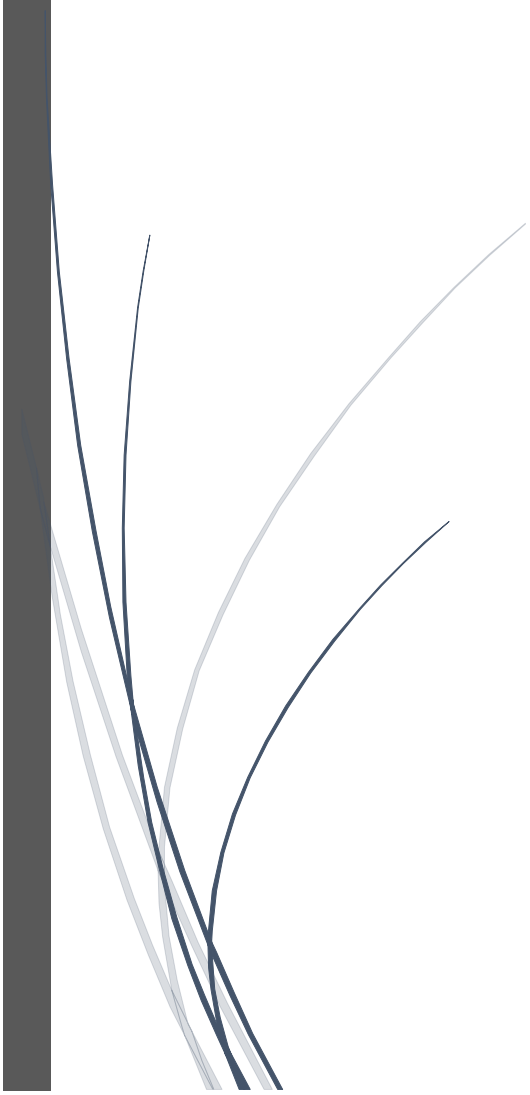
11/1/2019

Assessing Reading Comprehension

A Report for the Indiana State Board of Education



Prepared by the Indiana Technical Advisory Committee

Assessing Reading Comprehension: A Report for the Indiana State Board of Education

By, Marianne Perie, Karla Egan, Ed Roeber, Richard Patz, Gregory Cizek, and Chad Buckendahl, Indiana Technical Advisory Committee

October 30, 2019

This report responds to Indiana House Act 1629 which requires the Indiana State Board of Education (ISBoE) to submit a report defining "reading comprehension" and describing how ILEARN, the statewide assessment program, measures it. The report must include a review of accommodations that are appropriate for measuring reading comprehension in the 2019 assessment program, and recommendations for the 2020 program. This report was authored by the Technical Advisory Committee for the ISBoE to address these issues.

Assessment accommodations are intended to level the playing field for all students: to allow students to show what they know and can do, unhampered by the format of the assessment, the wording of the assessment questions, or the assessment administration procedures. However, it is also important to ensure any accommodations provided to a student does not change the construct of what is being assessed. Whereas the affordance of appropriate accommodations increases the validity and usefulness of a student's test score, inappropriate accommodations or improper modifications would decrease the validity of the results and could seriously degrade the possibility of making confident conclusions about the student's level of knowledge or skill and undermine the ability to make desired comparisons across students and schools and corporations.

Determining the assessment accommodations that are appropriate to provide to students with disabilities is challenging. Answers to several questions will help in determining what accommodations should be available:

- What is the intended *meaning* of the test scores?
- What are the intended uses of the assessment?
- What content standards are measured by the assessment? What do they imply about how the skills are to be measured?
- What accessibility features will be made available to all test takers?
- What accommodations can be made available without changing the inferences that can be drawn from achievement results (i.e., not change the content of the standards that were assessed)?
- For existing assessments (e.g., ILEARN), does changing assessment accommodations due to changes in the definitions of the content standards in a discipline require new standards be set for those assessments?

This report will: identify a workable definition of reading comprehension based on relevant research literature; discuss how reading comprehension has been assessed in Indiana; describe a variety of

possibly available accessibility features and accommodations and when and how they may be appropriate; and make recommendations for moving forward on an accommodation policy for reading assessments. This paper approaches this topic from a psychometric view point. As psychometricians, our primary concern is that the construct defined in the Indiana standards is aligned to the construct measured in the test.

