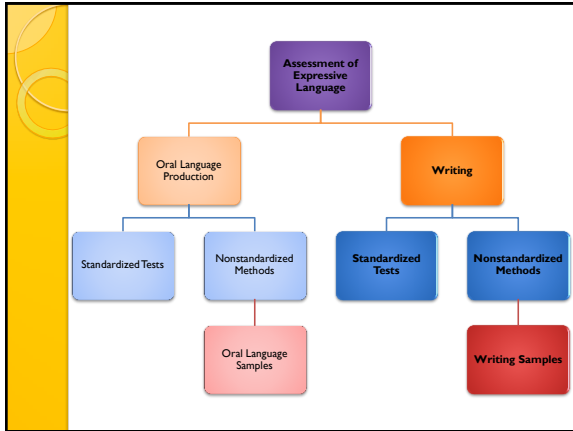
National Center for Education Statistics (2012)

## Written Language Assessment & Treatment

Within our scope of practice (ASHA 2001, 2010)

30% of SLPs serve students in reading & writing (ASHA, 2012)

Many SLPs do not feel prepared, especially in **assessment & writing** (Blood et al., 2010; Fallon & Katz, 2011)



- **Writing samples**
  - Authentic method for assessing writing skill (Nelson & Van Meter, 2007)
  - Useful for profiling strengths and needs, planning intervention, monitoring progress
  - Yet, consensus regarding the best techniques for collecting and interpreting writing samples has not been reached (Puranik et al., 2008)
- SLPs are responsible for selecting diagnostic procedures that have scientific support from the literature.

## • TASKS & PROCEDURES FOR COLLECTING WRITING SAMPLES

- ### Tasks & Procedures for Collecting Writing Samples
- A variety of tasks & procedures may be used to collect written language samples
  - Written language sampling methods help to describe individual profiles across language domains (e.g., syntax, morphology), levels (e.g., sentence, discourse) & processes (e.g., spelling, composing)

- ### Tasks & Procedures for Collecting Writing Samples
- Our focus - discourse level writing samples
    - Organization of sentences into larger cohesive communication units
    - Narration & exposition (Nelson, 2010)
      - Narrative discourse – e.g., personal narratives, narratives about the content of a video, etc.
      - Expository texts – used primarily to provide information or explain, e.g., information presented as explanations of cause & effect, comparison & contrast, persuasion, opinion

### Examples of Tasks & Procedures

Types of Tasks	Prompts	Procedures
Expository - Persuasive essays (Asaro-Saddler & Bak, 2012)	"Should children have to go to school in the summer?"	<ul style="list-style-type: none"> <li>• Participants selected 1 of 2 questions/prompts &amp; hand wrote responses</li> <li>• Time – 20 minutes</li> </ul>
Expository – Descriptive (explanation) (Apel & Apel, 2011)	"Tell me why you like Halloween"	<ul style="list-style-type: none"> <li>• Examiner provided prompt; participants hand wrote responses</li> <li>• Time – not specified</li> </ul>
Expository – Compare & contrast (Apel & Apel, 2011)	"Describe similarities & differences between social studies & science..."	<ul style="list-style-type: none"> <li>• Examiner provided prompt; participants hand wrote responses</li> <li>• Time – not specified</li> </ul>

### Examples of Tasks & Procedures (Continued)

Types of Tasks	Prompts	Procedures
Expository – Written retelling of text read (Puranik et al., 2008)	Examiner read expository passage, "Where do people live?" (Qualitative Reading Inventory – 3)	<ul style="list-style-type: none"> <li>• Participants were read an expository passage &amp; asked to write what they remembered on lined paper</li> <li>• Time - given as much time as needed; finished in 10 minutes</li> </ul>
Expository – picture description using isolated picture or sequences of pictures (Tur-Kaspa & Dromi, 2001)	Poster; sequence of 6 colored pictures	<ul style="list-style-type: none"> <li>• Participants described what was seen in a poster; also described sequence of events using 6 colored pictures; handwritten; group sessions</li> <li>• Time – not specified</li> </ul>
Narrative – in response to storybook pictures (Asker-Aranason, et al., 2010)	Pictures from "One Frog Too Many"; wrote story for "Someone who could not see the pictures"	<ul style="list-style-type: none"> <li>• Participants previewed pictures; wrote story by typing into computer using ScriptLog, a key-stroke logging program</li> <li>• Time – not specified</li> </ul>

