REVISIONS TO THE PARCC MODEL CONTENT FRAMEWORKS FOR MATHEMATICS AND ELA/LITERACY BASED ON PUBLIC FEEDBACK

The PARCC Model Content Frameworks for Mathematics and ELA/Literacy have been developed through a state-led process in collaboration with members of the Common Core State Standards (CCSS) writing teams. The frameworks were reviewed by the public between August 3-31, 2011. Nearly 1,000 responses were collected, and respondents included K-12 educators, principals, superintendents, higher education faculty, school board members, parents and students. In fact, over 77 percent of respondents were teachers, administrators or curriculum directors. While some 200 responses were suggested line-item edits, the vast majority of responses fell into major themes. The following pages describe those themes by content area and how the frameworks have been revised to address them.

Major Feedback Themes and Actions Taken: Mathematics

Expand the Mathematics Model Content Frameworks to include kindergarten, first and second grade.

The single most requested change to the frameworks was to create grade-level analyses for grades K-2. As PARCC's primary responsibility is to address the tested grades 3-8 and high school, frameworks for those grades have been created first. However, PARCC also plans to create formative assessment tools for grades K-2. These tools are intended to be curriculum embedded and voluntary, and to support teaching and learning in the early grades by providing early and regular feedback to teachers on student progress.

The precursor to the formative assessment tools will be frameworks for those grades. While this version of the Model Content Frameworks does not include grades K-2, PARCC is planning to develop content frameworks for these grades beginning immediately, with a planned release in late 2012.

Shorten the document and simplify some of the technical terminology to ensure that the Model Content Frameworks reach the targeted audience (e.g., curriculum directors, administrators and teachers).

Based on feedback from the public review, many readers felt that the Model Content Frameworks for Mathematics were too long and, in some cases, unnecessarily technical and thus hard to read. In considering revisions to the frameworks based on this feedback, writing teams sought to find the right balance between using mathematically precise and descriptive language where necessary, while employing an easy-to-read writing style throughout the rest of the document.

To that end, the introduction has been shortened by over 30 percent. The repetition that existed between the Introduction and the Grade-Level Frameworks no longer exists. Lengthy explanations have been shortened where possible, and terminology has been revised with the intended audience in mind. Language in the document has been made simpler, more concise and more consistent (e.g., consistently using the words “problem”, “task” and “item” through the document). Where possible, jargon has been replaced by more straightforward language.

Revisit the priorities and explain the rationale behind the prioritization process.

In addition to calls for grade-level analyses in grades K-2, requests for additional information and revisions to the earlier “Priority Charts” were numerous. In the earlier version of the Model Content Frameworks, these charts were intended to provide educators with additional information about the

varying levels of emphasis described in CCSS. frameworks writers wrestled with how best to communicate these varying levels of emphasis prior to the public draft (August 3, 2011) and determined that a straightforward chart would be most efficient. Two unintended consequences of using that chart became evident as a result of the feedback. First, readers tended to misinterpret the chart, thinking that the CCSS cluster headings were either new standards or paraphrased standards. Second, readers found that the chart unintentionally communicated tacit "permission" to ignore some standards in each grade level. Neither conclusion was intended in the document: The frameworks used only language from the CCSS (cluster headings) and neither promoted nor supported not addressing any part of any grade's standards. Yet, the chart was communicating both. Therefore, it has been removed, and the method for "unwrapping" the existing emphases in the CCSS has been overhauled.

The current version of the frameworks describes a range of emphases and shows how the standards relate to each other, supporting both focus and coherence:

