

SAMPLE REPRESENTATIVENESS

How do I know if a sample is representative?

If you are trying to determine whether or not a screening tool accurately measures children's skills, you want to ensure that the sample that is used to validate the tool is representative of your population of interest.

To do this, you must have a clear understanding of the population identified by the developer of the screening assessment. A population could be as large as a country or as small as a school. The answer to the question "Is the sample representative?" lies in a complementary question, "To whom should children's scores be generalized?" If a sample's scores should be compared to a national benchmark, then the demographics of the sample should look like the demographics of the nation. If, instead, a sample's scores are to be compared to the population of a state, then the sample's demographics should look like the state and not the nation.

How does this apply to the NCII's tools charts?

Achieving sample representativeness can occur in several ways. In this brief, we quickly highlight two mechanisms that the National Center on Intensive Intervention (NCII) uses to assess sample representativeness. First, a sample can be considered representative when data collection occurs across multiple sites or across one nationally representative sample. Second, a group of samples can be considered representative if the statistical analyses between the samples result in approximately the same results. For instance, if the correlation between a reading screening assessment score and a reading state test score is similar across the groups of samples, then sample representativeness for that screening assessment can be achieved.

What is it?

A representative sample is a group that closely matches the characteristics of its population as a whole.

Example

A baker makes 100 cookies, where 60% of the cookies are chocolate chip and 40% are sugar cookies. She wants to sell batches of 10 cookies that are representative of the larger batch. So, her sample batches of cookies should include six chocolate chip cookies and four sugar cookies. With this proportion of cookies in her sample, she knows that she is accurately representing the larger batch of cookies.

Where do I go from here?

To learn more about the sample representativeness of screening measures, visit NCII's [academic](#) and [behavior](#) screening tools charts. NCII publishes these charts to assist educators and families in becoming informed consumers who can select screening tools that best meet their needs.

For more information on literacy screening processes, see resources from the National Center on Improving Literacy: <https://improvingliteracy.org/>.

Academic Screening Tools Chart

Universal screening can be used to identify which children will need the most intensive intervention. In some cases, children with the weakest initial skills may bypass Tier 2 intervention and move directly into intensive intervention. The tools on the academic screening tools chart can be used to identify students at risk for poor academic outcomes, including students who require intensive intervention.

This tools chart has three tabs that include ratings on the technical rigor of the tools: (1) Classification Accuracy, (2) Technical Standards, and (3) Usability Features.

Last updated: July 2019. [Learn more about the content and structural changes to the academic screening tools chart during the most recent update.](#)

Legend

- Convincing evidence
- ◐ Partially convincing evidence
- Unconvincing evidence
- Data unavailable
- ^d Disaggregated data available

[View Chart Resources](#)

FILTER RESULTS

Subject Reading Mathematics

Grade Pre-K Elementary (K-4) Middle School (5-8) High School (9-12)

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				Classification Accuracy	Technical Standards	Usability Features	
All	Title	Area	Grade	Reliability	Validity	Sample Representativeness	Bias Analysis Conducted
<input type="checkbox"/>	Acadience Reading (aka DIBELS Next)	Composite Score	K	●	◐	Regional without Cross-Validation	Yes

This handout was produced under the U.S. Department of Education, Office of Special Education Programs, Award No. H326Q160001. Celia Rosenquist serves as the project officer. The views expressed herein do not necessarily represent the positions or policies of the U.S. Department of Education. No official endorsement by the U.S. Department of Education of any product, commodity, service, or enterprise mentioned in this website is intended or should be inferred.