Capti® Assess + ETS® ReadBasix™

Researcher's Addendum

March 2024 Edition

General Questions

What is the history of development of ETS ReadBasix™?

The R&D of ReadBasix was supported by the Institute of Education Sciences (IES), U.S. Department of Education, through Grant R305F100005 to the Educational Testing Service (ETS) as part of the Reading for Understanding Research (RFU) Initiative, as well as IES Grants R305G040065 and R305A150176. The R&D of Capti Assess was supported by Grants 91990021C0029 and 91990019C0024.

Capti Assess with ReadBasix is supported by a strong foundation of research, beginning with SARA (the Study of Adult Reading Acquisition) by Dr. John Sabatini. Dr. Sabatini is currently a Distinguished Research Professor in the Institute for Intelligent Systems at the University of Memphis. He has been researching adult and adolescent literacy since the late 1990s. He spent several years at the National Center for Adult Literacy and has been involved in numerous domestic and international literacy projects, including the Programme for the International Assessment of Adult Competencies (PIAAC) and the Program for International Student Assessment (PISA).

In 2004, Dr. Sabatini joined the Educational Testing Service and began working to create the RISE (Reading Inventory and Scholastic Evaluation) assessment, the predecessor to ETS ReadBasix. This work was spurred by a collaboration with the Strategic Education Research Partnership (SERP), a group that works closely with numerous school districts across the U.S. Those school districts noted that many of their middle school students were arriving at 6th grade with weak reading skills, but the schools were not equipped to identify exactly where their weaknesses were—or what to do about them. RISE was initially designed specifically for middle school students, to give schools the information they needed to help struggling readers. The project was funded by grants from SERP, Carnegie, and Lila Wallace.

One of the first large-scale administrations of the RISE battery occurred in a school district in Massachusetts in 2007. This allowed the battery to be field tested for the first time with students in entire middle schools.

In 2010, ETS was awarded an assessment grant under the Reading for Understanding Initiative funded by IES at the U.S. Department of Education. This funding allowed for the expansion of the assessment to include more grade levels including elementary school starting from grade 3 and high school.

The field tests expanded in 2012 to include a large district in Maryland. The tests allowed ETS and the SERP Institute to refine RISE based on user feedback and analysis of the data. In 2016, the team performed a national norming study in grades 3-12, after which the RISE evolved into its current form under the name ETS ReadBasix, officially distributed as part of the Capti Assess product.

Why should we use ETS ReadBasix™ for research instead of another assessment?

ETS ReadBasix™ was designed through research based on reading development by Sabatini and colleagues (2013, 2015, 2019). The researchers concluded that it is important to measure the foundational reading skills separately along with reading comprehension. Specifically, they felt it was important to measure reading skills in this way for students who may be below grade level or for those who struggle to make expected reading comprehension growth. Designing and implementing an assessment that isolates reading skills allows for more meaningful data and provides the ability to isolate which skills are impeding reading comprehension growth.

The previous reasons provide a basis for why to use ETS ReadBasix™ instead of another assessment. ETS ReadBasix™ includes subtests that measure (a) decoding and word recognition; (b) vocabulary knowledge; (c) morphological awareness; (d) sentence processing; (e) reading efficiency; and (f) basic reading comprehension. Testing reading skills in this way allows for researchers to determine which foundational skills may be hindering reading comprehension. In fact, Sabatini and colleagues encourage interpreting scores by beginning with the most distal (i.e., decoding and word recognition) and moving to the more proximal (i.e., sentence or basic reading efficiency) to reading comprehension to account for the impact that weak lower level skills may have on subsequent subtest performances.

While other assessments may claim to measure the same subskills in fewer questions, they may lack the item numbers needed to truly measure each skill. Some estimates suggest that an assessment needs to include 20-30 items for each skill to provide insight into the reader's abilities (the number of items may vary depending on their type). Without that number of items for each skill, the assessment may have low reliability or validity.

How were the subtests and item types designed?

Each subtest's content is modeled after academic materials found in school curricula. Additionally, the subtests' constructs and item types were designed similarly to other batteries employed for clinical use (e.g., Woodcock–Johnson III; Woodcock, McGrew, & Mather, 2001). A key distinction between the clinical batteries and ETS ReadBasix™ is that most of the batteries were designed to be administered one-on-one with students to identify specific reading disabilities, whereas ETS ReadBasix™ was designed to target a wider range of students. Through its computerized administration with brief subtests and automated scoring and reporting, the possible implementation is much greater.

