

Creating Accessible PARCC Reading Assessments: Separating the Constructs and Providing Text-to-Speech Accommodations for Students with Disabilities

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Successful individuals with disabilities exist in business, politics, and a variety of other careers (e.g., Reitz, 2011). In addition to achieving competency in critical knowledge and skills, they have learned ways to get around the barriers of their disabilities. They are successful because they have not had artificial barriers placed in the way of demonstrating the knowledge and skills that they do have. They have demonstrated that they are college and career ready even though they may lack some foundational skills.

Reading is an essential part of being college and career ready, yet what is meant by “reading” for those who are college and career ready is debated. This debate permeates what happens in instruction and how assessments are designed to measure students’ reading skills.

The purpose of this paper is to explore the creation of accessible reading assessments for the Partnership for Assessment of Readiness for College and Careers (PARCC), specifically with regard to separating the constructs that underlie the ability to read, and determining whether to allow text to speech or read-aloud accommodations on the reading tests for students with certain disabilities¹. Most states allow students with disabilities to have math, science, writing, and other subject tests read aloud as a standard accommodation without limitation. Currently, however, 16 percent of PARCC states allow the read aloud accommodation to be used on state reading tests with no conditions or consequences for scoring, reporting, and accountability; another 56 percent allow its use with conditions; and 20 percent of PARCC states prohibit its use. In states that either impose consequences or do not allow the read aloud on reading tests, scores may be reported as failing; may be invalidated and excluded from participation rates for school accountability; or students may be designated inappropriately for alternate assessments. PARCC states will need to reach agreement on a unified accommodations policy for emerging reading assessments, and states will be required to shift to the new policy. This paper provides recommendations and a pathway for resolution in this challenging policy area.

Although the English Language Arts standards for college and career include writing, speaking, and listening in addition to reading, the focus of this paper is on the reading construct. We explore the construct of reading and accessibility for students with disabilities by (a) clarifying the *Common Core State Standards* developed by the National Governors Association and the Council of Chief State School Officers in collaboration with states; (b) the characteristics of students with disabilities and barriers to demonstrating knowledge and skills, (c) relevant research findings, (d) other considerations (e.g., listening comprehension vs. reading comprehension), and (e) approaches to determining who has barriers that indicate a need for accommodations that provide access to text. This paper concludes by providing PARCC with several recommendations to consider for the text-to-speech or read-aloud accommodation.

¹ PARCC assessments are intended to meet the requirements of the Elementary and Secondary Education Act. If a state chooses to use the assessment for high stakes consequences for students (e.g., grade promotion, graduation requirement), the state would need to decide whether the use of these accommodations would affect the promotion or graduation determination.

The development of this paper was undertaken with consideration of the principles that guide PARCC's assessment development work:

1. Minimize/eliminate features of the assessment that are irrelevant to what is being measured and that measure the full range of complexity of the standards so that students can more accurately demonstrate their knowledge and skills.
2. Design each component of the assessment in a manner that allows ELs and students with disabilities to demonstrate what they know and can do.
3. Use Universal Design for accessible assessments throughout every stage and component of the assessment, including items/tasks, stimuli, passages, performance tasks, graphics and performance-based tasks.
4. Use technology for rendering all assessment components in as accessible a manner as possible. (PARCC ITN 2012-31, section 7.2)

There are several topics that are important for PARCC to address, but they are not the topic of this paper. They include, for example, whether to allow a scribe or speech-to-text for an assessment of writing, and whether to provide a calculator for an assessment of mathematics. They also include the very important topic of accessibility for English Learners (ELs). Future papers may address these topics and make recommendations to the PARCC consortium.

Common Core State Standards: Focus of PARCC Reading Assessments

In designing accessible reading assessments for the Partnership for Assessment of Readiness for College and Careers (PARCC) Consortium, it is important to understand what PARCC assessments will be designed to measure, and to review the existing literature, which includes current thinking on how best to ensure that potential barriers to student performance on the reading assessment do not unintentionally interfere with measuring what a student knows and can demonstrate. It is instructive to review not only the Common Core State Standards, but also the PARCC item development specifications and the PARCC Model Content Frameworks to contribute to an understanding of what the English Language Arts/Literacy (ELA/literacy) test (a test of reading, writing, language, and other constructs) will measure, and how constructs related to reading will be incorporated into the assessment.