> *Not all of the content in a given grade is emphasized equally in the standards. The list of content standards for each grade is not a flat, one-dimensional checklist; this is by design. There are sometimes strong differences of emphasis even within a single domain. Some clusters require greater emphasis than the others based on the depth of the ideas, the time that they take to master and/or their importance to future mathematics or the demands of college and career readiness. In addition, an intense focus on the most critical material at each grade allows depth in learning, which is carried out through the Standards for Mathematical Practice. Without such focus, attention to the Practices would be difficult and unrealistic, as would best practices like formative assessment.*
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> *Therefore, to make relative emphases in the standards more transparent and useful, the Model Content Frameworks designate clusters as* ***Major****,* ***Additional*** *and* ***Supporting*** *for the grade in question. As discussed further in Appendix C, some clusters that are not major emphases in themselves are designed to support and strengthen areas of major emphasis, while other clusters that may not connect tightly or explicitly to the major work of the grade would fairly be called additional.*
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> *To say that some things have greater emphasis is not to say that anything in the standards can safely be neglected in instruction. Neglecting material will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade. All standards figure in a mathematical education and will therefore be eligible for inclusion on the PARCC assessment. The assessments will mirror the message that is communicated here: Major clusters will be a majority of the assessment, supporting clusters will be assessed through their success at supporting the major clusters, and additional clusters will be assessed as well. The assessments will strongly focus where the standards strongly focus.*
>
> *In addition to identifying the Major, Additional and Supporting clusters for each grade, suggestions are given in each grade for ways to connect the Supporting Clusters to the Major clusters of the grade. Thus, rather than suggesting even inadvertently that some material not be taught, there is direct advice for teaching it in ways that foster greater focus and coherence.*[1]

In short, the CCSS in Mathematics suggest a range of emphasis for each grade level, and this is illuminated by the frameworks. Neither the CCSS nor the frameworks advocate or support ignoring any

[1] Model Content Frameworks for Mathematics, pages 12-13.

standards. In fact, quite the opposite is communicated in this draft of the frameworks. To ignore any standards runs the risk of both undermining focus and coherence, and causing unproductive confusion in the minds of learners.

Include more specifics in the High School Mathematics Model Content Frameworks.

The overwhelming request from the public feedback was for more specificity about high school courses. Because the CCSS in Mathematics are not written as course standards, and because the Model Content Frameworks for Mathematics are derived directly from the CCSS, communicating course-level specificity in high school has been a challenge. To address the call for more specific guidance regarding both implementation and assessment, the frameworks reflect a balanced approach by providing guidance without restricting the marketplace of curricular approaches in high school.

The frameworks are informed by, but are not identical to, the model course pathways found in Appendix A of the CCSS. The reader will see that many of the major concepts described for the course analyses outlined in the frameworks are similar to those found in the pathways. The reader will also notice these two critical sentences found in the introduction to the high school CCSS analysis in the frameworks: "This version adds more detail about possible courses, including suggesting areas of emphasis in the course introductions, the 'Key Advances,' and 'Connections to Practices' sections for each course, but it does not specify full details of the courses. The Model Content Frameworks provide initial, high-level guidance."[2] As such, one should not read the high school course frameworks as actual courses to teach, but rather as guidance for the Mathematical Practices, concepts and skills that one may consider for instructional and assessment purposes.

In addition to providing guidance on "Key Advances" and "Connections to Practices", the Model Content Frameworks seek to offer more specificity for high school. This led to providing additional detail on an important problem for implementation efforts to solve: namely, how "cross-cutting standards" such as "seeing structure in expressions" could play out across two three-year course sequences. A discussion of this challenge can now be found on pages 42-47. As noted earlier, while these tables are intended to illuminate an interesting design feature of the CCSS, they are intended to suggest possibility and common sense rather than strict adherence to a particular approach.

Finally, as with the prioritization charts in grades K-8, the prioritization charts in high school have been removed. Unlike in grades K-8, however, they were replaced with a brief discussion on considerations for emphasis in high school (Appendix D) based on the notion of college and career readiness. As further details are determined for the PARCC high school assessments, additional specificity about the high school CCSS will be made available.

Consider reformatting and adding more visual elements, including charts and matrices, to break up the text-heavy document as well as provide quick reference points for educators, and consider embedding the CCSS in the document for easier navigation.

As noted above, many readers found the August draft difficult to manage, especially with respect to navigation and readability issues. To address this feedback, several revisions have been made to the frameworks, including the following two examples.

- First, a table of contents has been added, making the document easier to navigate. In addition, statements have been inserted into the document reminding readers to have with them a copy

[2] Ibid, p. 41.

of the CCSS. Inserting the actual text of the CCSS would make an already long document significantly longer.