Defining Reading Comprehension

Reading comprehension, defined as "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language" is critical for students to succeed in today's educational settings (Snow, 2002). Text is broadly construed to include any printed text or electronic text but text that contains characters that must be combined into words and interpreted. In considering this activity, we include the purposes, processes, and consequences associated with the act of reading. There are two components to reading: Decoding and understanding. "Decoding" is the process of translating print into speech by rapidly matching a letter or combination of letters (graphemes) to their sounds (phonemes) and recognizing the patterns that make syllables and words. It involves taking apart the sounds in words (segmenting) and blending sounds together. It requires both knowledge of letter-sound relationships, as well as an ability to apply that knowledge to successfully identify written words and make meaning. The ability to rapidly decode text, also called "fluency," entails quick and efficient recognition of words and at least some aspects of syntactic parsing. Decoding is a prerequisite for the second component of reading comprehension, understanding (Snow, 2002). "Understanding" requires the student to extract and construct meaning through the interaction with the decoded, written text.

Although the argument could be made that the definition of reading comprehension might change as technology changes, there is no evidence for that in the more recent literature. Even Wikipedia defines reading comprehension as "the ability to process text, understand its meaning, and to integrate with what the reader already knows." In fact, recent research has focused on that last component, not on the interaction with written text. Instead, the focus has been on understanding "comprehension" but still distinguishing reading comprehension from listening comprehension.

Reading comprehension differs from listening comprehension primarily in the aspects of decoding and interacting with written text. Research shows that listening comprehension is often a precursor to reading comprehension and thus listening comprehension instructional activities can be used as a tool for improving reading comprehension (Hogan, Adlof, and Alonzo, 2014). As early as 1969, researchers demonstrated that listening comprehension and reading comprehension are two separate constructs and both are necessary for academic achievement. Furthermore, a weakness in either ability is detrimental to learning in most subject areas (Durrell, 1969). Interestingly, research shows that a student's listening vocabulary is typically larger than his or her reading vocabulary until Grade 8, when they become of equal size (Hogan, et al., 2014). Therefore, while it is clearly important to teach listening comprehension, the distinctness of reading comprehension and its importance for academic achievement may explain the nearly universal practice of measuring reading comprehension, including its component skills, in elementary education across the United States.

Assessing Reading Comprehension

Assessments of reading comprehension generally measure a test-taker's ability to process text (i.e., decode), understand its meaning, and integrate it with what s/he already knows about the topic(s) presented in the text. When reading comprehension of school students on a large scale, state

assessment programs must align to the state standards, which articulate the skills that are the primary focus of instruction in each grade range being assessed. For example, assessments may emphasize recognition of print features in kindergarten, and emphasize phonics, word recognition, and fluency through fifth grade. Although comprehension is introduced early in many states' standards, it becomes the primary focus after fifth grade. Accordingly, Indiana state standards in English/language arts focus on both reading foundations (including print concepts, phonics, and fluency) as well as reading literature and nonfiction in grades K–5. In grade 6, the category of reading foundations is eliminated and the primary focus is on reading literature and nonfiction. All grades include a section on reading vocabulary as well. Thus, the definition of reading comprehension for the purposes of determining an accommodations policy for Indiana should primarily be based on the Indiana state standards.

It could be argued that Indiana's content standards beyond grade 5 reflect less reliance on print and more on information acquisition, regardless of how it is acquired. However, some Indiana reading standards clearly imply that students are reading the text independently. For instance, Indiana standard 8.RN.3.2 states that Indiana students should be able to "analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept." This standard implies an understanding of text structure. Although this may be possible through listening, it can be exceedingly difficult when the author structures a text, like a poem, in a way intended to be visual. Even through high school, the first learning outcome for both literature and nonfiction included in the Indiana standards implies that students must continue to read text-based material and not acquire the material received solely through other forms (i.e., listening):

> *"Read a variety of literature/nonfiction within a range of complexity appropriate for grades 9-10. By the end of grade 9, students interact with texts proficiently and independently at the low end of the range and with scaffolding as needed for texts at the high end of the range. By the end of grade 10, students interact with texts proficiently and independently."*

Indiana assessments

Focusing on Indiana's current assessment program in reading, all students start with the IREAD-3, which has as its stated purpose to measure foundational reading standards through grade 3 to ensure the student is ready to learn through reading. Students then progress to ILEARN in grades 3–8, which measures student achievement and growth according to Indiana Academic Standards in four subjects each spring. Finally, students end their public-school career with the ISTEP+. ISTEP+ Grade 10 is Indiana's high school accountability assessment through school year 2019–2020 and impacts student graduation through cohort 2022. Prior to that, Indiana gave end-of-course exams in English/language arts (ELA) and mathematics. In 2021–22, Indiana intends to move to a nationally-recognized college-entrance examination in which reading is an important content area assessed. At this point, neither the ACT nor the SAT allows the read-aloud accommodation on their reading assessment except for a very small group of students who have substantial documentation that they have no other way of accessing the test.