PARCC has developed model content frameworks for English language arts/literacy to serve as a bridge between the Common Core State Standards and the PARCC ELA/Literacy assessments. The model content frameworks illustrate how the standards could be organized over the course of a school year for instruction, and how these standards will be used to inform the development of item specifications and test blueprints for the PARCC assessments in grades 3–8 and high school.

The *PARCC Model Content Frameworks for English Language Arts/Literacy in Grades 3–11* (November 2011) states that the PARCC Assessment System, generally, will be designed to measure the knowledge, skills, and understanding essential to achieving college and career readiness, and describes the following specific literacy skills and understandings in the Common Core State Standards that will be measured on the reading portion of the ELA/literacy assessment:

- **Reading complex texts**, which requires students to read and comprehend a range of grade-level complex texts, including texts in the disciplines of ELA, science, history/social studies, technical subjects, and the arts. Highlights include the importance of focusing on sustained analysis of complex text, and thoroughly and methodically examining its meaning. For example, depending on the text, students may be asked to closely read to determine the central idea, point of view, or the meaning of words and phrases as part of gathering and analyzing evidence drawn from a range of different text from across the disciplines. Reading complex text also encompasses the comparison and synthesis of ideas. Vocabulary, a critical component of reading comprehension, will be assessed primarily in the context of reading passages.
- **Language for reading, writing, and research**, which requires students to have a strong command of grammar and spoken and written academic English, including citing evidence, analyzing content, and applying grammar correctly, which can be integrated with standards in all disciplines. Emphasis is on the development of content knowledge through learning and using new vocabulary, engaging in focused formal and informal discussions, and reporting findings in multiple formats. As described in the standards, each of these skills is an essential element of reading (and writing about) texts.
- **Foundational reading skills** for grades 3–5, which require students to acquire and develop reading skills that include fluency and recognition of phonics and words. (PARCC will not explicitly measure foundational skills on the summative assessment, but unless students are accommodated appropriately, these skills would still be measured implicitly on the assessment.)

The *PARCC Item Development Invitation to Negotiate (ITN 2012-31)* describes the need to develop tests and items that address specific “assessment claims” regarding students’ demonstration of deep understanding of text, based on their performance of tasks on the PARCC ELA/Literacy assessment. Ultimately, a student’s performance of those tasks will determine the extent to which students are “on track” in their preparation for college and careers. Major assessment claims elaborate in detail on the need for PARCC assessments to “elicit sufficient evidence to yield scale scores for making longitudinal comparisons,” as shown below for the area of reading.

The summative PARCC assessment will determine how well students are able to (1) undertake close, analytic reading and the comparison and synthesis of ideas that are at the heart of comprehending complex literary works and informational texts; (2) write effectively when using and/or analyzing sources; (3) build and present knowledge through research; and (4) integrate, compare, and synthesize ideas.

Major Claim I: Reading Complex Text—*Students read and comprehend a range of sufficiently complex texts independently.*

Major Claim I addresses several key requirements of the Common Core State Standards for reading and the PARCC Model Content Frameworks for English Language Arts/Literacy in Grades 3–11.

On PARCC assessments, students will be required to demonstrate their ability to comprehend texts of steadily increasing complexity as they progress through school (Reading Standard 10), as well as the skill with which they are able to draw sufficient evidence from a range of complex

texts of different types and from a range of disciplines (e.g., history/social studies, science, and technical subjects) to support their analyses and conclusions (Reading Standard 1). In addition, students must demonstrate facility meeting the expectations articulated in Reading Standards 2-9, which ask students to apply Reading Standard 1 to specific tasks such as determining the central ideas, comparing and contrasting points of view, and determining the meaning of words and phrases.

Students will be required to show that they understand the central ideas and the key supporting details of a text, the meanings of individual words and sentences, the order in which sentences unfold, and the development of ideas over the course of the text. Close, analytic reading will require students to make observations about a text. . Students will also be asked to compare and synthesize ideas across texts, consider a wide range of textual evidence, and show that they are sensitive to inconsistencies, ambiguities, and poor reasoning in texts.

