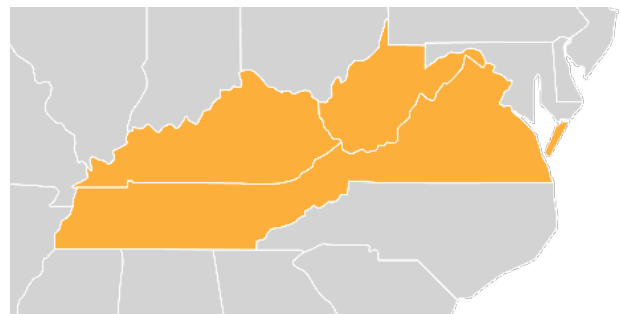**IES** Institute of Education Sciences

Project 4.2.3: Ask An Expert Kindergarten Readiness Screeners

Regional Educational Laboratory Appalachia

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Ask an Expert Response

High-leverage request

For over twenty years, the Niswonger Foundation has partnered with school districts in northeastern Tennessee to support PreK–12 learning and readiness. In this role, the Niswonger Foundation also partners with Comprehensive Educational Resources, a Tennessee education consortium that seeks to improve student achievement by providing common benchmark assessments, reporting and pacing guides, data analysis, teacher-created resources, and collaboration across the region.

The Niswonger Foundation would like to identify available kindergarten readiness screeners and better understand the best practices for implementing them. Specifically, it would like to learn about the domains assessed by kindergarten readiness screeners and the various structures of kindergarten readiness screeners. It would also like to learn more about what is already in use across the region, and the country, and which screeners categorize student readiness both reliably and accurately. The Niswonger Foundation is also interested in any information about best practices for administering and using data from kindergarten readiness screeners. It plans to use this information to help standardize the use of kindergarten readiness screeners in the region.

Thus, the Niswonger Foundation requests answers to the following questions:

- Inventory: What evidence about reliability and validity exists for screeners that districts in the region are currently using to assess kindergarten readiness? Are other reliable and valid screeners not currently in use in the region available?

- Screener design: What are the characteristics of valid and reliable kindergarten readiness screeners including which domains they assess and how they are administered?

- Implementation: What are promising strategies for training and supporting educators to reliably administer kindergarten readiness screeners? What are best practices for using kindergarten readiness screening data?

Response

To answer these questions, we first identified a list of screeners to include in this response. We started with seven screeners that the Niswonger Foundation indicated are already in use in the region.[1] These screeners are indicated with an asterisk symbol below. To identify additional screeners, we consulted published reviews of kindergarten readiness screeners that are being used nationwide (Pierson, 2018; Weisenfeld, 2017). Through this process, we identified four additional screeners, for a total of eleven. This list of screeners should not be considered exhaustive. For example, the list does not include any state-developed screeners, as they may be less accessible to the audience in this region. For the remainder of this document, we examine the following screeners:

- aimswebPlus*

- Bracken School Readiness Assessment*

- Brigance Early Childhood*

- Desired Results Developmental Profile: Kindergarten (DRDP-K)

- Dynamic Indicators of Basic Early Literacy Skills (DIBELS)*

- Early Screening Inventory, third edition (ESI-3)*

- easyCBM*

- Individual Growth and Development Indicators (myIGDIs)

- Phonological Awareness Literacy Screening (PALS-K)

- Renaissance STAR*

- Teaching Strategies Gold (TS Gold)

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[1] The list of screeners provided by the Niswonger Foundation included three additional assessments that did not appear to be kindergarten screeners—the Tennessee Growth Portfolio, Education Software for Guiding Instruction (ESGI), and Core Knowledge Language—so they are not included in this response. The Tennessee Growth Portfolio is an approach to collecting student artifacts that represent students' mastery of standards. It is designed for use as part of teacher evaluation, not for the screening of students for kindergarten readiness. ESGI is an online assessment platform. Although it includes some pre-loaded tests, educators can use it to administer teacher-made assessments. It was unclear which assessments on this platform districts in the region are using for kindergarten screening. We were unable to locate any information about the reliability and validity of the pre-loaded ESGI assessments. Finally, Core Knowledge Language Arts is a curriculum that includes some assessments, but it is does not appear that the assessments are designed for kindergarten readiness screening.