While the theoretical foundations for each construct were reviewed, specific choices for items took into consideration the likelihood that students might encounter reading content in school similar to that in the ETS ReadBasix™ subtests. Find more information about this topic in this Sabatini et al. (2015).

What is the scoring process for each subtest?

Scores are computed based on a statistical algorithm grounded in state-of-the-art research on reading science and item response theory. The algorithm considers the pattern of correctly answered items and various item statistics. This approach places all scores across all grades on a common scale such that they

can be directly compared. The percentiles are based on a weighted national sample of students and the associated score distributions at each grade level.

Is the ETS ReadBasix™ assessment the same as SARA / RISE?

Yes. ETS ReadBasix™ is the modern version of RISE / SARA developed on top of the Capti Assess platform. Capti Assess provides an easy to use user interface, insightful reports, actionable recommendations, instructional grouping, and student management tools, while ReadBasix is the reading assessment.

How does ETS ReadBasix™ align with the Science of Reading?

ETS ReadBasix™ was created by researchers while working on the Reading for Understanding(RfU) Initiative by the Institute of Education Sciences (U.S. Department of Education). The latest Science of Reading includes research from a variety of interdisciplinary fields including Cognitive Psychology, Communication Sciences, Developmental Psychology, Education, Special Education, Implementation Science, Linguistics, Neuroscience, and School Psychology. A team of experts led by Dr. John Sabatini, a world-renowned reading researcher, developed the assessment based on the Science of Reading principles. This assessment measures key foundational reading skills derived from the Science of Reading literature, which allows educators to effectively identify areas where learners struggle. Since teachers can pinpoint the areas of need, they help students overcome reading deficiencies, and make the U.S. education system better prepared for the 21st century. You can find more information in the References section of this document.

Does the ETS ReadBasix™ assessment align with the Common Core State Standards (CCSS)?

ReadBasix aligns with the CCSS for foundational reading skills, language standards, and the college and career readiness anchor standards for reading. The foundational reading skills standards cover constructs related to ReadBasix including decoding, word recognition, fluency, and morphology. ReadBasix augments the standards by measuring the five foundational skills beyond grade 5 (where the foundational reading skills in the CCSS end). Failure to measure foundational skills beyond grade 5 may limit the detection of key sources of reading issues. ReadBasix can assist educators in determining sources of reading difficulties with students in grades 6-12 where foundational reading skill standards are assumed to be fully developed, and therefore not addressed.

Language standards cover constructs related to vocabulary and sentence processing, which are focused on in the CCSS from grades 3-12. ReadBasix specifically measures the language standards aligned with choosing words and phrases for effect (i.e., L.3.3a., L.4.3a.) and pronoun use (i.e., L.6.1c., L.6.1d.).

The college and career readiness anchor standards for reading cover constructs related to ReadBasix's comprehension subtest. Specifically, the reading comprehension subtest measures CCSS anchor standards 1, 2, and 4 related to reading closely, determining central ideas, and interpreting words and phrases used within a text.

Given that the assessment is aligned with standards, it does show progress with the skills addressed in the standards. Each subtest uniquely demonstrates progress on various standards. The table below shows an overview of the connection between each subtest and its aligned standards.

Subtest / Skill	Common Core State Standard (CCSS)
Word Recognition and Decoding	CCSS Reading Standards, Foundational Skills, Phonics and Word Recognition
Vocabulary	CCSS Language Standards, Vocabulary Use and Acquisition
Morphology	CCSS Reading Standards, Foundational Skills, Phonics and Word Recognition
Sentence Processing	CCSS Language Standards, Knowledge of Language
Reading Efficiency	CCSS Reading Standards, Foundational Skills, Fluency
Reading Comprehension	CCSS Reading Anchor Standards 1, 2, and 4

What are the means and the growth effect size?