The assessment will also measure students' ability to apply vocabulary knowledge to assist them in comprehending what they have read. The CCSS and *Model Content Frameworks* focus especially on academic vocabulary. Reading Standard 4 and Language Standards 4-6 will be the basis of tasks and items evaluating this competency on the PARCC assessments. (*ITN 2012-31—PARCC Item Development, page 36-37*)

Major Claim II: Writing—Students write effectively when using and/or analyzing sources, *which requires students to read and comprehend a complex text* (authors' emphasis), draw evidence from it in support of logical conclusions, and present a clear and coherent analysis of those conclusions (through explanation or argument) in writing in order to inform/explain, convey an opinion, advance an argument, or meet a combination of these purposes.

Major Claim III (for grades 6–11) and Sub Claim III.1 (for grades 3–5): Research—*Students build and present knowledge through research and the integration, comparison, and synthesis of ideas.*

Students will demonstrate research capabilities as part of the PARCC summative assessment. In addition to Standards for writing, the assessment will require students to *integrate relevant, credible information from multiple print and media sources* (authors' emphasis) in response to a specific question or prompt, and produce a coherent account of, or to take and defend a position on, the subject under investigation. Students will evaluate and synthesize primary and secondary resources as they develop and defend their conclusions and claims. (*ITN 2012-31—PARCC Item Development, page 41*)

Diagnostic and mid-year assessments will be conducted and reviewed locally on an optional basis, and are expected to generate information that will inform curriculum, instruction, and professional development throughout the school year. PARCC will develop computer-based diagnostic assessments for reading, writing and mathematics. Local educators will be able to use these assessments anytime during the school year to diagnose areas of students' strengths and weaknesses (for example, decoding) and as a result, respond to students' needs with focused interventions. Speaking and listening will also be assessed annually in grades 3-11. Diagnostic assessments will provide continuous opportunities to measure individual student needs and make adjustments in instructional strategies as needed. Likewise, the mid-year assessment will provide additional information about students' performance during the year and an opportunity to

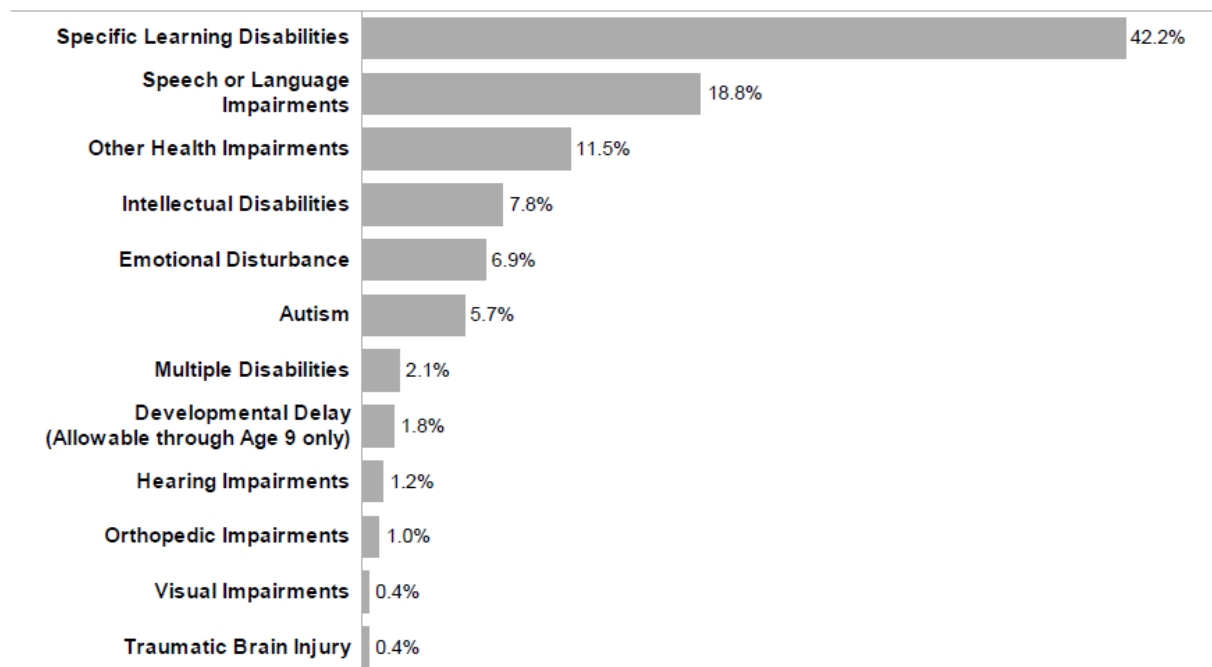
respond to the type of extended tasks that will appear in the performance-based summative assessment.