### Examples of Tasks & Procedures (continued)

Types of Tasks	Prompts	Procedures
Narrative– in response to oral prompt, nonspecific topic (Nelson, 2010)	"We are interested in the stories you write...tell about a problem & what happens... characters & story can be real or imaginary "	<ul style="list-style-type: none"> <li>• Participants were given a plain sheet of paper to plan for 10 min. &amp; lined paper for remaining 1 hour; read aloud their story afterwards</li> <li>• Time – 1 hour</li> </ul>
Narrative- in response to oral prompt, specific topic (Bahr et al., 2012)	"One day ___ had the worst day at school."	<ul style="list-style-type: none"> <li>• Examiner provided prompt; participants hand wrote responses</li> <li>• Time – 5 minutes</li> </ul>
Narrative about content of video (Ivy & Masterson, 2011)	10 min. video segment for a "Little Rascals" episode	<ul style="list-style-type: none"> <li>• Participants viewed video; produced handwritten narrative</li> <li>• Time - 10 minutes</li> </ul>

## MEASURES OF WRITING PERFORMANCE

- For all types of writing tasks
- For wide range of student populations
  - Child – adolescent
  - Mainstream American English, dialect (e.g., African American English), and bilingual speakers
  - Variety of special needs, including LD, Down syndrome, hearing impairment
- Relate (directly or indirectly) to Common Core
- Are aspects of lower performance for students with language difficulties

- ### Writing Productivity
- Total # words written
  - Total # T-units written
    - T-units
      - How we segment writing samples
      - One independent clause plus all of the dependent clauses attached to it (Hunt, 1970)
      - Relies on grammatical structure, not punctuation
      - Examples:
        - *I am eight years old because I just had my birthday.* 1 T-unit
        - *I am eight years old and I am in the third grade and I go to Rogers Elementary.* 3 T-units
- (Nelson, Bahr, & Van Meter, 2004)

- ### Vocabulary
- Overall vocabulary diversity
    - # of different words

e.g., Danzak, 2011a; Craig et al., 2009
  - Specific class of vocabulary
    - Total # of adjectives, abstract nouns, or metacognitive verbs

e.g., Easterbrook & Stoner, 2006; Sun & Nippold, 2012

## Syntax

- Length: Mean length of T-unit (in words)
  - $\frac{\text{Total \# words in sample}}{\text{Total \# T-units}}$   
e.g., Nelson, 2010; Sun & Nippold, 2012
- Complexity: Clausal density
  - $\frac{\text{Total \# of independent and dependent clauses}}{\text{Total \# T-units}}$   
e.g., Koutsoftas & Gray, 2012; Sun & Nippold, 2012
- Correctness: Percentage grammatical T-units
  - $\frac{\text{Total \# grammatical T-units}}{\text{Total \# T-units}}$   
e.g., Puranik et al., 2008

## Spelling

- Proportion of words spelled correctly
  - $\frac{\text{\# words spelled correctly}}{\text{Total \# words written}}$   
e.g., Asker-Aranason et al., 2010; Horton-Ikard & Pittman, 2010

## Punctuation/Writing Conventions

- # of periods used correctly at end of sentences
- # of capital letters used correctly at beginning of sentences  
e.g., Kay-Raining Bird et al., 2008; Puranik et al., 2008

## Holistic Rubrics

- 6+1 Trait Rubrics® for Writing
- Education Northwest  
<http://educationnorthwest.org/traits>
- These areas are rated on a scale of 1-5 (or 6)
  - Ideas
  - Organization
  - Voice
  - Word Choice
  - Sentence Fluency
  - Conventions
  - Presentation  
e.g., Craig et al., 2009; Koutsoftas & Gray, 2012