Word Recognition and Decoding

Grade	Untransformed Mean	Untransformed SD	Transformed Mean	Transformed SD	Growth Effect Size
3	-1.38	0.66	228.39	15.70	
4	-1.30	0.70	230.17	16.71	0.11
5	-1.19	0.74	232.85	17.72	0.16
6	-1.04	0.78	236.44	18.73	0.20
7	-0.85	0.83	240.93	19.74	0.23
8	-0.63	0.87	246.31	20.75	0.27
9	-0.36	0.91	252.60	21.76	0.30
10	-0.06	0.95	259.79	22.77	0.32
11	0.28	1.00	267.88	23.77	0.35
12	0.65	1.04	276.87	24.78	0.37

Vocabulary

Grade	Untransformed Mean	Untransformed SD	Transformed Mean	Transformed SD	Growth Effect Size
3	-1.63	0.30	226.42	7.29	
4	-1.61	0.35	226.96	8.30	0.07
5	-1.52	0.40	229.03	9.64	0.23
6	-1.38	0.47	232.62	11.31	0.34
7	-1.16	0.55	237.74	13.31	0.41
8	-0.89	0.65	244.38	15.64	0.46
9	-0.55	0.76	252.55	18.30	0.48
10	-0.14	0.89	262.24	21.30	0.49
11	0.32	1.02	273.46	24.62	0.49
12	0.86	1.18	286.20	28.27	0.48

Morphology

Grade	Untransformed Mean	Untransformed SD	Transformed Mean	Transformed SD	Growth Effect Size
3	-2.14	0.40	211.58	10.32	
4	-1.86	0.46	218.89	11.93	0.66
5	-1.58	0.52	226.20	13.54	0.57
6	-1.30	0.58	233.52	15.15	0.51
7	-1.02	0.64	240.83	16.75	0.46
8	-0.74	0.70	248.14	18.36	0.42
9	-0.46	0.77	255.45	19.97	0.38
10	-0.18	0.83	262.77	21.58	0.35
11	0.10	0.89	270.08	23.19	0.33
12	0.39	0.95	277.39	24.80	0.30

Sentence Processing

Grade	Untransformed Mean	Untransformed SD	Transformed Mean	Transformed SD	Growth Effect Size
3	-1.85	0.49	214.57	13.19	
4	-1.60	0.54	221.26	14.51	0.48
5	-1.35	0.59	227.94	15.82	0.44
6	-1.10	0.64	234.63	17.14	0.41
7	-0.86	0.69	241.31	18.46	0.38
8	-0.61	0.74	247.99	19.78	0.35
9	-0.36	0.78	254.68	21.10	0.33
10	-0.11	0.83	261.36	22.42	0.31
11	0.14	0.88	268.05	23.73	0.29
12	0.39	0.93	274.73	25.05	0.27

Reading Efficiency

Grade	Untransformed Mean	Untransformed SD	Transformed Mean	Transformed SD	Growth Effect Size
3	-1.46	0.43	226.13	10.91	
4	-1.38	0.50	228.13	12.60	0.17
5	-1.26	0.57	231.11	14.29	0.22
6	-1.10	0.64	235.08	15.98	0.26
7	-0.91	0.70	240.02	17.67	0.29
8	-0.67	0.77	245.94	19.36	0.32
9	-0.40	0.84	252.85	21.05	0.34
10	-0.08	0.90	260.74	22.74	0.36
11	0.27	0.97	269.60	24.43	0.38
12	0.66	1.04	279.45	26.13	0.39

Reading Comprehension

Grade	Untransformed Mean	Untransformed SD	Transformed Mean	Transformed SD	Growth Effect Size
3	-0.92	0.35	228.92	9.59	
4	-0.88	0.42	230.08	11.64	0.11
5	-0.80	0.50	232.18	13.69	0.17
6	-0.69	0.57	235.21	15.74	0.21
7	-0.55	0.65	239.19	17.79	0.24
8	-0.37	0.72	244.10	19.84	0.26
9	-0.16	0.80	249.96	21.89	0.28
10	0.09	0.87	256.75	23.94	0.30
11	0.37	0.94	264.49	25.99	0.31
12	0.69	1.02	273.16	28.04	0.32

Quality Measure Criteria

What is the reliability and validity of each subtest?

Reliability and validity make Capti Assess with ETS ReadBasix a real diagnostic assessment that helps teachers assess more skills in more depth. Each foundational skill is assessed with 30 items, which significantly improves measurement accuracy.

The reliability of each Capti Assess with ETS ReadBasix subtest was estimated and the majority of the values were between .8 and .9, though some were around or below .7 (see the technical report for more detail, pp. 27-36). Sabatini and colleagues (2019) examined effects of potential differential item functioning (DIF) and found very little presence of significant DIF. For more detail, refer to the technical report.