Summary. Constructs that are defined in clear and specific ways are needed for supporting teacher capacity to adjust teaching for individual student needs without losing the content or performance expectations. It is particularly important for those teachers who work with students with disabilities to understand the construct in order to know what are acceptable and unacceptable adjustments that can be made during instruction and assessment. Research on teacher use of accommodations and accommodations decision making by Individualized Education Program (IEP) teams, as well as other research on relating IEPs to standards (DeStefano, Shriner, & Lloyd, 2001; Ketterlin-Geller, Alonzo, Braun-Monegan, & Tindal, 2007; Ruble, McGrew, Dalrymple, & Jung, 2010; Shriner & DeStefano, 2003, 2007), suggests that teachers often have foundational misunderstandings of what the content and achievement standards mean. As a result, strategies to adjust instruction through accommodations often mean that students are denied access to the content; they are either over-accommodated or receive different content than intended by the standards.

Characteristics of Students with Disabilities and Barriers to Demonstrating Reading Knowledge and Skills

Most students with disabilities (at least 80% according to disability categorical descriptions – refer to Figure 1) are able to meet challenging grade level standards when given appropriate access to instruction, supports, accommodations, and assessments that allow them to demonstrate their knowledge and skills on the constructs being measured. These are students with learning disabilities, speech-language disabilities, emotional-behavioral disabilities, sensory disabilities, and other health impairments – students who do not have intellectual disabilities (sometimes called “cognitive disabilities”). Even for students with cognitive disabilities, one cannot predict which students will (or will not) achieve high standards when they are effectively taught (see Kaufman & McGrew, 2012; McGrew & Evans, 2004) and are provided appropriate accommodations and assessments that allow them to demonstrate their grade-level knowledge and skills.

Figure 1. Distribution of disability categories among students served under IDEA (Fall, 2009)



Source: Data Accountability Center. 2009 Part B Child Count, Tables 1-1 and 1-3 (Students ages 6-21, 50 States, DC, PR, BIE schools). Retrieved from www.ideadata.org/arc_toc11.asp#partbCC. Note: Students in the "Deaf-blindness" category accounted for only 0.02% of students served and are not displayed.

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One goal of an assessment of the Common Core State Standards that meets the PARCC principles for accessibility should be to ensure that nothing is included that would prevent a student with a disability from demonstrating his or her knowledge and skills simply because of disability characteristics. For example, students who are blind and use braille or assistive technology (such as text readers) to access written materials should be able to demonstrate their comprehension skills without having to decode printed text. This is an obvious example of a characteristic that may hinder a student from demonstrating his or her knowledge.

Characteristics associated with some disabilities can create barriers both to accessing the content and to demonstrating knowledge and skills on assessments. This is especially the case for reading assessments (Thurlow, Moen, Liu, Scullin, Hausmann, & Shyyan, 2009), with the result being that students are not able to demonstrate their knowledge and skills simply because the assessment itself has created a barrier to doing so.

Students who are blind or visually impaired generally need accommodations to access and interact with text. As reported by Jackson (2012), these students often are challenged by slow reading rates directly related to their sensory limitations that are “unrelated to shifts in teaching practices or opportunity to learn” (p. 1). He noted that with audio-supported reading, “the task of reading and comprehending text can occur with greater efficiency, thus opening up learning opportunities that will support students in maximizing their educational potential” (p. 1).