To gather information about each screener, we searched publishers' websites (see appendix A) and several research databases including Child Care and Early Education Research Connections, Head Start Early Childhood Learning and Knowledge Center, What Works Clearinghouse, and the Education Resources Information Center (ERIC) for articles or reports published by the authors of each screener. The information presented below is not based on a comprehensive review of all the literature on assessing kindergarten readiness.

Inventory

A principle of good assessment is that kindergarten screeners should have evidence that they are both reliable and valid for both the purposes and the populations for which they will be used (National Research Council, 2008). We located information on validity and reliability for ten of the eleven screeners identified in our previous list (table 1). For the remaining screener, the ESI-3, the authors make claims on their website about the reliability and validity of the assessment. However, a representative from the publisher explained that the details of those studies are only available in the examiner's manual, which is available for purchase on their website. References for the information in table 1 presented in appendix A.

Table 1. Measures of validity and reliability by assessment

Assessment	Approaches to assessing validity	Reliability measures
aimswebPlus	Correlation coefficients	Internal consistency (>0.83) Alternate form (>0.74)
Bracken	Construct validity; Discriminant validity – Steiger's Z test	Internal consistency (>0.85)
Brigance	Construct validity; Content validity; Criterion validity	Internal consistency (>0.90) Interrater reliability (>0.80)
DRDP-K	Consequential validity; Content validity; Internal structure validity; Response process validity	Internal consistency (>0.73) Interrater reliability (>0.83)
DIBELS	Content validity; Criterion validity; Discriminant validity	Alternate form (>0.66) Interrater reliability (>.94)

Assessment	Approaches to assessing validity	Reliability measures
easyCBM	Construct validity; Criterion validity	Alternate form (>0.61) Test-retest (>0.79)
myIGDIs	Construct validity; Criterion validity; Kane's approach	Internal consistency (>0.74)
PALS-K	Construct validity; Content validity; Criterion validity	Test-retest (>0.78) Internal consistency (>0.78) Interrater reliability (>0.96)
STAR	Concurrent validity; Predictive validity	Split-half reliability (>0.82)
TS Gold	Construct validity	Internal consistency (>0.95) Interrater reliability (>0.80)

Screener design

We gathered information about two aspects of screener design: the domains assessed by each screener and the method of administration.

Domains assessed

Many early childhood assessment experts recommend assessing a wide range of developmentally and educationally significant goals, rather than a narrow set of skills (National Association for the Education of Young Children [NAEYC], 2003; National Research Council, 2008). Consistent with this goal, the Tennessee Department of Education has identified five domains that are important when assessing young learners for kindergarten readiness (TDOE, n.d.):

- Approaches to learning – self-regulation

- Social and personal competency

- Language and literacy development

- Cognition: math

- Physical development

We identify which domains are assessed by each screener in table 2.

Method of administration

With respect to method of administration, some experts recommend that kindergarten readiness screeners be conducted in such a way that decisions are not made based on a single assessment, but rather gathered from realistic settings and situations that are reflective of the child's natural performance and ability (NAEYC, 2003). This can take the form of repeated observations, documentation, or other broad types of assessment, rather than standardized tests (NAEYC, 2003). Some of the screeners we reviewed used this format, where educators observe a child's interactions and behavior during the regular school day and document evidence of skills. In table 2, we labeled these as "observation" screeners. Other screeners used more formal standardized questions, sometimes using manipulatives. In table 2, we labeled these as "direct" screeners. Finally, some screeners used a combination of these two modalities, which we describe as "combination" in table 2.