There are student-level consequences for the IREAD-3 and the ISTEP+, with the IREAD-3 impacting grade promotion and the ISTEP+ counting as a graduation requirement. The ILEARN is used for school and educator accountability purposes, meaning there are fewer consequences for individual students than for the educators and administrators at the school.

When looking at the use of the assessment data, one often refers to the student or school reports. For all grades, student and school reports for ELA include scores that are further broken down into two reading subcategories. Two writing strands are also reported. Thus, it appears that reporting accurately on a student's reading ability is important to Indiana stakeholders.

Accommodations

Assessment accommodations are alterations in assessment context, conditions, or the way assessment questions or tasks are presented that allow all students an equal opportunity to demonstrate their true levels of learning. Accommodations should not alter the content or construct measured by test items, give students an unfair advantage, or change what a test measures. Accommodations are in this way distinguished from test *modifications*, which are alterations that involve changing test content and impacting the construct measured by a test. Because of their impact on the meaning of a test performance, modifications should only be allowed under the relatively rare circumstance that no available accommodation will provide a student access to meaningfully participate in an assessment. The measurement distinction between accommodations and modifications is itself distinct from the policy question of which alterations are allowable under what conditions, the latter being referred to as "allowable accommodations," which may include modifications for students who require them.

Needed accommodations are determined by a student's Individual Education Plan (IEP) team and specified in their IEP, which is a legal document. Allowable accommodations differ by student and subject as different supports are needed based on disability and the nature of the content. Accommodations may be broader for instruction than assessment, as scaffolding is often needed while teaching a concept but the assessment must be sufficiently standardized to yield valid, comparable results across students. Tests have accessibility features that are offered to all students to increase their access to the exam. For instance, the use of a highlighter or magnifier is considered an accessibility feature as those tools do not alter the construct and may be useful to multiple students regardless of whether they have a recorded disability. An accommodation is intended to help only those students who need it. For example, reverse contrast (printing or displaying the test as white text on a black background) is only appropriate for students with a visual disability needed that contrast. And, as described earlier, a modification does change what is being assessed, but may be the only way for a student to access the material. It changes the interpretation of the test score and must therefore be used sparingly.

In general, there are four types of accommodations to consider on any assessment: Setting, timing, presentation, and response. Briefly, the setting accommodation is for students who require special circumstances to avoid distraction or for the administration of specific accommodations. For instance, the child may need to be assessed in a small group setting, in a carrel by himself or herself, or one-on-one with an instructor. A timing accommodation can include extra time for students who need it as well as students who require frequent breaks. The presentation category is a broad one and can cover assessment formats such as paper versus computer administration, the need for a large-print or projected version of the test, a test translated into Braille or a foreign language, or a test that is read aloud or provided some text to speech accommodation. Finally, the response category details ways in which a student may be allowed to respond to a test question, including writing or typing or dictating to a computer or human scribe.

Students needing accommodations in reading

For most subjects, students may have test directions, stimuli, questions, and possible responses read aloud to them. This can be done in multiple ways, including a human reader who is pre-recorded or sitting with students live, via a screen reader, or via a text-to-speech program that has been embedded into the assessment. The distinctions among these types of reading accommodations will be discussed in a later section. Regardless, these kinds of accommodations do not advantage or disadvantage any students, but merely enhance the validity of test scores by ensuring that all students understand the testing tasks presented to them.

Typically, research studies investigating the validity of accommodations look to see if students with disabilities get a differential boost in their performance compared to students without disabilities. If everyone's score increases, then the accommodation is seen as making a test easier rather than providing additional access to students with disabilities. Unfortunately, the research around the read-aloud accommodation is mixed. For example, Randall and Engelhard (2010) found that the use of a read aloud accommodation on the reading portion of the Georgia Criterion Reference Competency Tests (GA CRCT) produced greater benefit for students with disabilities than students without disabilities in the grade 3–4 band. This differential boost was not found grade 7–8 band; instead, both students with disabilities and students without disabilities benefited about equally from using a read aloud accommodation. However, Fletcher et al. (2009) found that the use of the read aloud accommodation on an experimental version of the Texas Assessment of Knowledge and Skills (TAKS) reading test produced a greater benefit for students with disabilities than students without disabilities in grade 7. Laitusis (2010) found that providing audio presentation on a reading test in grades 4 and 8 provided a boost for all students, with our without disabilities. There was a differential boost for students with disabilities, although the boost was stronger for grade 4 students with disabilities. Thus, an argument can be made that even after grade 5, the read aloud accommodation on reading passages may serve not just to make the item more accessibility but also to make it easier.