Basic print reading and reading comprehension are also the most common problems associated with students with learning disabilities (Gersten, Fuchs, Williams, & Baker, 2001). Eighty percent of students with learning disabilities are diagnosed because their reading skills lag behind, and 90% of students with learning disabilities identify reading as their primary disability (President’s Commission on Excellence in Special Education, 2002). The terms “reading-based

learning disabilities” and “print disabilities” have been used to describe those students with disabilities whose area of deficit is reading.

There are a number of points at which problems can occur in the process of reading comprehension. As noted by Thurlow, Moen, Lekwa, and Scullin (2010):

some students might have adequate skill in word-level decoding but perform poorly on a reading test due to deficits in prosody. Other students could have adequate prosody, but might perform poorly on a reading test due to deficits in decoding or word recognition.... Recognizing the diversity of students and the multifaceted nature of reading suggests that it is a challenge to accurately measure students’ reading comprehension. (p. 2)

Research Findings

Researchers have explored the issue of having text read to students for reading assessments. These studies included those that explored having a human reader and those that entailed the use of assistive technology such as text-to-speech software (i.e., screen reader). These studies have used different approaches to explore the appropriateness of using a read aloud accommodation for an assessment of reading comprehension, including factor analyses, differential item functioning, and differential boost studies.

Table 1 provides a brief summary of studies that were published in 2009 and 2010 (see Rogers, Thurlow, & Christian, 2012). Although research on accommodations historically shows contradictory results, and there are as many studies that show that the read aloud accommodation changes the construct as there are studies to the contrary, recent research on the read aloud accommodation is more consistent. This is due in part to the narrower focus on those students who need the accommodation. The findings of the 2009-2010 research indicate first, that the use of a read aloud accommodation does not produce invalid results on tests of reading comprehension; and second, that students with disabilities tend to benefit more than other students from the read aloud accommodation, thus meeting the criterion of *differential boost* used by researchers to indicate that the accommodation addresses the disability related needs of students with disabilities.

Table 1. Summaries of Studies on Read Aloud Accommodation in 2009-2010 (see Thurlow, Christensen, and Rogers, 2012)

Study Citation:	General Findings
Cook, L., Eignor, D., Steinberg, J., Sawaki, Y., & Cline, F. (2009). Using factor analysis to investigate the impact of accommodations on the scores of students with disabilities on a reading comprehension assessment. <i>Journal of Applied Testing Technology</i> , 10(2).	Cook et al. (2009) found that the singular reading construct measured by the subtest of comprehension on the Gates MacGinitie Reading Test (GMRT) was not changed when a read aloud accommodation was provided. This pattern was shown for 527 fourth-grade students with reading-based learning disabilities and 376 eighth-grade students with reading-based learning disabilities throughout 84 New Jersey public schools. The read-aloud accommodation was presented through an audio CD.
Cook, L., Eignor, D., Sawaki, Y., Steinberg, J., & Cline, F. (2010). Using factor analysis to investigate	Cook et al. (2010) found that the construct tested by a statewide English language arts (ELA) assessment was not altered whether the test was given without accommodations, or