The validity of Capti Assess with ETS ReadBasix is based on its validity by design, where the elements that compose validity are considered before the tests' construction. Since its inception, Capti Assess with ETS ReadBasix subtests have been correlated with other, well-established assessments. For example, the vocabulary and morphology subtests have demonstrated moderate correlations with the Test of Word Reading Efficiency (TOWRE; Torgesen et al., 1999) from r = .36 - .56, the Peabody Picture Vocabulary Test (PPVT; Dunn & Dunn, 1997) from r = .52 - .57, the Clinical Evaluation of Language Fundamentals, Recalling Sentences subtest (Semel, Wiig, & Secord, 2003) and the Comprehensive Assessment of

Spoken Language, Grammatical Judgement subtest (Carrow-Woolfolk, 2008) from r = .38 - .51, and the Gates-MacGinite reading test at r = .50 and r = .65. The ReadBasix™ reading comprehension subtest was also correlated with the Gates-MacGinite at r = .77. For more on validity, see the technical report (i.e., Sabatini et al., 2019) and Foorman, Koon, Petscher, Mitchell, and Trunkenmiller (2015).

Item Response Theory Marginal Reliability for Each Subtest, by Grade

Grade	Decoding/Word Recognition	Vocabulary	Morphological Awareness	Sentence Processing	Reading Efficiency	Reading Comprehension
3	0.886	0.871	0.864	0.832	0.826	0.703
4	0.917	0.832	0.868	0.830	0.927	0.753
5	0.896	0.867	0.871	0.825	0.927	0.674
6	0.903	0.859	0.865	0.805	0.899	0.706
7	0.902	0.864	0.868	0.818	0.890	0.836
8	0.904	0.872	0.866	0.830	0.878	0.834
9	0.867	0.780	0.773	0.743	0.808	0.830
10	0.864	0.807	0.740	0.750	0.803	0.844
11	0.815	0.716	0.649	0.647	0.711	0.800
12	0.837	0.769	0.710	0.748	0.731	0.847

Table replicated from Sabatini et al. (2019).

The validity of each subtest began with the initial construction of the assessment using a validity by design approach. Each subtest has been aligned with evidence-based practices and interventions designed to address students' reading skill weaknesses. Along with evidence-based practices, the ETS ReadBasix™ subtests have been found to be correlated with other reading measures. For instance, the vocabulary and morphology sections of ETS ReadBasix™ have been correlated with the Gates-MacGinitie reading test at r =.50 and r = .65, respectively. See Sabatini et al. (2019) for additional reading measures that correlate to ETS ReadBasix™.

How were the norms set? Was the timer on? If ETS ReadBasix™ is administered without the timer, can the scores be interpreted using the norm-referenced scores?

The norms were set using a national sample of students in Grades 3-12 with 173,743 unique test administrations. In establishing the norm-referenced scores, each task was timed. While the norms were set with the timer, the reading efficiency subtest will be impacted when the timer is not used since efficiency is part of the subtest's construct.