However, as indicated above, the research is mixed for students in middle-school grades. Thus, the question many policymakers grapple with is when to allow a reading accommodation on a *reading* assessment may do better to focus on the construct of the assessment. From the previous section, we know that the construct of reading includes a significant emphasis on print orientation and phonics through grade 5; after which the reading construct is more focused on understanding. Even if the relevant standards indicate or imply comprehension of written text, it may be reasonable to consider alternative presentation modes after grade 5, where the decoding of written text comprises a smaller portion of the construct. We thus turn our attention to the characteristics of test takers who might need a reading accommodation after grade 5.

Understanding the population of struggling readers

There are typically three types of disabilities that cause students to struggle with reading, particularly decoding: a learning disability, dyslexia, and a vision impairment, including blindness.

For students with learning disabilities, there is much research on decoding strategies they can learn. It is important to understand the relationship between their disability, decoding, and comprehension (Gersten, Fuchs, Williams & Baker, 2001). Englert and Thomas (1987) demonstrated that children with learning disabilities often have more difficulty comprehending what they read than do children without disabilities, even when the level of decoding ability is controlled. These struggling students could not

distinguish between essential and nonessential material in text and tended to have difficulties formulating reasonable hypotheses based on what they read. These effects were found even when the text was read aloud to the students to try to eliminate any issues with decoding. In this case, comprehension is what is being tested, and a read-aloud accommodation may have little effect on the assessed reading performance.

The most common learning disability that affects decoding is dyslexia. Between 2 and 8 percent of school-aged children have such a reading disability. Some of the common signs of dyslexia, include: difficulty associating or recognizing sounds that go with letters and separating the sounds within words, difficulty sounding out words, trouble rhyming, problems understanding and using words and grammar, and poor spelling (Hulme & Snowling, 2016). Dyslexia can be present in different degrees, from a straightforward reversal of specific letters to the extreme case of perceiving letters continually changing. At the most extreme level, no successful strategies for teaching students to decode have been found; at less extreme places on the continuum, students can be taught effective decoding strategies that require extra time to employ. These students only need the accommodation of additional time on an assessment. To determine which students have such an extreme form of dyslexia that they cannot learn to decode despite intensive, targeted instruction, documentation of the approaches that have been taken to strengthen the student's decoding, fluency, or comprehension skills is needed. This documentation should include specific dates with progress monitoring data and interventions implemented. It should demonstrate that continuous, intensive interventions have not been successful in improving student decoding, fluency, or comprehension performance. For these students, a read-aloud accommodation may be appropriate. However, the population of students for whom this accommodation may be appropriate is estimated to be no more than 1.5 percent (Smarter Balanced, 2016).

The final category of students benefitting from a read-aloud accommodation is blind/visually impaired. The first choice of accommodations for students who are blind is a Braille form. Braille is made up of a series of raised dots representing letters, meaning that decoding is still required. A student who is learning to read braille should be assessed with the braille form of the assessment, so that an accurate measure of his or her decoding and comprehension skills is obtained. Most other visually impaired students can still access the test form using large-print or magnification accessibility features often combined with a specific color contrast feature. However, there are students who have recently become fully blind and have not yet learned Braille. These students would have no means of accessing the material on a test without a read-aloud accommodation. Again, this is a very low incidence of occurrence. Out of 5.7 million students enrolled in PK-12, approximately 62,000 are legally blind (American Printing House for the Blind, 2016). Of those 62,000, approximately 60% cannot read either raised text or braille. This means approximately 24,800 students would need a different way to access text, although this number includes pre-kindergarten and kindergarten students who are not expected to read (American Printing House for the Blind, 2017). According to the National Center of Educational Statistics, about 2% of students enrolled in public school across the country are enrolled in Indiana. Therefore, assuming the number of students who are blind are equally distributed around the country, we would expect approximately 496 students in grades PK-12 to be legally blind and need assistance accessing text.

Issues with read aloud accommodations on the reading assessment

Because decoding and comprehension are both assessed by reading tests, changing the format to allow for a read aloud accommodation changes the construct. In a study by Crawford and Tindal (2004), 4th- and 5th-graders benefited from having the reading passage read aloud regardless of whether or not they have a disability. The fact that students without an IEP also performed slightly better, on average, on a reading test when the reading passage was read aloud supports the concern that this practice changes the construct and cannot be called an "accommodation;" rather, it is a "modification" to the assessment. Additionally, this study found that teachers greatly overpredicted a student's need for the accommodation. Specifically, teachers judged that 40% of all students would greatly benefit from the modification, but only 17% of the students benefited to a significant degree.