<p>accommodations used by students with disabilities on an English-language arts assessment. <i>Applied Measurement in Education</i>, 23(2), 187-208.</p>	<p>with IEP-specified accommodations, or with the read aloud accommodation. The authors concluded that use of the read aloud accommodation by students with disabilities on the reading test did not change what the test was intended to measure. This pattern was shown for 1500 fourth-grade students with learning disabilities. The read aloud accommodation was provided through an audio recording.</p>
<p>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. <i>Exceptional Children</i>, 75(4), 447-463.</p>	<p>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. This pattern was shown for 359 seventh-graders in four suburban districts in southeast Texas, which included 168 “poor readers” with disabilities and 191 average readers not receiving special education.</p>
<p>Laitusis, C. C. (2010). Examining the impact of audio presentation on tests of reading comprehension. <i>Applied Measurement in Education</i>, 23(2), 153-167.</p>	<p>Laitusis (2010) found that the use of the read aloud accommodation on the Gates-MacGinitie Reading Tests (GMRT) subtest on comprehension resulted in a differential benefit for students with learning disabilities in comparison to students without disabilities. This pattern was shown for 1,181 fourth-graders and 847 eighth-graders from 84 public and private schools in New Jersey. This “boost” was determined to be larger in the lower grade than the higher grade. Additional analyses accounted for reading fluency and ceiling effects, excluding their potential impact on the data.</p>
<p>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. <i>The Journal of Special Education</i>, 44(2), 79-93.</p>	<p>Randall and Engelhard (2010) found that the use of a read aloud accommodation on the Georgia Criterion Reference Competency Tests (GA CRCT) in reading produced greater benefit for students with disabilities than students without disabilities. Specifically, this result occurred for students in the 3rd-4th grade-band, totaling 945 students in Georgia. This result – a “differential boost” – did not occur for students in the 7th-8th grade-band; instead, both students with disabilities and students without disabilities benefited about equally from using a read aloud accommodation.</p>
<p>Snyder, J. (2010). Audio adapted assessment data: Does the addition of audio to written items modify the item calibration? <i>Dissertation Abstracts International: Section A. Humanities and Social Sciences</i>, 71(05).</p>	<p>Snyder (2010) found that the reading construct measured by a group of items drawn from the Measures of Academic Progress (MAP) item bank (from the Northwest Evaluation Association) did not change between the first item calibration and a later calibration after adding audio presentation (read-aloud). Although some individual items became more difficult, others became easier, and some remained unchanged, there were no differences across the reading items as a whole. This pattern was shown for 624 students with IEPs in four schools in grades 3 through 6. Specific disabilities were not reported; this was a cross-section of naturally-occurring disabilities across the school populations of the four schools under study.</p>

Other Considerations – Reading versus Listening

It is sometimes argued that if “read aloud” or “text-to-speech” accommodations are provided to students, the assessment is then changed to a test of *listening*. Some argue against that position,

noting that assessments of listening skills are designed to measure different skills from those measured by assessments of reading comprehension. Listening comprehension has been identified as a critical skill that includes “receiving, attending to, interpreting, and responding to verbal messages” (U.S. Department of Labor, 1991, p. 14). Assessments of listening comprehension, such as the Woodcock-Johnston listening comprehension cluster, measure such skills as listening to a sequence of instructions and following them, and supplying missing words in orally presented sentences using syntactic and semantic clues. Reading researchers have debated for years whether listening comprehension and reading comprehension are the same or different, and have reached conflicting conclusions (e.g., Devine, 1968; Durrell, 1969; Guthrie & Tyler, 1976; Tuman, 1980). More recently, brain activity research has indicated that different parts of the brain were activated by identical sentences when the person was reading versus when the person was listening (Buchweitz, Mason, Tomitch, & Just, 2009; Michael, Keller, Carpenter, & Just, 2001)

Based on the Common Core State Standards, PARCC has identified listening comprehension standards. They include, for example at grade 3, “Ask and answer questions about information from a speaker, offering appropriate elaboration and detail” (SL.3.3), and at grade 8, “Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation” (SL.8.2). In high school, these standards include such skills as “Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used” (SL.11-12.3). Although these standards are clearly different from those for ELA/Literacy, there are some standards that do seem to overlap, such as SL 5.2, “Summarize a written text read aloud.” This type of overlap reflects the fact that both listening and reading are means for making meaning out of a message (Tuman, 1980).

Those who agree that providing the “read aloud” or “text-to-speech” accommodation changes the assessment to one of listening argue that this is the case only because the accommodation removes the decoding aspect of reading, but that it does not change what the test taker must do – the test taker engages in the same cognitive processes and thus the same level of comprehension is required (Spratley, no date).

Reading materials and assessments of reading (and other content) are increasingly electronic. At a recent hearing before the Senate Committee on Health, Education, Labor & Pensions, Eve Hill (Senior Counselor to the Assistant Attorney General for Civil Rights, Department of Justice) noted:

We are at a critical juncture for people with “print disabilities” – that is, people who experience barriers to accessing print in nonspecialized formats because of a visual, physical, perceptual, developmental, cognitive or learning disabilities...The current transition from printed materials to digital materials creates an incredible opportunity for people with print disabilities to finally use the same products as their peers who do not have disabilities. It promises a truly revolutionary kind of change for students with disabilities, allowing them to integrate fully with their non-disabled peers in terms of access to materials and class participation. (p. 2)

There is no doubt that PARCC similarly is at a critical juncture as it contemplates what reading means for students in its member states, and for the assessments that it will develop. Sifting through the constructs that it intends to assess is fraught with potential for missteps, particularly for ensuring that the assessment obtains valid measures of what students know and are able to do in reading.