Table 2. Domains assessed and methods of administration by assessment

Assessment	Approaches to learning	Social and personal competency	Language and literacy development	Cognition: Math	Physical development	Test type
aimswebPlus	✓	✓	✓	✓		Combination
Bracken			✓	✓		Direct
Brigance	✓	✓	✓	✓	✓	Combination
DRDP-K	✓	✓	✓	✓	✓	Observation
DIBELS			✓			Direct
ESI-3			✓	✓	✓	Direct
easyCBM			✓			Direct
myIGDIs		✓	✓	✓	✓	Combination
PALS-K			✓			Direct
STAR			✓	✓		Direct
TS Gold	✓	✓	✓	✓	✓	Observation

Implementation

With respect to implementation, we gathered information on two topics: how to train and support educators to reliably administer kindergarten readiness screeners and best practices for using kindergarten readiness screening data. This information is not based on a comprehensive review of all the literature on assessing kindergarten readiness.

Training and supporting educators

Panels of early childhood assessment experts have developed and published recommendations on how to train and support educators to administer kindergarten readiness screeners (NAEYC, 2003; National Research Council, 2008). Specifically, they recommend that training help educators develop a common understanding of the purpose and intended use of the assessment, as well as build their capacity to articulate the intended purpose to parents, caregivers, and others (NAEYC, 2003). It is also important to train those who are administering screeners to meet a specified level of skill (for example, meeting an interrater reliability threshold). In addition to initial training, it is important that those who are administering screeners be monitored and reevaluated regularly (National Research Council, 2008).

All eleven screeners we examined offer some form of training or professional development for educators to administer the assessment such as webinars, guidebooks, and Q&A sessions (table 3). Some of these trainings were offered at no charge and some cost a fee to enroll. To find this information, we reviewed assessment manufacturer's websites for professional development opportunities and report generators for educators, families or both (see appendix A for references).

Table 3. Screeners offering features to support implementation

Assessment	Professional development	Educator reports	Family reports
aimswebPlus	Webinars, trainings, workshops	✓	✓
Bracken	Starter kits, supplemental materials, free guidebook to implementation	✓	✓

Assessment	Professional development	Educator reports	Family reports
Brigance Early Childhood	Webinars, on-site trainings sessions	✓	✓
DRDP-K	Free support resources, tutorials, and online modules	✓	
DIBELS	Free online resources, in-person trainings	✓	✓
ESI-3	On-site, virtual, and on-demand trainings, support materials, starter kits	✓	✓
easyCBM	Free PDF Teacher's Manual	✓	
myIGDIs	Free resources, on-demand webinar	✓	✓
PALS-K	Premium website, webinars, blog posts	✓	✓
STAR	On-site, online or on-demand trainings	✓	✓
TS Gold	Instructor-led sessions, coaching, online tutorials	✓	✓

Using kindergarten readiness screener data

A panel of early childhood assessment experts recommended that early childhood assessment systems include plans to use what is learned from the assessment to support children's continued development (National Research Council, 2008). Schools can use kindergarten readiness screener data for a variety of instructional purposes, including individualizing instruction and identifying students for additional assessment to identify potential learning problems (Shields et al., 2016). Using kindergarten readiness screeners for instructional purposes often involves consistent tracking of a child's progress toward goals over time (NAEYC, 2003). These screeners should not be used to deny or delay entry into kindergarten for students who meet age cutoffs (Regenstein et al., 2017; Yun et al., 2021).

To promote use of early childhood assessment data, information about screener scores should also be available to educators and parents (National Research Council, 2008). All the screeners

we reviewed offer data reports for educators to support them in using screening data (see table 3). Additionally, nine of the screeners offered a family or caregiver service, including family-friendly versions of test results, at-home guidebooks, or a parent/caregiver portal to directly access results.

Simply providing results to educators may not be enough to promote the use of the data for instructional purposes. In previous research, educators have reported that they were uncertain about how to use screener data to inform instruction (e.g., Bowdon et al., 2019). Structured reflection protocols, like that developed by Bowdon and colleagues (2019), may help educators to engage with screener data and support its use. Instructional coaches can also support educators to use kindergarten readiness screener data (Yun et al., 2021).