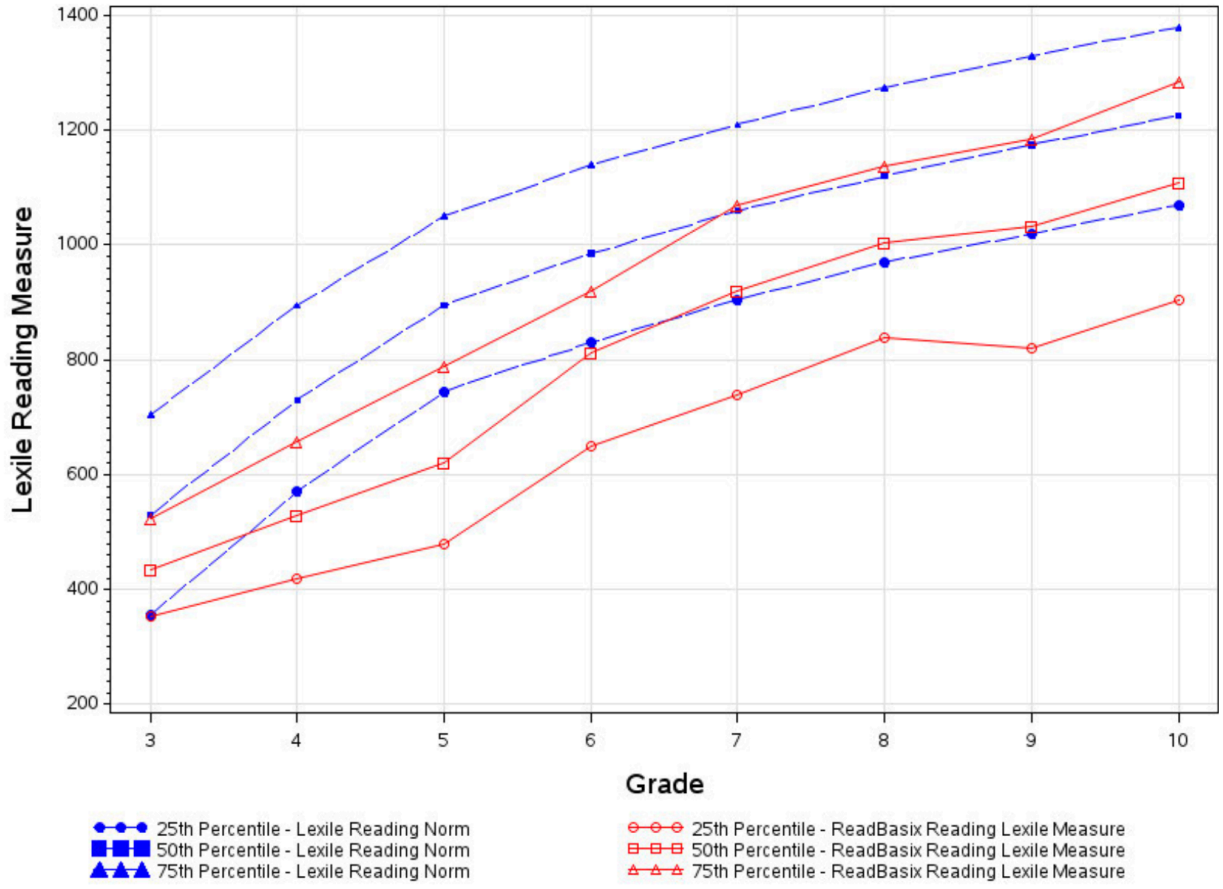
What is the correlation between the foundational reading skills according to the subtests?

The correlation between the foundational reading skills on the subtests by grade can be found in the appendix of Sabatini et al. (2019).

Is ReadBasix correlated with other reading assessments?

Yes, the correlation between ReadBasix and the Lexile Framework for Reading, as well as with the Gates MacGinitie have been established.

Lexile reading measure. Selected percentiles (25th, 50th, and 75th) plotted for the ReadBasix Sentence Processing, Reading Efficiency, and Reading Comprehension Lexile reading measures for the initial sample (N = 3,039), in relation to the Lexile reading measure norms. Reproduced from Linking the ReadBasixTMM Assessment with the Lexile Framework for Reading.



Gates MacGinitie. The correlation between ReadBasix and the Gates MacGinitie is shown in the table below

	Word Recog. and Decoding	Vocabulary	Morphology	Sentence Processing	Reading Efficiency	Reading Comp.	Gates Vocabulary	Gates Reading Comp.
Vocabulary	0.762							
Morphology	0.752	0.832						
Sentence Processing	0.66	0.726	0.792					
Reading Efficiency	0.684	0.752	0.785	0.772				
Reading Comp.	0.539	0.555	0.580	0.589	0.619			
Gates Vocabulary	0.709	0.766	0.749	0.659	0.657	0.673		
Gates Reading Comp.	0.608	0.652	0.684	0.663	0.647	0.695	0.762	
Gates Total	0.717	0.770	0.769	0.706	0.715	0.759	0.920	0.947

Administering the Assessment

Is it possible to set it up so all students get the same form or level?

The assessment randomizes forms and automatically adjusts difficulty level, but you can also control the difficulty level yourself. When creating a new ReadBasix assignment you can select “Low”, “Medium” or “High” levels for all students in that assignment. The students will still be assigned randomized forms, but the difficulty level will be kept to your preference. If you also want to prevent form randomization and assign all students with the same form, please contact Capti support. You can learn more about creating and configuring ReadBasix assignments in ReadBasix Teacher’s Manual.

What is the length of the time interval needed to use ETS ReadBasix™ for the purpose of progress monitoring?

It is recommended that ETS ReadBasix™ be given three times a year to all students; however, subtests may be administered every two to four weeks when providing an intervention to monitor progress.

How many data points are needed to use ETS ReadBasix™ for the purpose of progress monitoring?