Many state assessment programs now allow some read-aloud accommodation on their reading assessments, with policies that treat older and younger students in different ways. Approximately 14 states allow a read-aloud accommodation in grades K-5 under very narrow conditions where the accommodation is the only way for the student to access the test. In the upper grades, where more emphasis is placed on comprehension than decoding, more states allow some read aloud accommodation, although this allowance is still strictly monitored. In 2015, approximately 14 states allowed the read-aloud accommodation under narrow circumstances in all grades, and 35 states allowed them in the upper grades. (See Appendix A for a list of read-aloud policies by state.)

For states that allow read-aloud accommodation in the lower grades, the narrow circumstances include, on a student-by-student basis, evidence that research-based practices have not been effective in teaching decoding. For example, Maryland requires the following[1]:

- A student must be receiving research or evidenced-based intervention at the time the accommodation decision is made.
- All intervention services a student receives must be in addition to the core instruction.
- All interventions must be in place for at least two years.
- Research-based interventions are established on multiple, systematic investigations, including testing and evaluations, and are designed to develop or contribute to generalized knowledge.
- Evidence-based refers to an instructional program or collection of practices that have been tested and shown to have a record of success. That is, reliable, trustworthy, and valid evidence indicates that when that program or set of practices is used, students can be expected to make adequate gains in academic achievement.

It is worth noting that while Maryland began with a small number of students who were granted the read-aloud accommodation, that number has grown over the years. While it is not appropriate to identify accommodations on a student score report, the score report will need to be interpreted differently for students with a read-aloud accommodation as the score will not mean the same as it does for students who read the passages and questions.

[1] From the Maryland Assessment, Accessibility, and Accommodations Policy Manual retrieved from http://marylandpublicschools.org/programs/Documents/Special-Ed/IEP/MAM508102017.pdf

History of accommodations in Indiana

Indiana has been publishing accommodations procedures in their administration manuals for their assessments for decades. Going back as far as 2005, there is no history of allowing any type of read-aloud accommodation for the reading portion of the ELA exam. Although the early manuals do not contain much detail, they do say "Students…are not to have the reading comprehension portions read to them." Later, these instructions were included explicitly in the test administrators' manual. For instance, this instruction was found in the administration manual for the ISTEP+ in 2010–2011: *Even though a student's IEP, Section 504 plan, or ILP (EL plan) may permit reading of the test questions, the test questions that measure reading comprehension must not be read to the student. Whenever the DO NOT READ icon appears (shown left), do not read aloud the passages or the questions in that portion of the test session to any student.* The most recent accommodations guide, intended for the 2019–2020 testing year, also excludes reading comprehension from the assessments that may use the text-to-speech accommodation. The policy of not reading any portion of a reading passage remains in effect today.

The requirement that students must independently read each reading passage (i.e., not be read to students as an accommodation) ensures that the reading scores are comparable across students supports, and that the reading standards that require decoding are measured directly. Allowing read-aloud of passages only for the small percentage of students who have a severe form of dyslexia that is not responsive to research-based interventions, or who are recently blind and have not yet learned braille, fairly addresses the needs of these students who have no other means of accessing the test content.

It should be noted that ELA assessment could be expanded to include a listening comprehension section, in which case then this form of comprehension could be validly measured with this assessment. A widespread usage of read-aloud accommodation for the reading test, by contrast, blurs the definition of the reading comprehension construct, lessens comparability of scores, and weakens the validity of the assessment.

Finally, it is important to reconcile the purpose of an assessment with the appropriate accommodations policy. The purpose of the IREAD-3 is to evaluate the students' reading ability, including decoding. The purpose of the ILEARN is for school accountability and has no student-level consequences. The purpose of ISTEP+ is both school accountability and graduation. For the purpose of school accountability, comparability is important and identifying where systematic weaknesses in instruction occur will be better served by a strict accommodations policy. In grade 10, however, the focus is on comprehension and with a high-stakes graduation component, the emphasis is on the individual student and ensuring that each has every opportunity to earn a high school diploma. Maximizing accessibility to tested content is the driving factor here. When Indiana moves to a nationally-recognized college-entrance exam, the accommodations will be heavily influenced by the policy of the administering agency, as they determine what makes a score valid for college admission reporting purposes.

Types of read-aloud accommodations

Indiana has been allowing three forms of read-aloud accommodations since they began online assessments:

1. Human read-aloud

2. Screen readers
3. Text-to-speech software

Human read-aloud was the first type of accommodation, involving the test administrator simply reading the test instructions and questions aloud to the student. Over time, as research showed the even subtle emphasis on certain words were cuing students, more instruction and training was added. Standardization was strengthened by recording a person reading every piece out loud and including that recording with the administration materials. Again, standardization is a key component for comparability. To increase the validity of score interpretation, it is important that every student have the same, or at least equivalent, assessment experience.