Determining Who Has Barriers that Indicate a Need for Accommodations that Provide Access to Text

One of the challenges of allowing for text-to-speech and other access avenues for assessments of reading is that these accommodations (hereafter referred to as *reading access accommodations*²) sometimes are abused in that they are provided to every student who has poor reading skills—including those who can decode but who have poor comprehension skills, and those who simply have not been taught decoding skills. Several states have implemented policies to ensure that a reading access accommodation is available only to those students who need it (i.e., those with visual impairments and those whose mechanism for decoding is at issue, not for those whose comprehension itself is the deficit), while at the same time ensuring that the accommodation is not overused. The policies that states have employed include (a) carefully defining who qualifies for the accommodation, (b) defining which constructs will be assessed differently by grade level (especially foundational skills), (c) increasing and requiring professional development about the reading access accommodation, and (d) monitoring data on frequency of use of the accommodation and sharing this with each school and district.

Of critical importance in developing defensible reading access accommodation policies is the need to have procedures for ensuring that only those students who truly need the accommodations receive them. The procedures should be based on multiple data sources to support accurate decisions about which students should receive the reading access accommodation.

The collection of data to determine which students need reading access accommodations should be easier with computer-based reading assessments. It is possible to administer a “screening” assessment and to have the data collected as the student responds. The PARCC assessment system includes a diagnostic assessment that could also be used as a “screener” for determining which students may need reading access accommodations, if a decision is made to include decoding in the skills assessed by the PARCC diagnostic assessment. Only students who scored below a predetermined score on the “screener” would be eligible to receive the reading access accommodation, provided multiple data points contribute to making this determination. If the threshold score was set at about the level at which students are merely guessing at the answer to test questions, then this would assure that only students who are severely limited or prevented from decoding would receive the accommodation on the summative test. A pilot test of the use of the diagnostic assessment for identifying those students who show the greatest limits and need for the reading access accommodations would be worthwhile.

In addition to the benefits of having a systematic and objective way of identifying those students who need the accommodations for the reading assessment, pilot tests of the use of the diagnostic

² Reading access accommodations refer to a variety of approaches for providing access to text for students whose disabilities create barriers to demonstrating their reading knowledge and skills. For paper-pencil tests, the accommodation may be a human read aloud or a recorded voice presented on tape, MP3, DVD or other means. For computer-based tests, the accommodation may include text to speech technologies such as screen readers.

assessment would also allow for the testing of the reading access accommodation as a student-operated system – one where the student would determine exactly what would be read, whether a word, a sentence, or entire passages. In the end, a policy decision may be to allow students to determine the specific words, sentences, and excerpts to be read aloud for all content areas except reading, where entire passages would be read to them because of those students’ demonstrated need for the accommodation for *all* text, as indicated by their having met a specific test-based criterion.

Recommendations

This review of constructs, disability barriers, and approaches to identifying students who need reading access accommodations leads to several recommendations for the PARCC assessment system:

