



Technology-Assisted Reading Assessment



Technology Assisted Reading Assessment (TARA)

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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 alternate assessment of modified achievement standards in reading for blind and visually impaired examinees



Overview of TARA Research

- Differential Item Functioning
 - Evidence of comparability of scores
- Demographic Studies
 - Improved understanding of characteristics of blind and visually impaired students taking state standards based assessments



Differential Item Functioning (DIF) Studies

- Differential Item Functioning
 - Examines performance on a test item of a matched group of test-takers
 - Items are classified as A, B, C DIF
 - DIF can be negative or positive
 - Carried out analyses for a grade 4 and 8 state standards based English-language arts (ELA) assessment



Number of Items for Grade 8 English-Language Arts Assessment

| Test | Content | No. of Items |
|----------------|--|---------------------|
| Reading | Word Analysis, Fluency, and Systematic Vocabulary Development | 9 |
| | Reading Comprehension | 18 |
| | Literary Response and Analysis | 15 |
| | Total—Reading | 42 |
| Writing | Writing Strategies | 17 |
| | Written and Oral English Language Conventions | 16 |
| | Total—Writing | 33 |



Descriptive Information for Grade 8 ELA Sample

| Summary Statistics | Students Without Disabilities | VI Large Print | VI Large Print and Braille |
|--------------------|-------------------------------|----------------|----------------------------|
| N | 30069 | 74 | 98 |
| Mean | 46 | 34 | 35 |
| SD | 12 | 12 | 14 |



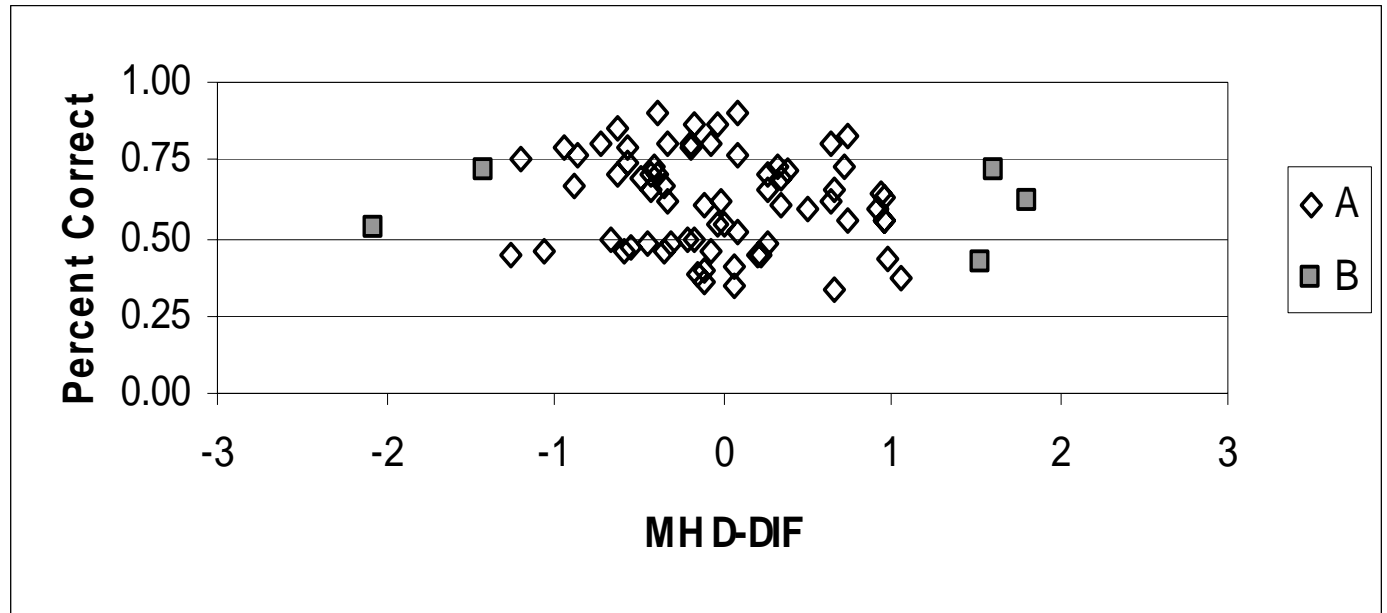
TARA DIF Analyses: Reference and Focal Groups

| Grade | Focal Groups | Reference Group |
|--------------|--|--------------------------------------|
| Eight | Blind and VI students with a large print accommodation | Students Without Disabilities |
| | Blind and VI students with a large print or braille accommodation | |