- Second, while many different graphic elements were considered in the revision process by the frameworks writing team, new or additional graphics, tables and charts proved to be an ineffective way of communicating the information. Instead, the text has been revised with readability and navigation in mind. In addition, PARCC plans to release a web-based version of the Model Content Frameworks, complete with live hyperlinks and "roll-overs" or "pop-ups" of the CCSS, to make navigation of the document even easier.

Add more examples and non-examples at each grade level to assist curriculum directors and educators in implementation, clarify the depth of content instruction to meet the needs of the CCSS and explain how that relates to the complexity of concepts covered in the assessment.

Another significant theme from the feedback was the request for sample tasks and annotated student work to support instruction and illustrate complexity. Without question, both will go a long way in providing important details about expected performance levels and concrete examples of how the Standards for Mathematical Practice and Standards for Mathematical Content interact. Yet the frameworks writing team determined that the Model Content Frameworks for Mathematics are not the most appropriate document to communicate such information, as examples and tasks would inevitably cause the frameworks to be interpreted as an assessment framework, which it is not.

Rather, PARCC is currently in the process of developing an Assessment Item Development procurement document which will describe the consortium's theory of action for item development, including specifications. The Model Content Frameworks for Mathematics have heavily influenced discussions around item specifications, especially with respect to the critical role of the Standards for Mathematical Practice and the Standards for Mathematical Content in assessment. Additionally, examples will be made available as a result of the PARCC Item Prototyping work currently under way (http://tinyurl.com/PARCC-Tools-Resources). Together, these two products will be the appropriate documents to effectively address implementation at the task level.

Additional Changes

In addition to the major themes above, two additional areas for revisions have been made apparent in the feedback: fluency and the role of statistics and probability in the documents.

Fluency

Some reviewers expressed concern that the frameworks overemphasized fluency at the expense of conceptual understanding and the practices. This was certainly not the intent of the frameworks, as the CCSS clearly communicate the importance of balance among these three areas. As such, revisions have been made to the discussion of fluency in the "Introduction" to alleviate concerns that fluency might be taught in the absence of understanding. Language emphasizing the balance of application, conceptual understanding and fluency has been strengthened, knowing that each supports the other and that all are critical for student success. Statements about fluency have been made more precise, and the differences between fluencies and culminating standards have been better distinguished in the revisions.

Statistics and Probability

An example of the concern about priority noted above was a perceived (by some) relegation of statistics and probability. As with the question of priority, the revision of the instructional emphasis component

of the frameworks to include "Major," "Additional," and "Supporting" areas of emphasis is intended to alleviate the concern that statistics and probability might be skipped in grades 3-8 mathematics. Statistics and probability now has been presented in a way that shows its strong support to the major work of these grades. For example, in grade 7, the frameworks offer at least two ways that statistics and probability may be addressed directly and connected to other concepts in the year, indicating the absolute necessity of including these concepts during the course of the year's teaching and learning:

- Use random sampling to draw inferences about a population: The CCSS in this cluster represent opportunities to apply percentages and proportional reasoning. In order to make inferences about a population, one needs to apply such reasoning to the sample and the entire population.

- Investigate chance processes, and develop, use and evaluate probability models: Probability models draw on proportional reasoning and should be connected to the major work in those CCSS.

Major Feedback Themes and Actions Taken: ELA/Literacy

Expand the ELA/Literacy Model Content Frameworks to include grades K-2 and grade 12.

The single most requested change to the frameworks was to include grades K-2 and grade 12. As PARCC's primary responsibility is to address the tested grades of 3-8 and 9-11, frameworks for those grades have been created first. However, PARCC also plans to create formative assessment tools for grades K-2. These tools are intended to be curriculum-embedded and voluntary, and to support teaching and learning in the early grades by providing early and regular feedback to teachers on student progress.

The precursor to the formative assessment tools will be Model Content Frameworks for those grades. While this version of the Model Content Frameworks do not include grades K-2, PARCC is planning to develop content frameworks for these grades beginning immediately, with a planned release late 2012.

In addition, PARCC will facilitate the development of "bridge courses" that will serve students in the final years of high school in order to improve their college and career readiness.

Clarify terminology on the Model Content Framework Chart.