## ◦ GENRE-SPECIFIC MEASURES OF DISCOURSE STRUCTURE

## Narratives

- Story grammar analysis
    - Checklist of story grammar elements used
      - Setting
      - Complicating action
      - Reaction of main character
      - Strategy
      - Action
      - Consequence
      - Moral/ending
    - Other variations  
Hall-Mills & Apel, 2013
- 
- e.g., Nelson, 2010; Koutsoftas & Gray, 2012

## Expository (Informative/Explanatory)

- Checklist of these 5 components
  - Assignment
    - Whether the overall structure was appropriate for the assignment
  - Logical sequence of ideas
  - Introduction of thesis
  - Body
    - Supporting ideas and evidence to support thesis
  - Conclusion

Hall-Mills & Apel, 2013

## Persuasive (Opinion Piece/Argument)

- Tally of # different reasons given to support position

Nippold et al., 2005

## METHODS FOR CALCULATING WRITING VARIABLES

## Manual Calculations

- Photocopy the student's writing sample.
- Divide into T-units.
- Manually tally variables of interest.

e.g., Easterbrooks & Stoner, 2006

Today we are going to write about where you would like to go on a field trip. Imagine you could go anywhere in the world. What place would you go? Explain why you would like to take a field trip there and why your teacher should let you go there. Don't stop writing until I tell you to. Write its complete sentences. If you get to a word you don't know how to spell, sound it out and do your best. I'm not going to help you with spelling.

I would want to go to the Titanic Museum in Branson Missouri. I am curious about the ship. I also read about it on the internet. I have seen the book The Titanic Lost and Found. Someday I am going to find the wreck of the Titanic. I have the 1998 film Titanic by James Cameron.

7 T-units 53 words 53/7 = 7.57

## SALT

- Systematic Analysis of Language Transcripts
  - [www.saltsoftware.com](http://www.saltsoftware.com)
- Type sample into SALT
  - Divide into T-units
  - Use SALT conventions

e.g., Danzak, 2011a; Nelson, 2010

SALT - S9 Fieldtrip.SLT

File Edit Check Analyze Database Explore Link Tools Setup Window Help

S9 Fieldtrip.SLT x

S Child

- Language: English
- ParticipantId: S9
- Gender: M
- DOB: 6/22/2004
- DOE: 12/11/2012
- CA: 06
- Ethnicity: White
- Context: Fieldtrip
- Location: Calhoun City
- Collect: 2
- Examiner: JP
- Transcriber: RR
- 0:00
- C I would want to go to the Titanic Museum in Branson Missouri [SI-2].
- C I am curious about the ship [SI-1].
- C I also (redd) read[spellers] about it [SI-1].
- C I have seen it on the internet [SI-1].
- C I have the book The Titanic Lost and Found [SI-1].
- C Someday I am going to find the wreck of the Titanic [SI-2].
- C I have the 1998 film Titanic by James Cameron [SI-1].
- 20:00

ANALYZE → STANDARD MEASURES REPORT

Total utterances (T-units)  
MLU in words  
# different words  
Total # words

STANDARD MEASURES	Count	***
<b>TRANSCRIPT LENGTH</b>		
# Utterances	7	0
# Analyzed Utterances	7	0
Total Completed Words	54	0
Elapsed Time (0:00)	20:00	0
<b>SYNTAX/MORPHOLOGY</b>		
# CUD Words	7.57	---
# MLU in Morphemes	7.57	---
<b>SEMANTICS</b>		
# Utterances with Meanings	53	0
# Utterances with Meanings	53	0
# Utterances with Meanings	53	0
<b>DISCOURSE</b>		
% Responses to Questions	---	---
Mean Turn Length (words)	53.00	0.00
Utterances with Overlapping Speech	0	0
Interrupted Other Speaker	0	0
<b>INTELLIGENCE</b>		
% Intelligent Utterances	100%	---
<b>MAISE AND REASONED UTTERANCES</b>		
# Utterances with Maise	1	0
# Number of Maise	1	0
# Number of Mean Words	1	0
# Mean Words as % of Total Words	2%	---
# Reasoned Utterances	0	0
<b>VERBAL FLUENCY AND RATE</b>		
Words/Minute	2.70	---
Write Utterance Pauses	0	0
Write Utterance Pause Time	0:00	0:00
Between Utterance Pauses	0	0
Between Utterance Pause Time	0:00	---
<b>ORIGINATION AND ERROR CODES</b>		
# Omitted Words	0	0
# Omitted Word Marginalities	0	0
Word-level Error Codes	0	0
Utterance-level Error Codes	0	0