DIF Categories ELA Grade 8 Blind and Visually Impaired/Large Print

Easy



Difficult

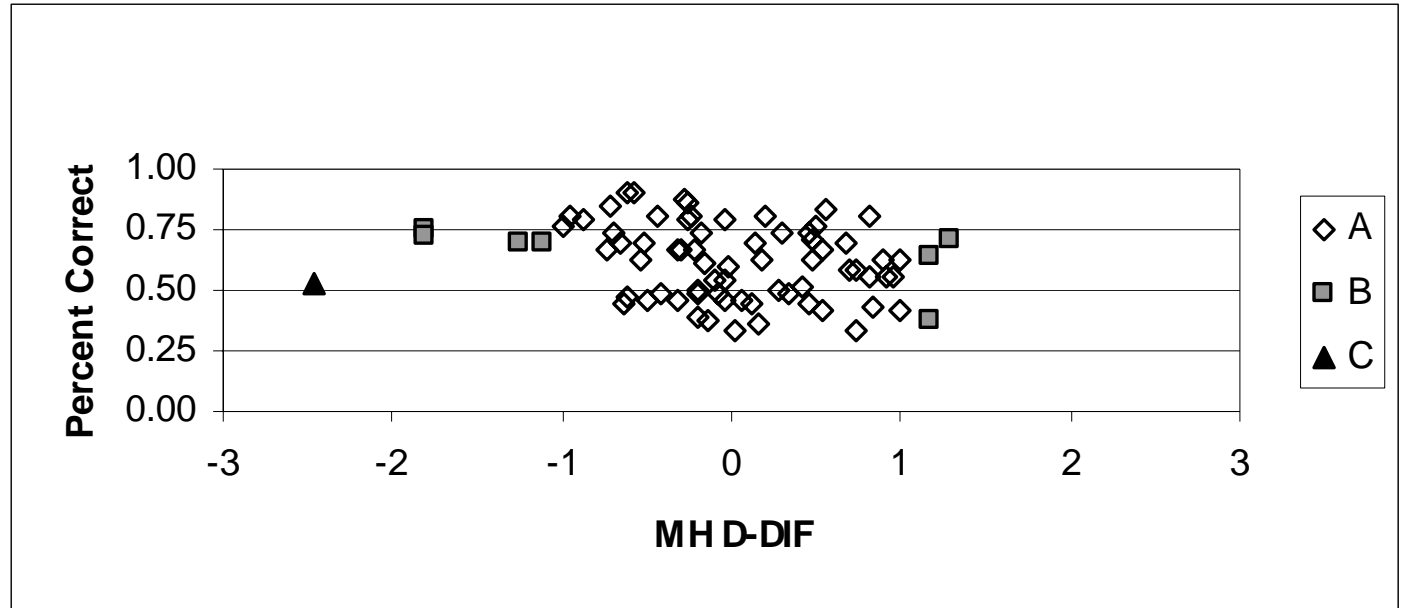
Favors Non-Disabled
Test-Takers

Favors Blind and
Visually Impaired
Test-Takers



DIF Categories ELA Grade 8 Blind and Visually Impaired/Large Print or Braille

Easy



Difficult

Favors Non-Disabled Test-Takers

Favors Blind and Visually Impaired Test Takers



Summary of TARA DIF Results

- Minimal Amount of DIF for all groups
- Students who took the test with large print or braille accommodation show the most DIF
- Items following reading passages taken from other media, e.g., advertisements, instructional manuals, showed more negative DIF
- Items with content associated with blindness showed both positive and negative DIF



Implications of Study Results

- Scores on ELA assessment are basically comparable
- It might be best to avoid passages with topics associated with disabilities
- It is important to ensure that students have adequate exposure to type of reading material assessed in large print or braille



Questions?
Comments?