In general, research suggests that six data points should be collected when monitoring progress (e.g., Christ, & Silberglitt, 2007). This would mean that an intervention being monitored every two weeks would have six data points after ten or twelve weeks of intervention depending on if the baseline data point is used as an initial data point.

References

Technical Reports by ETS

Sabatini, J., Weeks, J., O' Reilly, T., Bruce, K., Steinberg, J., & Chao, S.-F. (2019). SARA Reading Components Tests, RISE forms: Technical adequacy and test design, 3rd edition (Research Report No. RR-19-36). Princeton, NJ: Educational Testing Service.

This is the third and most recent edition of the technical report for the ReadBasix (SARA / RISE) assessment battery. This report expands the first and second reports by featuring a national sample of students from grades 3-12 (the first report had grades 6-8; the second one had grades 5-10). This report includes a theoretical overview of the battery of assessments including a subtest for each foundational skill: word recognition and decoding, vocabulary, morphology, sentence processing, and reading efficiency, and for basic reading comprehension. The report includes psychometric analyses, item response theory scaling study, evaluation of multidimensionality, validity evidence, evaluation of differential item functioning for gender, and race/ethnicity.

Sabatini, J., Bruce, K., Steinberg, J., & Weeks, J. (2015). SARA Reading Components Tests, RISE Forms: Technical Adequacy and Test Design, 2nd Edition (ETS RR-15-32). Princeton, NJ: Educational Testing Service.

The second edition of the technical report on the ReadBasix (SARA / RISE) assessment battery expands the first report by featuring grades 5-10 (the original had grades 6-8). Included in this report are analyses for each subtest (word recognition and decoding, vocabulary, morphology, sentence processing, and reading efficiency, and basic reading comprehension), psychometric analysis of parallel forms of each subtest, results of item response theory scaling studies for each subtest across the entire grade span, and evaluation of differential item functioning for gender, and race/ethnicity.

Sabatini, J., Bruce, K., Steinberg, J. (2013). SARA Reading Components Tests, RISE Form: Test Design and Technical Adequacy (ETS RR-13-08). Princeton, NJ: Educational Testing Service.

This is the first technical report on the ReadBasix assessment (SARA / RISE). ReadBasix was originally designed for struggling readers in middle school because teachers within a large, urban district wanted more information about why their students were struggling to read. The battery of assessments includes a subtest for each foundational skill: word recognition and decoding, vocabulary, morphology, sentence processing, and reading efficiency, as well as for basic reading comprehension. This report details the research base that supports the design and development of the reading skills components battery, and describes a pilot study with students in grades 6-8.

Relevant Research Papers by ETS

Wang, Z., O'Reilly, T., Sabatini, J., McCarthy, K., & McNamara, D. (2021). A tale of two tests: The role of topic and general academic knowledge in traditional versus contemporary scenario-based reading. Learning and Instruction, 73, 101462

This article presents research suggesting high school students' academic knowledge is highly predictive of traditional comprehension assessments, which require identifying information and drawing inferences from single texts, but less so for scenario-based assessments, which call for integrating, evaluating, and applying information across multiple sources. Within the study, a shortened version of three ReadBasix subtests (vocabulary, morphology and sentence processing) all strongly predicted academic knowledge (r's .43 - .57), and reading comprehension on both a traditional comprehension test (r's .56 - .57) and a scenario-based comprehension test (r's .50 - .54). The strength of relation between ReadBasix to either comprehension test was comparable to the relation between the two comprehension tests (r = .57). Results demonstrated that ReadBasix subtests are valid indicators of students' academic achievement, single text comprehension, and scenario-based multiple-text comprehension.

Wang, Z., Sabatini, J., & O'Reilly, T. (2019). When slower is faster: Time spent decoding novel words predicts better decoding and faster growth. Scientific Studies of Reading

This article presents research from two studies that compared poor and normal decoders' processing times on real words, pseudo-homophones, and nonwords (Study 1), and evaluated how a processing time difference is associated with rates of decoding development (Study 2). The results suggest that poor decoders spend more time recognizing real words and pseudo-homophones, but less time on non-words, whereas normal decoders spend more time decoding non-words. The researchers concluded that poor decoders may be trapped in a vicious cycle where poor decoding skill combined with less time spent attempting to decode novel words interferes with decoding development.

Wang, Z., Sabatini, J., O'Reilly, T., & Weeks, J. (2019). Decoding and reading comprehension: A test of the decoding threshold hypothesis. Journal of Educational Psychology, 111(3), 387-401.

