

**Guiding Questions for Evaluating a Screener**  
**Yaacov Petscher**  
**Created on: October 31, 2018 | Last edited: October 31, 2018**

**Population of Interest**

1. How is the population defined?
  - a. What is the intended age range for the assessment?
  - b. How is the outcome (e.g., dyslexia, learning disability) defined?
2. When the screener was normed, is the sample reflective of the intended population?
  - a. How similar is the norming sample to your local environment?
  - b. Is the sample size for validating the screener sufficient for the analyses?
  - c. Were multiple sites, states, or regions used to validate the screener?

**Scope of Assessment**

3. How is the outcome from question 1b operationally defined?
  - a. What is the outcome by which students are judged to have a skill deficiency (e.g., standardized word reading test)?
  - b. What cut-point is used on the outcome from question 3a to define “failure”?
  - c. Is the cut-point from 3b reasonable for your local environment?
  - d. Is the content on the screener reflective of what should be measured?
  - e. Is the screener a measure of accuracy or automaticity?
    - i. If the screener is computer adaptive, is the content developmentally appropriate for your local environment?
  - f. Does the screener use more than one assessment?
    - i. If yes, does the assessment provide guidance on how to use the scores in combination with each other?
    - ii. If yes or no, does there appear to be good conceptual alignment between the screener and the outcome?

**Statistical Considerations – Reliability**

4. What type(s) of reliability are reported?
  - a. If the screener is item-based, is internal consistency reported?
  - b. If test-retest is reported, what is the spacing between testing occasions?
  - c. If alternate-form or split-form reliability is reported, is another form of reliability reported?
  - d. Are at least two forms of reliability reported?
    - i. What level of reliability is reported?
  - e. If the screener is not computer adaptive, is the reliability
    - i. At least .80 (important for research decisions)?
    - ii. At least .90 (important for clinical decisions)?
  - f. If the screener is computer adaptive
    - i. Is only marginal reliability reported (i.e., overall)?
    - ii. Is reliability across a range of ability reported?
    - iii. What is the level of reported reliability?

### **Statistical Considerations - Validity**

5. Content Validity
  - a. Has the domain been well defined (see question 1)?
  - b. Is the domain relevant as defined
  - c. Is the content appropriate for the local environment (see question 3.e.i)?
6. Substantive Validity
  - a. Is there a reporting of how the test design matches the construct?
7. Structural Validity
  - a. Are there tests of the factor structure/dimensionality reported (e.g., exploratory or confirmatory factor analysis)?
8. Generalizability
  - a. For Bias, has one of the following types of analyses been used to test that the screener is not biased against subgroups (e.g., sex, race, poverty, students with disabilities, dual language learnings)
    - i. Item-level bias analysis (e.g., differential item functioning)
    - ii. Test-level bias analysis (e.g., differential classification accuracy)
9. External
  - a. Convergent Validity
    - i. Are correlations reported between the screener score and scores from an assessment on a related construct?
    - ii. Are the correlations at least .60?
  - b. Discriminant Validity
    - i. Are correlations reported between the screener score and scores from an assessment on an unrelated construct?
    - ii. Are the correlations no greater than .20?
  - c. Predictive Validity
    - i. Are correlations reported between the screener score at one time point and scores on an assessment at a later time point?
    - ii. Are the correlations at least .20?
10. Consequential Validity
  - a. Does the report document any intended or unintended side effects for those who are identified or misidentified based on the selected cut-points?

### **Statistical Considerations - Classification Accuracy**

11. Is Sensitivity reported?
  - a. Is it at least .80?
  - b. Is a confidence interval reported and is the lower bound of the confidence interval at least .80?
12. Is Specificity reported?
  - a. Is it at least .80?
  - b. Is a confidence interval reported and is the lower bound of the confidence interval at least .80?
13. What is the Area under the curve?
  - a. Is it at least .80?
  - b. Is a confidence interval reported and is the lower bound of the confidence interval at least .80?

14. What is the False Positive rate?
15. What is the False Negative rate?

DOI: 10.31234/osf.io/vukt2

URL

<https://doi.org/10.31234/osf.io/vukt2>

## Abstract

The plethora of considerations when creating, evaluating, choosing, or using a screener for dyslexia can be overwhelming. This checklist is intended to provide initial guidance and questions to be thoughtful about pertaining to screener assessments. When reviewing a screener technical report, tool chart, or summary of the assessment, we have created a list of 15 questions related to a hierarchy of core considerations of screeners to help facilitate discussion amongst administrators, advocates, data teams, parents, and others invested in what screeners are used in schools for early screening.

See less

## Preprint DOI

[10.31234/osf.io/vukt2](https://doi.org/10.31234/osf.io/vukt2)

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## Disciplines

Social and Behavioral Sciences Educational Psychology

## Tags

classification accuracy early identification screening

## Citations

### APA

Petscher, Y. (2018, October 27). Guiding Questions for Evaluating a Screener.  
<https://doi.org/10.31234/osf.io/vukt2>

### MLA

Petscher, Yaacov. "Guiding Questions for Evaluating a Screener." PsyArXiv, 27 Oct. 2018. Web.

### Chicago

Petscher, Yaacov. 2018. "Guiding Questions for Evaluating a Screener." PsyArXiv. October 27.  
doi:10.31234/osf.io/vukt2.

## Alaska Reading Coalition

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**From:** Yaacov Petscher <ypetscher@fcrr.org>  
**Sent:** Wednesday, November 14, 2018 9:37 AM  
**To:** Alaska Reading Coalition  
**Cc:** Jennifer Hall Jones; Mike Bronson  
**Subject:** RE: Guiding Questions for Evaluating a Screener, Created on: October 31, 2018 | Last edited: October 31, 2018

Feel free to use and widely distribute as much as possible! I would also be happy to provide any additional guidance or support in the area of screening and assessment for Alaska.

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**From:** Alaska Reading Coalition [mailto:[alaskareadingcoalition@gmail.com](mailto:alaskareadingcoalition@gmail.com)]  
**Sent:** Wednesday, November 14, 2018 12:26 PM  
**To:** Yaacov Petscher  
**Cc:** Jennifer Hall Jones; Mike Bronson  
**Subject:** Guiding Questions for Evaluating a Screener, Created on: October 31, 2018 | Last edited: October 31, 2018

Dear Dr. Petscher,

An Alaska Reading Coalition member shared this document with us.  
Thank you so much for all of the work you are doing to improve reading outcomes for all children.

We would like to share this document with Alaska's first Reading Proficiency and Dyslexia Task Force members formed via HB64.

The legislative website is here. [http://www.akleg.gov/basis/Committee/Details/30?code=HRPD#tab2\\_7](http://www.akleg.gov/basis/Committee/Details/30?code=HRPD#tab2_7)

Alaska has only sunk from terrible at 49<sup>th</sup>, to bottom of the NAEP barrel, 51<sup>st</sup> lowest in reading.

May we have permission to place this document on the November 19<sup>th</sup>, 2018 meeting document list?  
This would mean anyone with the link could download it. As it is in Word, I could convert it to a protected pdf if you desire.

Alternatively, perhaps we could have permission to just provide hard copy to our 12 members of the task force.

With sincere gratitude for your work,

Posie

Posie Boggs,

on behalf of the Alaska Reading Coalition: comprised of Literate Nation Alaska, The Alaska Branch of the International Dyslexia Association, Decoding Dyslexia Alaska, The Alaska Literacy Program, NAACP Anchorage, Connections that Work, LLC, Future Frontiers Tutoring, The Missing Links, Turning Leaf Literacy Center, ITV Education & Disability Support Services, and Read Write Alaska