Many students with learning disabilities or visual impairments use screen readers. Screen readers are very helpful in instruction as they highlight words as they are read, helping students with their reading fluency. However, screen readers read everything on the screen and are not customizable to things like regional dialect. They can be difficult to use with graphics and charts or any portion of a page that needs more interpretation. Thus, screen readers are most useful in instruction and less so in assessment applications.

Text-to-speech software is becoming a commonly-used tool in online assessment. Assessment developers can tag words to be read aloud and those that need to be spelled for construct reasons. The pronunciation can be altered to match a regional dialect (e.g., see-rup vs suhr-up), and alternate text can be written and attached to a visual that the software will then read to the test taker, giving the test developer more control over how graphs and charts are described. Another benefit of text-to-speech is that an audio file can be generated for each test form and used for students taking a paper version, thus increasing comparability.

Because of the differing levels of customization and standardization, using all three types of accommodations in one testing program can lead to lowered comparability across individual scores. Thus, although it makes sense to use all three approaches in classroom instruction, selecting one, standardized, format and using it across all assessments will increase the validity of the assessment results.

Accommodations for instruction

This report is primarily meant to serve as a review and recommendation for the use of read-aloud accommodations on a reading assessment. However, we would be remiss not to address the implications for instruction. Teachers need to understand what full mastery of a skill looks like and what accommodations students are permitted to show that mastery on a state assessment. But, while working towards that mastery in the course of classroom instruction and activities, scaffolding is often needed. Additional accommodations can provide that scaffolding. For example, whereas reading text aloud may not be permitted on a test of reading comprehension, teaching a student to analyze an author's style by listening to a passage being read aloud could be highly appropriate. Students using screen readers can increase their reading fluency by seeing and hearing written words matched to the verbal sounds. Strong professional development can aid educators in understanding how to use read aloud as a scaffold rather than as the only way to enable and measure comprehension.

A negative outcome of increasing access to a read aloud accommodation on a statewide assessment would be if fewer teachers focused on teaching decoding skills for students who were struggling and

instead switched immediately to a screen reader. Again, professional development can help mitigate that concern by helping educators match students with various strategies towards independent reading.

Finally, IEP committees will need additional professional development to distinguish between accommodations for instruction and assessment and to document them appropriately. Aligning accommodations in instruction to assessment is an important goal, but additional accommodations can be used appropriate as means to reach the end goal. Like scaffolding, certain accommodations can be removed as students learn other strategies for accessing content. Research shows that teachers overestimate students' need for accommodations, and that providing unnecessary accommodations can be detrimental to student performance (c.f. Abedi, 2012).

Summary and Recommendations

The Indiana legislature adopted House Enrolled Act No. 1629. Section 10 mandates that the Indiana Department of Education is to "…make every reasonable attempt to provide the same voice-to-text,[2] screen reader, or human accommodations to a particular student on every section of the statewide assessment program" as provided by the student's IEP, 511 service plan, or choice scholarship education plan. We believe that two clarifications regarding this language are needed. First, it is important that Indiana state assessment reading scores maintain the interpretation that aligns with the standards to which the tests were built. That is, if a student receives a score for decoding and fluency, he/she should have been tested on decoding and fluency. Second, ensuring appropriate accommodation on every section of a statewide test does not mean providing identical accommodations across every section of the test. This is because determination of appropriate accommodation depends on the content of the test as well as the student's characteristics. Fundamentally, we believe that every reasonable attempt should be made to ensure fair and equitable measurement of the Indiana standards and the validity of the assessment results.

Currently, a primary threat to validity on the reading portion of the ELA assessments is the practice of using an uncontrolled variety of read-aloud accommodations. Stronger comparability would be ensured by employing a text-to-speech program, customizing it to Indiana assessments, and outputting an audio file to use for paper-based versions of the same form.

Because of the construct assessed as defined by the Indiana standards, the current accommodations policy practice of not reading aloud the reading text and questions to students provides valid scores for students' reading ability, even though it results in near zero scores for some students with very specific print disabilities. Two policy positions are supported by psychometric research and practice in reading assessment: 1) The current accommodation policy could be maintained; or 2) the current policy could be amended to allow text-to-speech for the small proportion of students who have a severe form of dyslexia that is not responsive to research-based interventions or who are newly blind and have not learned Braille. In this second condition, the scores would reflect student comprehension of the text but not their ability to decode it. To implement this policy option, Indiana would first need to develop an accurate system for identifying such students and procedures to ensure that appropriate research-based interventions had been implemented without success.