Reviewers noted that the Model Content Framework Chart seemed complicated and, at times, "overwhelming." For this reason, the chart for each grade level received careful attention during the revision process. State content experts, a lead writer of the CCSS and graphic artists were consulted in order to improve the Model Content Framework Chart. In addition, the placement of CCSS was reviewed and, in some cases, small adjustments have been made. Finally, visual relationships between chart elements were meticulously analyzed in order to improve the clarity of ideas expressed.

In the Model Content Framework Chart released for public feedback, the following phrase was used in the "Research Project" column: "Additional texts and writing for research." This phrase has been refined to reflect a more inclusive definition of *text* and to use language that aligns with the research process. As a result, the following phrase is now found in the "Research Project" column: "Integrate knowledge from sources when composing." Since students may not always produce a written response reflecting their research, the phrase "when composing" permits a variety of presentations, including the use of multimedia.

A few refinements to the placement of CCSS on the chart have also been made. For example, Speaking and Listening Standards 2-3 have been added to the "Analyze Content" domain found at the bottom of the Model Content Framework Chart. Additionally, Writing Standard 10 has been added to the "Narrative Writing" column to indicate the potential for its routine use to develop understanding and reflect on various aspects of a text.

Describe the relationship between close reading and other types of meaningful reading.

The public's insight regarding types of reading provided critical information for revising the ELA/Literacy Model Content Frameworks. Reviewers noted that excellent readers, at times, move beyond a single text when conducting meaningful analyses. Others commented on the limitations of solely emphasizing close, analytic reading. One reviewer worried that a focus on "close reading ... [would] not prepare students to read/write across the disciplines or to do research." Perhaps more than any other topic, the relationship between *close, analytic reading* and other types of reading aligned with college and career readiness received careful attention from the teams revising the ELA/Literacy Model Content Frameworks.

Based on such feedback regarding the competencies of great readers and the need to prepare students to conduct interdisciplinary (and cross-disciplinary) studies, a section has been added discussing the role of comparing and synthesizing ideas, especially when building and integrating knowledge. The CCSS clearly emphasize the close, analytic reading of texts, but there is also an emphasis on extending one's analysis beyond a single source in order to refine understandings of complex topics and themes across multiple texts. For example, the following language has been added to the frameworks:

> *Reading complex text also encompasses the productive comparison and synthesis of ideas. Readers use the meaning developed through the analysis of particular words, phrases, sentences and paragraphs to elaborate on the connections among ideas across multiple texts. Once each source is read and understood, students can give attention to integrating what they have recently read with readings they have previously encountered and knowledge they have previously acquired. By drawing on relevant prior knowledge, students can make comparisons between what they have just read to previous learning and assess how the text expands or challenges that knowledge. Comparison and synthesis of ideas across multiple texts allows students to thoroughly demonstrate reading comprehension as defined by the entirety of the reading standards. This type of reading is also essential when conducting research, where students build and present knowledge through integration, comparison and synthesis of ideas.*

Clarify the importance of "great books" and exceptional literature.

Reviewers expressed concerns that the frameworks diminished the place of literature in the English classroom. Indeed, one reader stated the case strongly: "The frameworks … ask schools to limit the teaching of imaginative texts." Comments like this led the writing teams to consider how best to clarify the importance of "great books" and exceptional literature.

It's true that the CCSS emphasize the need for increased focus on informational texts, but this does not diminish the value of studying exceptional works of literature. Indeed, p. 5 of the "Introduction" to the CCSS comments on the importance of studying literature in the ELA classroom while attending to the need for greater reading instruction using informational texts: "Because the ELA classroom must focus on literature (stories, drama and poetry) as well as literary nonfiction, a great deal of informational reading in grades 6-12 must take place in other classes." The ELA/Literacy Model Content Frameworks never intended to falsely signal that reading literature was no longer a critical part of preparing students

for college and careers. In order to address this concern, the following sentences have been added to the ELA/Literacy Model Content Frameworks:

> *Texts should be selected from among the best contemporary fiction and nonfiction and from a diverse range of authors and perspectives. These texts should also include classic works that have broad resonance and are alluded to and quoted often, such as foundational literary works, influential political documents, and seminal historical and scientific texts.*

Expand the definition of text.