This article presents research from two studies that examined the relation between decoding and reading comprehension with middle and high school students. Using prominent reading theories as a basis, the authors propose the Decoding Threshold Hypothesis, which suggests the relation between decoding and reading comprehension can only be reliably observed above a certain decoding threshold. In Study 1, the Decoding Threshold Hypothesis was tested. Researchers found a reliable decoding threshold value below that there was no relation between decoding and reading comprehension, and above which the two measures showed a positive linear relation. Study 2 examined a longitudinal analysis of reading comprehension growth as a function of initial decoding status. Results showed that scoring below the decoding threshold was associated with stagnant growth in reading comprehension, and above demonstrated accelerating reading comprehension growth from grade to grade.

O'Reilly, T., Sabatini, J., Bruce, K., Pillarisetti, S., & McCormick, C. (2012). Middle school reading assessment: Measuring what matters under an RTI framework. Reading Psychology Special Issue: Response to Intervention, 33 (1-2), 162-189.

This article describes an early conception of ReadBasix designed to measure six component and integrated reading skills and determine the assessment's fit into an RTI framework. Aligning ReadBasix with the research in cognitive science, reading and learning allowed researchers to create an assessment that can help identify weakness in each of the six foundational skills. Additionally, the battery was found to be more predictive for students who were struggling readers. From the information provided by the

assessment's results, educators can make more informed decisions about who needs help, what help is needed, and whether the instructional support is effective.

Research Papers on ReadBasix by ETS

Sabatini, J., O'Reilly, T., Weeks, J., & Wang, Z. (2019). Engineering a 21st Century reading comprehension assessment system utilizing scenario-based assessment techniques. International Journal of Testing.

This article presents a developmentally sensitive reading comprehension assessment grounded in a scenario-based assessment paradigm, which was designed to meet the evolving construct of reading comprehension. Evidence for the concurrent validity of ReadBasix is included. The authors found the ReadBasix comprehension subtest to be correlated with external measures of reading comprehension, specifically the Gates-MacGinitie reading test and the scenario-based assessment. The correlation between the ReadBasix comprehension subtest and the scenario-based assessment of reading comprehension is important because the scenario-based assessment requires higher level comprehension constructs and shows that higher level constructs are related to foundational comprehension as measured by ReadBasix.

O'Reilly, T., Feng, G., & Sabatini, J., Wang, Z., & Gorin, J. (2018). How do people read the passages during a reading comprehension test? The effect of reading purpose on text processing behavior. Educational Assessment.

This research study examined the effect of reading purpose on participants' reading behaviors using eye-tracking technologies. Proficient undergraduate students read four passages; two required participants to write a summary, and two required answering multiple choice questions. Results indicated that more time was spent constructing a coherent mental model of text content (deep comprehension) when the purpose for reading included a written summary as compared to only answering multiple choice questions. This study provided evidence for content validity of the ReadBasix assessment because reading relevant parts of passages facilitated answering comprehension questions.

Wang, Z., Sabatini, J, O'Reilly, T., & Feng, G. (2017). How individual differences interact with task demands in text processing. Scientific Studies for Reading, 21 (2), 165-178.

This research study investigated how individual differences interacted with task requirements utilizing eye tracking technologies to measure undergraduate students' reading efficiency. Researchers found that participants spent more time reading when the task required a written summary as compared to when the task required only answering multiple choice questions. The time spent reading benefitted students who had relatively low reading efficiency as they were able to answer the multiple choice questions more efficiently after writing a summary. The results provide structural validity of ReadBasix by showing convergence in reading comprehension, fluency, and summary writing measures.

Sabatini, J., O'Reilly, T., Halderman, L. & Bruce, K. (2014). Integrating Scenario-based and component reading skill measures to understand the reading behavior of struggling readers. Learning Disabilities Research & Practice,29(1), 36-43.

This study presents data from two measures that were designed to provide a more holistic picture of reading comprehension. The measures include the Reading Inventory and Scholastic Evaluation (RISE), now known as ReadBasix, and Global, Integrated Scenario-Based Assessment (GISA), now known as ReadAuthentix in the Capti Assess suite of assessments. The results show that each subtest on ReadBasix predicted unique variance on ReadAuthentix. Further, this study provides evidence for measuring foundational reading skills, five subtests of ReadBasix, when assessing reading comprehension because lower level foundational skills may impede comprehension.

