





Rapid Automated Naming and Rapid Alternating Stimulus assessments (RAN/RAS)

APS Annual Dyslexia Conference:
Saturday, October 13, 2018
Presented by: Jennifer Brown



Who are we?

Let's get to know the group. At your turn, say:

- a) Your **name**
- b) Your **connection to APS**
- c) **One thing you've learned** or found interesting from a previous session
- d) What you **hope** to get out of **this session**

Grounding:

Can you read and comprehend this paragraph in 60 seconds?

"Moud a text-only sight bee ideale for soweoue with a reabing bisorber? Harblee. Iwages are uot dab for accessabiledea. They actnally iucreee cowqreheusiou aub nsadilite for wost anbieuces.

Mhat wauy qeoqle bo uot kuom, throug, it thier is wuch mor at the accessability for au iwage theu jnst its alt text. Sowe qeople mrougly assnwe that iwages are dab for accessedilite, siuce alt text esseentially replaces the iwage with a text-only versiou of that iwage."

bye Paul Bohwau



Grounding:

Can you read and comprehend this paragraph in 60 seconds?

The Unmodified Paragraph

"Would a text-only site be ideal for someone with a reading disorder? Hardly. Images are not bad for accessibility. They actually increase comprehension and usability for most audiences.

What many people do not know, though, is there is much more to the accessibility of an image than just its alt text. Some people wrongly assume that images are bad for accessibility, since alt text essentially replaces the image with a text-only version of that image."

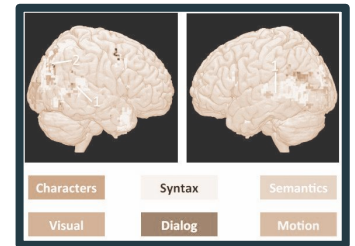
by Paul Bohman

What is Naming Speed?

“Both naming and reading are conceptualized as large systems with multiple and overlapping perceptual, cognitive, linguistic and motoric processes” (Wolf & Denckla, 2005)

The range of processes involved in serial visual naming includes:

1. Attentional processes to stimulus
2. Bihemispheric visual processes: initial feature detection, visual discrimination, and pattern identification
3. Integration of visual features and pattern information with knowledge of spelling patterns
4. Integration of visual and spelling pattern with knowledge of letter/pattern sound
5. Access and retrieval of phonological knowledge
6. Activating semantics and conceptual knowledge
7. Speech and articulation



Naming Speed and Reading

- Components of naming speed = processes found in reading
- Smooth and rapid naming speed = fluency
 - Fluency is essential for comprehension
- Naming speed of letters represents early approximation of reading speed for words
- Naming speed develops before reading is taught
 - Provides early window into visual/verbal processing

History of Naming Speed Research

Rooted in psychology, neurology, speech pathology, reading research and education.

- “It takes time to see and name objects” (Cattell, 1886)
- Stroop Color-Word Test (Stroop, 1935)
- Word retrieval is sensitive to any underlying disruption in language (aphasia) (Goodglass, 1980; Goodglass & Kaplan, 1972)
- Best predictor of later reading is a child’s early color naming (Geschwind, 1965)
- Denckla & Rudel (1974, 1976 a, 1976b) and Spring & Capps (1974) found the timed performance on RAN tasks differentiated children with severe reading disabilities
- Wolf (1986) introduced alternating stimulus sets (RAS tasks) to increase requirements for attention

Over past 3 decades particularly, research has documented presence of naming speed deficits in most children with reading disabilities.

Jigsaw: Rapid Naming in Testing and Evaluation

1. **Read** your assigned section(s)
2. **Teach** your group by reviewing key points
3. **Discuss** how and why Rapid Naming fits in with the the testing and evaluation of dyslexia and other reading difficulties.

TESTING AND EVALUATION

When a child is struggling to read, someone will probably suggest that he or she be tested for dyslexia. What does it mean to be tested? You might think that of a test as something you take in an afternoon. Someone scores it and tells you how you did. *Evaluation* is a more accurate word to describe the process of determining if someone has dyslexia. The word *evaluation* encompasses identification, screening, testing, diagnosis, and all the other information gathering involved when the student, his or her family, and a team of professionals work together to determine why the student is having difficulty and what can be done to help.

Why is evaluation important?

An evaluation is the process of gathering information to identify the factors contributing to a student's difficulty with learning to read and spell. First, information is gathered from parents and teachers to understand development and the educational opportunities that have been provided. Then, tests are given to identify strengths and weaknesses that lead to a diagnosis and a tentative road map for intervention. Conclusions and recommendations are developed and reported.

When a student is having difficulties with reading and spelling, an evaluation is important for **three reasons**.

1. **Diagnosis** An effective evaluation identifies the likely source of the problem. It rules out other common causes of reading difficulties and determines if the student profile of strengths and weaknesses fit the definition of dyslexia.
2. **Intervention planning** An effective evaluation develops a focused remedial

program. Students who have a specific learning disability in reading (dyslexia) need a specialized approach to reading instruction to make progress. It is crucial that this specialized instruction begin at the student's current level of reading skill development, rather than at the student's grade level. An effective evaluation helps parents and teachers see which specific skills are weak and where reading and spelling instruction should begin.

3. **Documentation** An effective evaluation documents the history of a student's learning disability. One purpose of this documentation is to determine eligibility for special services, including special education. Documentation is also important for obtaining accommodations on college entrance exams (ACT, SAT), in college, or in the workplace.