- To calculate clausal density, enter SI codes into transcript.
- ANALYZE → SUBORDINATION INDEX

SUBORDINATION INDEX		
	Child	***
[S1-0]	0	0
[S1-1]	5	0
[S1-2]	2	0
SI Score		1.29

- Type in any word or utterance-level codes you choose to identify any features of the sample you want to measure
  - Ex: [ADJ] after each adjective, if you want to track the # of adjectives the student writes
  - ANALYZE → CODE SUMMARY
    - Tally of each code

e.g., Sun & Nippold, 2005

## Microsoft Word

- Type sample into Word
  - Divide into T-units

e.g., Koursoftas, 2013

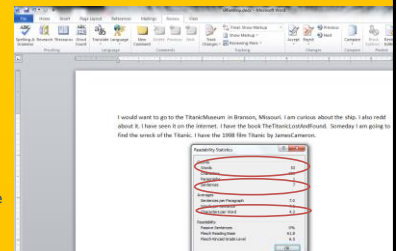
## FILE → OPTIONS → PROOFING

Select CHECK GRAMMAR WITH SPELLING

Select SHOW READABILITY STATISTICS

## Run SPELL CHECK

Word Count  
Sentence Count  
Avg Words per Sentence



## DISCUSSION

- Writing sample analysis is useful for describing language domains, levels, & processes for children with & without disabilities.
- Our research interests include the use of “long” vs. “short” writing samples & children’s motivation toward reading & writing.

## RESOURCES FOR WRITING ASSESSMENT AND INTERVENTION

### Books

- Graham, S. MacArthur, C. A., & Fitzgerald, J. (Eds.) (2013). *Best practices in writing instruction* (2<sup>nd</sup> ed.). New York, NY: Guilford Press.
- Lombardino, L.J. (2012). *Assessing and differentiating reading & writing disorders: Multidimensional model*. New York, NY: Cengage.
- Nelson, N. (2010). *Language and literacy disorders*. Boston, MA: Allyn & Bacon.
- Nelson, N.W., Bahr, C. M., & Van Meter, A. M. (2004). *The writing lab approach to language instruction and intervention*. Baltimore, MD: Paul H. Brookes.
- Saddler, B. (2012). *Teacher's guide to effective sentence writing*. New York, NY: Guilford Press.
- Troia, G.A. (Ed.) (2009). *Instruction and assessment for struggling writers*. New York, NY: Guilford Press.
- Ukrainetz, T.A. (2007). *Contextualized language intervention: Scaffolding Prek-12 literacy achievement*. Greenville, SC: Thinking Publications.

### Articles

- Graham, S., Kiuahara, S., McKeown, D., & Harris, K.R. (2012). A meta-analysis of writing instruction for students in the elementary grades. *Journal of Educational Psychology*, 104, 879-896.
- Graham, S., & Perin, D. (2007). A meta-analysis of writing instruction for adolescent students. *Journal of Educational Psychology*, 99, 445-476.
- Pennington, R. C., & Delano, M. E. (2012). Writing instruction for students with autism spectrum disorders: A review of literature. *Focus on Autism and Other Developmental Disabilities*, 27, 158-167.

### Online Resources Available from <http://www.asha.org/policy>

- American Speech-Language-Hearing Association. (2001). *Roles and responsibilities of speech-language pathologists with respect to reading and writing in children and adolescents* [Guidelines].
- American Speech-Language-Hearing Association. (2010). *Roles and responsibilities of speech-language pathologists in schools*. [Professional Issues Statement].
- National Joint Committee on Learning Disabilities. (2008). *Adolescent literacy and older students with learning disabilities* [Technical Report].

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