[2] In preparing this report, we interpreted the literal expression "voice-to-text" in ACT 1629 as "text-to-voice".

The TAC notes, however, that revising the accommodations policy option to allow read-aloud accommodation on the reading test for all students who receive a read-aloud accommodation on any test would *not* be appropriate for any assessment given in grades Kindergarten through five given the Indiana standards' emphasis on decoding at these ages. An alternative for these early-grade assessments is to design the assessment in such a way to separate decoding from comprehension and allow the accommodation only on the comprehension section. However, for the most part, the Indiana standards integrate the ability to read and the ability to understand what was read. Providing a read-aloud accommodation on reading passages means that these combined skills are not being assessed, and no conclusions can be reached about the student's skills in these areas.

It is also the recommendation of the TAC that the policy be revised for the ISTEP+ to allow text-to-speech for high school students who fit one of the two categories of exceptions—students who have a severe form of dyslexia that is not responsive to research-based interventions or who are newly blind and have not learned Braille. The criteria should be well documented and follow other states' lead, for instance, requiring two years of evidence of research-based interventions with no improvement in reading. (An example of documentation can be found in Appendix B.) However, because the college-entrance tests such as the ACT and SAT severely limit such accommodations, students should continue to be taught other strategies for decoding, including Braille for the newly blind.

The TAC finds it is more difficult to recommend a policy for Grade 6–8 assessments. Some of the Indiana ELA standards seem to imply that reading the text is required, but it is also important to understand students' ability to comprehend a text through any input mechanism. Additionally, the research is mixed as to whether allowing a read-aloud accommodation for a reading passage changes the construct and makes the items easier for all students. Approximately 28 states allow the read-aloud accommodation on the reading portion of their summative assessment for the small number of students who have no other way of accessing the passages.

Because of the focus on accountability at these grades and the possibility of sending the message to schools that it is no longer necessary to focus on print strategies, decoding, or fluency at these grades, the TAC is inclined to recommend not allowing the read-aloud accommodation on the state assessment for any student with an IEP. Only that small percentage of students for whom interventions are not successful should be given an exception as it will be the only way for them to access the content in the passage. However, IDOE will need to monitor this accommodation carefully to ensure it is not abused. Additionally, the TAC recommends measuring comprehension on local assessments that allow the read aloud accommodation to distinguish deficits in decoding from issues with comprehension for purposes of instructing all struggling readers. These recommendations are in line with the expectation that all students will need to be prepared to take college-ready assessments, which may not offer read-aloud accommodations on the reading portion of the assessment.

Finally, whenever a read-aloud accommodation is required on any test section, it will be important to move all schools to the more standardized text-to-speech technology for assessments (not instruction) for purposes of comparability. And, additional professional development should be provided to teachers of students with print or visual disabilities as well as to IEP teams to help them determine appropriate interventions and strategies for students with reading disabilities.

References

Abedi, J. (2012). Validity issues in designing accommodations. In: Fulcher, G. and Davidson, F. *The Routledge Handbook of Language Testing in a Nutshell*. Florence, KY: Routledge, Taylor & Francis Group

American Printing House for the Blind, Inc. (2016). 2016 Annual Report. Arlington, VA: Author. Retrieved from http://www.aph.org/annual-reports.

American Printing House for the Blind (2017) Annual Report 2017: Distribution of Eligible Students Based on the Federal Quota Census of January 4, 2016 (Fiscal Year 2016). Retrieved from http://www.aph.org/federal-quota/distribution-of-students-2017/.

Durrell, D. (1969). Listening comprehension versus reading comprehension. *Journal of Reading, 12*(6), 455–460.

Englert, C. S., & Thomas, C. C. (1987). Sensitivity to text structure in reading and writing: A comparison between learning disabled and non-learning disabled students. *Learning Disability Quarterly, 10*(2), 93–105.

Fletcher, J. M., Francis, D. J., O'Malley, K. Copeland, K., Mehta, P., Caldwell, C. J., Kalinowski, S., Young, V., & Vaughn, S. (2009). Effects of a bundled accommodations package on high-stakes testing for middle school students with reading disabilities. *Exceptional Children, 75*(4), 447-463.

Gersten, R., Fuchs, L., Williams, J. & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of the research. *Review of Educational Research, 71*(2), 279–320.

Hogan, T. P., Adlof, S.M. & Alonzo, C. (2014). On the importance of listening comprehension. *International Journal of Speech Language Pathology, 16*(3), pp. 199-207.