1. ***Allow access to text for students who are blind or visually impaired.*** Recognize that a small number of students who are blind or visually impaired depends on audio-supports for reading. These students may be unable to read braille or have only emerging braille-reading skills.
2. ***Allow access to text for the entire PARCC ELA Literacy test for a small number of students with significant decoding/fluency challenges.*** Recognize that some students will need to have a reading access accommodation that assists with decoding and fluency deficits, and agree that this small number of students will be identified, initially, using teacher observations and locally-developed and/or existing reading assessments, which will subsequently be corroborated with the PARCC diagnostic assessments or similar assessments for those states that do not use this assessment. States may want to stipulate that students must receive ongoing and intensive interventions to teach the student to decode as another condition for providing them with a reading access accommodation. Students who meet stringent eligibility criteria would receive a reading access accommodation for all parts of the ELA Literacy test, including reading passages, item stems, and response options, because their decoding abilities are virtually non-existent.
3. ***Allow only a small number of students to use the reading access accommodations.*** Historically, states have struggled with increasing numbers of students being given a read aloud accommodation (e.g., NCES, 2011; Friedebach, 2006). IEP teams making these decisions seem to err on the side of assigning accommodations to students when students’ actual needs are inconclusive or if the accommodation itself is perceived in some way to be beneficial to the student. PARCC should agree to set a cut score that identifies a small number, about 1-1.5%³ of the total assessed population, who are severely limited or prevented from decoding written text, depending on the grade levels of the students.
4. ***Determine whether the use of reading access accommodations should be limited to specific grades.*** For example, if it were to be determined that the constructs assessed in grades 3-5 included foundational skills such as decoding, then it would not be appropriate

³ This is the percentage of students in Massachusetts given reading access accommodations using the “severely limited or prevented” criteria after considerable efforts by the state over several years to retrain IEP teams on eligibility criteria.

to allow any students (except perhaps those with blindness and visual impairments) to use the reading access accommodation in those grades. However, an alternative approach is outlined below in recommendation 4.

5. ***Reporting ELA/Literacy test results for students who received the reading access accommodation could include separate subscores for “decoding and word recognition” and “comprehension.”*** The decoding subscore could be reported for informational purposes only; or scores from both portions could be combined. However, combining subscores should yield a composite score that does not prevent the student from achieving an overall score of proficient on the assessment, either by agreeing beforehand that the “decoding” subscore will not affect the overall score, or by weighting the two subscores accordingly.
6. ***Determine reporting policies.*** The use of reading access accommodations by a student should be reported on parent/guardian reports using a descriptive notation, so that parents are aware that the student’s score reflects the use of a reading access accommodation; and on school and district roster reports, so administrators are aware of which and how many students are using the accommodation.
7. ***Monitor the number of students using the reading access accommodations by state, district, and school.*** Document the number/percentage of students using the reading access accommodation by district and school to ensure that use is not related either to an instructional issue, misinterpreting the eligibility criteria, or inappropriate use of diagnostic tools, rather than to a disability barrier that meets an appropriate threshold.
8. ***Monitor the types of reading access accommodations students use.*** Carefully keep track of the use of reading access accommodations by students allowed to use them – do they have entire paragraphs read, or do they have only selected words read, etc.? These data will help address whether students who truly need these accommodations are the ones actually receiving them. They will also help in monitoring whether there are unreasonable increases or disparities among schools and districts in the numbers of students using these accommodations.

Need for Additional Research on Accessible Assessments

This paper describes a possible method for determining which students would likely benefit from the use of a reading access accommodation for the PARCC ELA/Literacy test and presents a justification to allow the accommodation on the test for students who meet specific criteria. The separation of the constructs of reading for assessments does not suggest that teaching students to read is to be ignored, even for those students determined to be “severely limited or prevented” from decoding written text.

These challenges apply as well to other content areas in which the intent is not to measure reading. For example, care must be taken not to confuse the eligibility criteria for receiving the read aloud accommodation on the reading assessment with those for other content area tests, such as mathematics. Similarly, if the intent of the writing assessment is not to assess reading decoding and fluency skills, it will be important to ensure that students have access to the accommodations and assistive technology that they use on a regular basis to access other content

areas. Finally, when assessing reading, it will be important to ensure that nothing is included that would preclude the use of a scribe, computer, or speech-to-text technology.

Given the computer-based reading assessments being developed by PARCC, there are additional issues of accessibility that go beyond the scope of this paper and merit additional research. This paper does not address, for example, the fundamental question of how to design accessible reading passages and assessments for a computer-based test administration; nor does it explore how technology might improve fundamental access to the curriculum and expand our understanding of universally designed assessments. Research is needed to explore which accommodations could be embedded in the technology platform itself for use by all students, and how new protocols could assist in gathering and reporting information on which students need to use various supports, and importantly, how they could benefit (Edyburn, in correspondence to authors).

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