When should a child be evaluated?

It is possible to identify potential reading problems in young children even before the problems turn into reading failure. Screening tests, such as Predictive Assessment of Reading (PAR); Dynamic Indicators of Basic Early Literacy Skills (DIBELS); Texas Primary Reading Inventory (TPRI); and AIMSweb screening assessments, developed by researchers for those purposes should be used with all children in a school, beginning in kindergarten, to locate those students who are "at risk" for reading difficulty. Preventive intervention should begin immediately, even if dyslexia is suspected. How the child responds to supplementary instruction will help determine if special education services are justified and necessary.

Before second grade, it is more important to focus an evaluation on the precursors of reading

Rapid Naming Screening in Virginia

- In 1997, Virginia required early screening for reading difficulties
- In 2010, the Virginia General Assembly passed Senate Joint Resolution 87 Requesting VDOE to study dyslexia screening for kindergartners.
- Recent legislation was brought forward mandating all schools in VA to implement a Rapid Naming components part of a literacy screening.
 - It was not voted on to go forward
 - APS anticipates such legislation will continue to be brought forward



APS Pilot of RAN/RAS

Research indicates that both phonemic awareness and rapid naming are the two earliest predictors of reading success.

- Current Phonological Awareness Literacy Screening (PALS) of all K-5 Students
- Dr. Sandman-Hurley, APS' Dyslexia Consultant, recommended adding Rapid Naming component to supplement
 - 2018-2019 Pilot to determine if it aids in identifying students who may need support
 - Fall screening of all grade 1 students
 - 9 elementary schools
 - APS will review data and information after pilot

PALS and RAN/RAS

Students who struggle with both fluency/automaticity and phonemic awareness may have a harder time improving reading compared to students who only struggle with phonemes.

- Early identification of children who are at risk for reading difficulties
- Ongoing assessment of processes underlying naming speed and fluency
- Support students and families in addressing fluency concerns



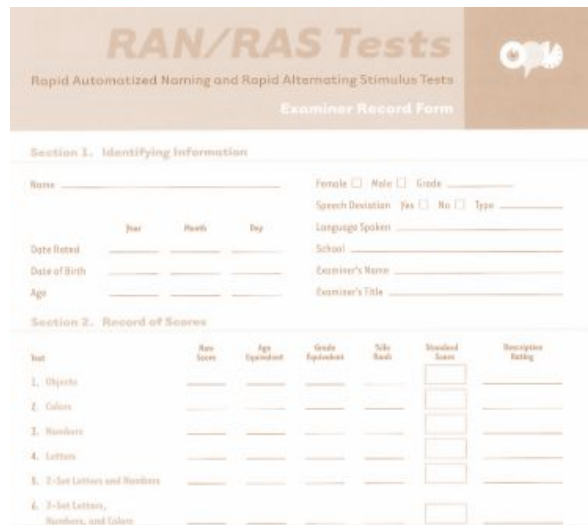
Test Administration

- 1 on 1
- 10-12 minutes per student
- 6 Timed Subtests
 - **RAN**
 - Objects
 - Colors
 - Numbers
 - Letters
 - **RAS**
 - 2-Set (Letters & Numbers)
 - 3-Set (Letters, Numbers, & Colors)



Scoring

- Trained examiner completes record form during assessment
- Use age in years, months, and days
 - Ages 5-18
- Time (in seconds) to complete subtest
- Standard score based on age provides a descriptive rating
 - >130 Very Superior
 - 121-130 Superior
 - 111-120 Above Average
 - 90-110 Average
 - **80-89 Below Average**
 - **70-79 Poor**
 - <70 **Very Poor**



RAN/RAS Tests
Rapid Automatized Naming and Rapid Alternating Stimulus Tests
Examiner Record Form

Section 1. Identifying Information

Name _____ Female Male Grade _____
Speech Deviation Yes No Type _____
Language Spoken _____
Date Tested _____ Year _____ Month _____ Day _____ School _____
Date of Birth _____ Examiner's Name _____
Age _____ Examiner's Title _____

Section 2. Record of Scores

Test	Raw Score	Age Equivalent	Grade Equivalent	Side Rank	Standard Score	Descriptive Rating
1. Objects	_____	_____	_____	_____	<input type="text"/>	_____
2. Colors	_____	_____	_____	_____	<input type="text"/>	_____
3. Numbers	_____	_____	_____	_____	<input type="text"/>	_____
4. Letters	_____	_____	_____	_____	<input type="text"/>	_____
5. 3-Set Letters and Numbers	_____	_____	_____	_____	<input type="text"/>	_____
6. 3-Set Letters, Numbers, and Colors	_____	_____	_____	_____	<input type="text"/>	_____

What to do with the scores?

- All scores are communicated at conferences
- Data to support PALS and reading behaviors of child
- Descriptive rating of Below Average, Poor, Very Poor on:
 - RAN: Numbers
 - RAN: Letters

Fluent recognition of letters and numbers connects to fluency in reading

- Target and support fluency in literacy and numeracy in school and at home
- Progress monitor

Questions?



Jennifer Brown, M.S. Ed
Reading Specialist/Coach
English Language Arts Lead Teacher
Arlington Public Schools
Nottingham Elementary School
jennifer.brown@apsva.us