Hulme, C. & Snowling, M.J. (2016). Reading disorders and dyslexia. *Current Opinion in Pediatrics, 28*(6), 731–735.

Randall, J., & Engelhard, G. (2010). Performance of students with and without disabilities under modified conditions: Using resource guides and read-aloud test modifications on a high-stakes reading test. *The Journal of Special Education, 44*(2), 79-93.

Smarter Balanced Assessment Consortium. (2016). *Guidelines for choosing text-to-speech or read aloud for Smarter Balanced ELA summative and interim assessment reading passages for students with disabilities in grades 3-5*. Los Angeles, CA: Author. Retrieved from https://portal.smarterbalanced.org/library/en/guidelines-for-choosing-tts-or-read-aloud-in-grades-3-5.pdf.

Snow C. E. (2002). *Reading for understanding: Toward a research and development program in reading comprehension*. Arlington, VA: RAND. Retrieved from https://www.rand.org/content/dam/rand/pubs/monograph_reports/MR1465/MR1465.ch2.pdf.

Appendix A: Summary of State Polices for the Use of the Read-Aloud Accommodation on Reading Assessments in Grades 3–8

	Read-aloud* policy on reading assessments				
State	No read-aloud allowed	Read-aloud only for instructions	Read aloud for instructions and items but not passages	Read aloud for all parts of the assessment with IEP	Read aloud for passages only for a very small proportion (1–1.5%) of students with severe print or recent visual disability
Alabama	X				
Alaska			X		
Arizona	X				
Arkansas		X			
California			X		X
Colorado					X
Connecticut			X		X
Delaware			X		X
Florida			X		X
Georgia			X		X
Hawaii			X		X
Idaho			X		X
Illinois			X		X
Indiana		X			
Iowa		X		X**	
Kansas		X			X
Kentucky				X	
Louisiana					X
Maine	X				
Maryland				X	
Massachusetts					X
Michigan			X		X
Minnesota		X			
Mississippi	X				
Missouri			X		X
Montana			X		X
Nebraska			X		
Nevada			X		X
New Hampshire					X
New Jersey					X
New Mexico			X		X
New York				X	

Continued…

State	No read-aloud allowed	Read-aloud for all only for instructions	Read aloud for instructions and items but not passages	Read aloud for all parts of the assessment with IEP	Read aloud for passages only for a very small proportion of students (1–1.5%) with severe print or recent visual disability
North Carolina	X				
North Dakota			X		X
Ohio					X
Oklahoma					X
Oregon			X		X
Pennsylvania		X			
Rhode Island		X			X
South Carolina				X	
South Dakota			X		X
Tennessee				X	
Texas			X		
Utah			X		
Vermont			X	X**	
Virginia					X
Washington			X		X
West Virginia			X		
Wisconsin			X		X
Wyoming			X		X
TOTAL	**5**	**7**	**25**	**7**	**28**

*"Read aloud" includes human read aloud, screen readers, and text-to-speech software.

**Only for grades 6 +

Appendix B: Documentation from the Smarter Balanced Consortium of Possible Need for Text-to-Speech or Read-Aloud Accommodations for ELA Reading Passages

Student Name:_____

Teacher:_____

*Responses in **shaded boxes may** indicate a need for the text-to-speech or read aloud accommodation. A **preponderance of evidence** should exist rather than one or two marks in shaded boxes for the accommodation to be provided to a student in grades 3-5 for ELA reading passages.*

Question[a]	Yes	No	Comments
Is this student blind or does this student have a significant visual impairment?			
• If the student is blind or has a significant visual impairment, is the student learning to read braille?			
Does this student have a identified reading-based disability that affects the student's decoding, fluency, or comprehension skills?			Describe skills affected.
Have interventions been used to improve the student's decoding, fluency, or comprehension skills?			Describe approaches.
Does the student use text-to-speech or receive a read aloud accommodation during instruction?			
Does the student belong to Bookshare or a similar organization?			
Does the student regularly use assistive technology software or audio books?			
Does the student use text-to-speech or receive a read aloud accommodation during formative assessments or during other *Smarter Balanced* tests?			
Does someone (teacher, paraprofessional, another student, parent) regularly read aloud to the student in school?			
Student Input:			
Did the student indicate he or she reads to himself or herself when at home, and that it is because he or she has trouble reading?			
Does the student indicate that it is **easier** to understand a book when it is read to him or her through text-to-speech or by another person?			
Does the student indicate that given the choice, he or she would prefer to read tests himself or herself?			

[a] Some questions in the "questions" sections are not included in this table because they are not indicators of a possible need for the text-to-speech or read aloud accommodation. These include, for example, the question "Is the student an English language learner (ELL)?"