



Technology Assisted Reading Assessment (TARA)

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Project Focus: Research and development to improve reading assessments for students with visual impairments or blindness.

Specific Focus: The project examines the properties of existing assessments for these students and aims to aid in the development of an assessment of reading with a particular focus on independent technology assisted reading.



The Purpose of TARA

- To research and develop standards based reading assessments for blind and visually impaired students
- To research the design and development of an assessment that will measure the degree to which a student can *independently access grade level English language arts text using assistive technology.*



Timeline

- Documenting claims of assessment, population of test takers, and potential score report within the framework of Evidence Centered Design
- National survey of TVIs
- In depth telephone interviews with TVIs
- Observational interviews of AT users with a range of proficiency levels
- Creation of test blueprint
- Item development
- Pilot testing of test items
- Item revision and test assembly
- Field testing of prototype test form



TARA Research Program

Part A: Research to Document Validity of State Reading Assessments

Part B: Research Toward the Development of an Alternate Assessment of Technology-Assisted Reading

Part C: Field Testing of TARA and NARAP prototypes



Part B: Research Plan

Phase 1: Survey of AT Users

Phase 2: Develop Test Blueprint and Prototype Items

Stage 1 Test Blueprint

Stage 2 Prototype Items

Phase 3: Pilot Test Items

Phase 4: Revise Items and Finalize Test



Phase 1: Survey of AT Users

- Survey intended for teachers of the blind or visually impaired (TVIs)
- Purpose of study is to determine the current platforms, reading styles, and assessment approaches used for students who are blind or visually impaired.



Phase 1: Survey of AT Users

Sample question:

9. What is the approximate percentage of your VI students who have additional disabilities on their IEP (please mark one or more)? Total percentages may exceed 100%. Students may have two or more disabilities.

- None
- Autism Spectrum Disorders
- Cognitive Impairment
- Emotional/Behavioral Disturbance
- Hard of Hearing/Deaf
- Learning Disability
- Non-cognitive neurological impairment
- Other Health Impairment (e.g., Attention Deficit/Hyperactivity)
- Physical Impairment



Phase 1: Survey of AT Users

Sample question:

11. What is the approximate percentage of your students who use the following accommodations and assistive technologies? Total percentages may exceed 100%. Students may use two or more assistive technology devices.

- None
- Braille
- Audio (Digital/Tape)
- Large Print on Page
- Read by Live Person
- Projected Large Print (e.g., CCTV)
- Digital Talking Book
- Screen Reader (e.g. JAWS)
- Text Reader (e.g. Read Right, Kurzweil)
- Computer Magnifier/Reader combination (e.g., ZoomText, Magic, or Lunar)
- Handheld Optical Magnifier
- Other



Phase 1: Survey of AT Users

Please rate how important it is for middle- and high-school aged students who are blind or have visual impairments to become proficient at each of the following aspects of reading.

	Not important	Somewhat important	Important	Very important	Don't know
16. Sounding out words					
17. Reading fluently					
18. Pronouncing words correctly					
19. Advanced comprehension skills (interpretation)					
20. Motivation to read					
21. Enjoying reading					
22. Using computer-based assistive technology to independently access print					



Summary of TARA Survey Results

- Respondents who were TVIs had an average of 12.1 years of experience and an average of 15.7 students on their caseload (on average 5.4 of them were grades 7-10)
- Survey data showed the largest percentage of students (42.9%) receive their services in a general classroom with itinerant support
- Respondents spend an average of 33% of their instructional time using computer software assistive technology with students in grades 7 through 10



Summary of TARA Survey Results

- Survey data showed that students with VIs most often used some form of visual access to print (41%), or visual access combined with audio access (39%)
- Nearly half of the respondents (49%) answered that “becoming proficient user of assistive technology” was a primary goal for reading instruction for their students with VI
- Respondents most often spend their time with students with VI in direct instruction of how to use assistive technologies to assist in reading (30%)



Summary of TARA Survey Results

- For students with VI: Sounding out words, reading fluently, pronouncing words correctly, advanced comprehension skills (interpretation), motivation to read, and using technology to independently access print are all seen as “very important” to respondents
- Students with VIs take reading assessments with large print on page (47%), read by live person (33%), and Braille (31%) most often
- Students with VIs use JAWS for Windows (32%), ZoomText Magnifier (22%), Duxbury (21%), and ZoomText Magnifier/Reader (20%) most often



Implications of Survey Results

- AT use is a large part of instruction for students with VI
- TVIs take a “blended” approach to teaching reading (e.g., using a variety of modalities)
- Standardization of assessments may be a challenge because students use different technology for different purposes



Questions?
Comments?