Reviewers worried that the ELA/Literacy Model Content Frameworks overemphasized the study of traditional texts. In other words, some people felt the frameworks inadequately addressed the role of analyzing and producing multimedia when preparing students to be college and career ready. One reviewer observed that the module structure did "not provide adequate impetus for multiple readings from a wide range of sources including multimedia." In fact, the CCSS include references to multimedia, and the Model Content Frameworks do not intend to limit the definition of *text* to the written word.

When examining the CCSS, it is clear that there is an emphasis on the independent reading of complex text (the written word). However, students should receive practice "reading" and analyzing multimedia selections, too. In fact, Reading Literature Standard 7 encourages students to analyze multiple representations of a topic, theme and/or text (including multimedia representations). Also, beginning in grade 6, students are encouraged to use multimedia "when useful to aiding comprehension" when writing to inform or to explain.

In response to the aforementioned feedback, refinements have been made to the Model Content Frameworks. For example, the following sentence regarding research reflects improvements based on public feedback:

> *Through a progression of research tasks, students are called upon to present their findings in a variety of modes in informal and formal contexts appropriate to the grade level (e.g., through oral presentations, argumentative or explanatory compositions, or multimedia products).*

In addition, the following sentence regarding the selection of texts reflects an emphasis on multimedia "readings":

> *While short texts might include a poem, short story or magazine article, extended texts would include novels or book-length informational texts, a magazine with a series of related articles or stories, or even a website with multiple related pages of grade-level complex text to navigate.*

Clarify the role of narrative writing, including its relationship to writing informative/explanatory and argumentative pieces.

Reviewers posed questions regarding narrative writing. For example, one person asked how narrative writing was "connected" to other types of writing. In an effort to clarify the role of narrative writing, including its relationship to writing informative/explanatory and argumentative pieces, some revisions have been made to the ELA/Literacy Model Content Frameworks.

To be sure, the CCSS emphasize the need for increased focus on writing to inform/explain and to form an opinion/argue. However, narrative writing plays a critical role in earlier grades and often serves as a vehicle for conveying information or making advanced arguments in later grades. An excerpt from p. 23 of Appendix A of the CCSS provides additional clarity:

Narrative writing conveys experience, either real or imaginary, and uses time as its deep structure. It can be used for many purposes, such as to inform, instruct, persuade, or entertain. In English language arts, students produce narratives that take the form of creative fictional stories, memoirs, anecdotes, and autobiographies.

It is important to note, too, that "skilled writers many times use a blend of these three text types [narrative, informative/explanatory and argumentative] to accomplish their purposes." The revised language in the ELA/Literacy Model Content Frameworks more clearly reflect this idea while explicitly describing the relationship of narrative writing to other types of writing:

From the importance of organization to the nuance of word choice, shaping narratives that reflect real or imagined experiences or events reinforces what students are learning elsewhere. Narratives also provide an additional opportunity for students to reflect on and to emulate what they have read through imaginative writing. The close attention to detail required by students to craft an effective and coherent narrative calls upon a skill set similar to that being developed by other writing tasks. As students mature as writers, their skill with narrative techniques also advances their analytic and explanatory prose.

Provide references to the research supporting the CCSS and ELA/Literacy Model Content Frameworks.

Reviewers commented on the research supporting the CCSS and ELA/Literacy Model Content Frameworks. In order to more clearly connect research and the ideas found in the frameworks, a clear reference (including a hyperlink) to Appendix A of the CCSS has been included in the "Introduction" to the ELA/Literacy Model Content Frameworks. Appendix A includes "research supporting key elements of the standards," and therefore directly informed the development of the ELA/Literacy Model Content Frameworks.

Conclusion

The Model Content Frameworks are intended to be dynamic and responsive to evidence and ongoing input. As such, PARCC hopes they will be used by educators for the remainder of the 2011-2012 school year. In spring 2012, PARCC will again solicit feedback on the Model Content Frameworks, and a refined version will be issued to incorporate feedback as needed. In this way, the Model Content Frameworks can evolve to reflect the real-life experiences of educators and students.