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Appendix A: Additional References

This appendix provides tables of additional sources of information about the eleven kindergarten readiness screeners reviewed in this document. REL Appalachia accessed the websites listed in table A1 to obtain information about the eleven screeners as a supplement to the information gathered from the documents listed in the reference section. The sources in table A2 included information about the validity and reliability of the screeners; these sources are also included in the references section, but here they are organized by screener.

Table A1. Publishers' websites for kindergarten readiness screeners

Assessment	Website
aimswebPlus	https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Academic-Learning/Brief/aimswebPlus/p/100000519.html?format=TRAINING
Bracken	https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Developmental-Early-Childhood/Bracken-School-Readiness-Assessment-%7C-Fourth-Edition/p/P100033000.html?gclid=Cj0KCQiA1ZGcBhCoARIsAGQ0kkoJX-YeKRLEMzu8CoxPorwGFK3Wq8WpqMOWHsDQ1EJitZOn4vzSR_QaAgC3EALw_wcB
Brigance	https://www.curriculumassociates.com/programs/brigance/early-childhood
DRDP-K	https://drdpk.org/index.html
DIBELS	https://dibels.uoregon.edu/
ESI-3	https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Academic-Learning/Brief/The-Early-Screening-Inventory-%7C-Third-Edition/p/100001986.html
easyCBM	https://www.easycbm.com/
myIGDIs	https://www.renaissance.com/products/myigdis-for-preschool/
PALS-K	https://literacy.virginia.edu/pals-k-assessment https://palsresource.info/pals-k/
STAR	https://www.renaissance.com/products/star-assessments/
TS Gold	https://teachingstrategies.com/product/gold/

Table A2. Sources of information on validity and reliability of screeners

Assessment	Source of information on validity and reliability
aimswebPlus	Pearson. (2018). *aimswebPlus efficacy research report*. https://www.pearson.com/content/dam/one-dot-com/one-dot-com/global/Files/efficacy-and-research/reports/efficacy-assessment-reports/aimsweb-Plus-research-report.pdf Pearson. (2022). *aimswebPlus assessment matrix*. https://www.pearsonassessments.com/content/dam/school/global/clinical/us/assets/aimsweb/aimswebplus-assessment-matrix.pdf
Bracken	De Almeida Maia, D., Phol, S., Okuda, P. M. M., Liu, T., Puglisi, M. L., Ploubidis, G., Eid, M., & Cogo-Moreira, H. (2022). Psychometric properties and optimizing of the Bracken School Readiness Assessment. *Educational Assessment, Evaluation and Accountability, (34)*2, 227–239. https://eric.ed.gov/?&id=EJ1338163 Ortiz, A., Clinton, A., & Schaefer, B. (2015). Construct validity evidence for Bracken School Readiness Assessment, third edition, Spanish form scores. *Psychology in Schools*, (52)2, 208–211. https://eric.ed.gov/?id=EJ1049582 Panter, J. & Bracken, B. (2009). Validity of the Bracken School Readiness Assessment for predicting first grade readiness. *Psychology in Schools,* (46)5, 397–409. https://eric.ed.gov/?id=EJ841392
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DIBELS	Amplify Education, Inc. (2014). *DIBELS/mCLASS technical report*. https://www.ode.state.or.us/wma/teachlearn/testing/resources/mclass_reading_3d_validation.pdf

Assessment	Source of information on validity and reliability
ESI-3	Meisels, S. J., Marsden, D. B., Henderson, L. W. & Wiske, M. S. (2019). *Early screening inventory, Third Edition. Examiners manual*. https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-Assessments/Academic-Learning/Brief/The-Early-Screening-Inventory-%7C-Third-Edition/p/100001986.html
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PALS-K	Invernizzi, M., Juel, C., Swank, L., & Meier, J. (2015). *PALS: Phonological Awareness Literacy Screening. Technical reference.* Curry School of Education, University of Virginia. https://literacy.virginia.edu/sites/g/files/jsddwu1006/files/2022-03/K_Tech_Ref_2015.pdf
STAR	Renaissance Learning. (2015). *STAR math technical manual.* https://www.pobschools.org/cms/lib/NY01001456/Centricity/Domain/607/STAR%20Tech%20Manual.pdf
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