Reports on ReadBasix Administration by Other Research Labs

Linking the ReadBasix™ Assessment with the Lexile® Framework for Reading. Linking Study Report. Redacted. Prepared by MetaMetrics for the ETS under License Agreement, signed August 1, 2022. March 2023 (Updated April 2023).

The primary purpose of this study was to link the ReadBasix Sentence Processing, Reading Efficiency, and Reading Comprehension Subtests to the Lexile Framework for Reading. ReadBasix Subtest scale scores can now be used to present a solution for matching students with text and information that can leverage tools such as the Lexile "Find A Book" to answer questions related to standards, test score interpretation, and test validation. A predictive function was constructed to transform ReadBasix Sentence Processing, Reading Efficiency, and Reading Comprehension subtest scale scores to Lexile reading measures. The regression approach allows for a profile of ReadBasix scores to be combined to predict a Lexile reading measure, rather than a multitude of functions for each subtest.

Magliano, J. P., Talwar, A., Feller, D. P., Wang, Z., O'Reilly, T., & Sabatini, J. (2023). Exploring thresholds in the foundational skills for reading and comprehension outcomes in the context of postsecondary readers. Journal of Learning Disabilities, 56(1), 43-57.

This article presents evidence to suggest potential thresholds in foundational reading skills that may limit college students' reading comprehension on both close and applied literacy tasks. This research extends the work of Wang, Sabatini, O'Reilly, and Weeks (2019) that found students' growth in reading comprehension conditional on their decoding scores to explore whether there are thresholds in foundational skills that may limit reading comprehension for college students. The study included students who were determined to be underprepared for college and assigned to developmental literacy programs, and others who were determined to be prepared for college. The findings suggest that there are thresholds for foundational reading skills—decoding/word recognition, morphological knowledge, and sentence processing—that had implications for students' inclination to engage in the reading comprehension strategies of paraphrasing, bridging, and elaborating (all higher level literacy tasks). Students who fell below the thresholds demonstrated a lower level of employing reading strategies when compared to those who above the thresholds. These are important findings as they highlight problems with foundational reading skills that may persist into college.

Goldman, S. R., Greenleaf, C., Yukhymenko-Lescroart, M., Brown, W., Ko, M. L. M., Emig, J. M., George M.A., Wallace P., Blaum D. & Britt, M. A. (2019). Explanatory modeling in science through text-based investigation: Testing the efficacy of the Project READI intervention approach. American Educational Research Journal, 56, 1148, 1216.

This article shares research on READI, a reading intervention designed to increase students' reading comprehension. The Reading Inventory and Scholastic Evaluation (RISE), also known as ReadBasix, was used as the pretest and the Global, Integrated Scenario-Based (GISA), now known as ReadAuthentix, was used as the posttest. Both ReadBasix and ReadAuthentix are part of the Capti Assess suite of assessments. Ninth-graders' performance on the comprehension measures suggests that the skills measured on ReadBasix are related to the deep comprehension required by ReadAuthentix.

Kim, J. S.,Hemphill, L., Troyer, M.,Thomson, J.M., Jones, S. M., LaRusso,M. D., & Donovan, S. (2017). Engaging struggling adolescent readers to improve reading skills. Reading Research Quarterly, 52, 357–382.

This article shares research on the Strategic Adolescent Reading Intervention (STARI), which was designed as a supplemental reading program based on peer- and discussion-based instruction that supports word-reading skills, fluency, vocabulary, and comprehension. ReadBasix (formerly known as RISE) was used to measure success of the intervention based on students' scores. The results from 6th to 8th grade students indicate that the skills assessed by ReadBasix can be improved from targeted reading interventions such as STARI.

Foorman, B. R., Koon, S., Petscher, Y., Mitchell, A., & Truckenmiller, A. (2015). Examining general and specific factors in the dimensionality of oral language and reading in 4th–10th grades. Journal of Educational Psychology, 107, 884, 899

This research article shares supporting evidence for the vast amount of variance in reading comprehension being attributed to oral language, specifically lexical knowledge. The findings differ from the Simple View of Reading proposed by Gough and Tunmer (1986), which suggest it is decoding and language comprehension that contribute to reading comprehension. The study also provides evidence for the concurrent validity of ReadBasix as the component subtests were predictive of reading comprehension. ReadBasix subtests, specifically the vocabulary and morphology, correlated with the Gates-MacGinitie reading test.