
Date: August 3, 2015
To: Sarah Hall, Central Comprehensive Center
From: Laura Jimenez, Director, College and Career Readiness and Success Center
cc: Beth Ratway, American Institutes for Research

Technical Assistance Response

Review of Draft College and Career Ready Academic Standards in English Language Arts and Mathematics

Oklahoma is revising its college and career ready (CCR) academic standards in English language arts (ELA) and mathematics (math). The South Central Comprehensive Center (SC3) requested assistance from the College and Career Readiness and Success Center (CCRS Center) to conduct a peer review of the propose revised standards, based on the national perspective of college and career readiness and success practices in the field the CCRS Center has developed, prior to the finalization of the standards, to assess the extent to which the standards reflect the skills necessary for the 21st century workforce. The target audiences for this memo are the CCR standards writing team in Oklahoma and the SC3 staff supporting that team in the drafting. Two reviewers, one CCRS Center representative and one content expert in CCR standards at the American Institutes for Research (AIR) individually reviewed the document and provided feedback, which was combined into a set of suggestions based on five key areas of focus.

Two document sets are included in the review:

- The draft of the ELA Pre-Kindergarten to 12th grade standards
- The draft of the math Pre-Kindergarten to 7th grade standards, plus Pre-Algebra, Algebra I, Geometry and Algebra II standards, as well as a draft vertical alignment of these standards

The CCRS Center developed questions within each focus area for reviewers to answer as they conducted the review. These questions form the criteria for the review. These questions are below.

Content

Rigor:

- *Do the standards represent the content and cognitive demand necessary for students to succeed in credit-bearing college courses without remediation and in entry-level, quality high-growth jobs. (Based on Oklahoma’s College, Career and Citizen Ready Plan¹)*
- *Do the 9th-12th grade standards reflect Oklahoma’s high school graduation requirements in English/Language Arts and mathematics?*

Clarity:

- *Are the standards clearly written and presented in an easy-to-use format that is accessible to the general public?*

Measurability:

- *Is each standard measurable, observable, or verifiable in some way?*

Structure

Progression:

- *Do the standards establish connections among the major areas of study, especially those required for high school graduation, and do they show a meaningful progression of content across the grades?*
- *Are the progressions meaningful and appropriate across the grades or grade spans?*

Focus:

- *Is the amount of content manageable for a specific grade level?*
- *Are the content, concepts and skills based on the knowledge and skills essential for students to succeed in postsecondary education and the world of work? (based on the Employability Skills²)*

The effort to review CCR standards has been ongoing since their inception. AIR has conducted CCR standards review for Illinois, Minnesota and Iowa. To do so, AIR used a rubric³ developed by the organization Achieve⁴, which provides technical assistance to states on the design, development, adoption, implementation and communications of their CCR standards and assessment systems. When evaluating standards, Achieve has historically used a set of six criteria: rigor, coherence, focus, specificity, clarity/accessibility, and measurability. This review modifies the Achieve rubric in two ways, which are designed to provide a college and career ready perspective. The first is to include Oklahoma’s college and career readiness requirements, which are defined in this review as Oklahoma’s high school graduation requirements⁵ and its C³ Plan.

¹ Oklahoma established its College, Career and Citizen Ready (C³) plan, “which will ensure each student graduating with a diploma from an Oklahoma public school will be ready for college or career without the need for remediation and will be citizen ready, meaning they will know something about our government and the history of our nation” (State of Oklahoma, 2012).

² <http://cte.ed.gov/employabilityskills/>

³

[http://blogs.edweek.org/edweek/state_edwatch/Indiana%202014%20Mathematics%20and%20English%20Language%20Arts%20Standards%20Review-FINA%20%20%20\(2\).pdf](http://blogs.edweek.org/edweek/state_edwatch/Indiana%202014%20Mathematics%20and%20English%20Language%20Arts%20Standards%20Review-FINA%20%20%20(2).pdf)

⁴ <http://www.achieve.org/>

⁵ <http://ok.gov/sde/achieving-classroom-excellence-resources#hsgr>

Oklahoma’s C³ plan states that “[OK] will ensure each student graduating with a diploma from an Oklahoma public school will be ready for college or career without the need for remediation and will be citizen ready, meaning they will know something about our government and the history of our nation” (State of Oklahoma, 2012). To address the extent to which the standards reflected the C³ plan, reviewers modified the “progress” section of the rubric to include progression across the content areas for the academic subjects required for high school graduation, which include science and social science, among other areas. To address the diploma requirements, the CCRS Center modified the questions in the “rigor” portion of the rubric to mention the graduation requirements and the C³ plan. Accordingly, staff reviewed the graduation requirements for 2014-2015 as well as college admission requirements⁶.

The second modification to the review questions reflects a key area of practice in college and career readiness; the extent to which the standards address the skills needed to succeed in the world of work. CCRS Center staff conducted a side-by-side⁷ review Oklahoma’s CCR standards and the Employability Skills Framework⁸ developed by the U.S. Department of Education. The Employability Skills identify skills in 9 key areas that are necessary for students to master in the 21st century workforce: applied academics, critical thinking, interpersonal, personal, resource management, information use, communication, systems thinking, and technology use. The reviewers identified the extent to which these areas are addressed in the standard strands and the standards themselves.

Results are presented by criteria bulleted above. The report delivers concrete suggestions to support the Oklahoma CCR standards writing team with making final revisions to the standards and ensuring the standards reflect Oklahoma’s goal for college and career readiness and success.

Findings

This section provides a narrative overview of key findings, including areas of strengths and opportunities for improvement to ensure Oklahoma ELA and math standards provide students the opportunity to learn the knowledge, skills, and practices needed to be ready for success in college and careers.

Findings across the **ELA draft standards** can be summarized as follows:

(Note: when findings apply also to math standards, those standards are also mentioned here)

Content

▪ **Rigor**

(Bolded text is a quick summary of the bullet)

- Oklahoma’s standards include ELA (reading, writing, speaking, listening, etc.) for grades 9-12, which also **reflect the State’s graduation requirements** of 4.0

⁶ <http://www.ccrscenter.org/ccrs-landscape/state-profile/oklahoma>

⁷ <http://www.ccrscenter.org/technical-assistance-networks/professional-learning-modules/integrating-employability-skills>

⁸ <http://cte.ed.gov/employabilityskills/>

credits. As such, these standards align with college admissions requirements which require 4 years of English language arts.

- The ELA standards would benefit from a **unifying vision** that is described in an opening paragraph for all of the standards, then paragraphs introducing each grade's standards. For example, Oklahoma could describe when it believes pre-reading ends and reading begins, as well as when a focus on reading informational texts (in addition to literature) begins.
 - Oklahoma may also wish to provide a **unifying vision** for its CCR standards in math and ELA. For example, does Oklahoma believe that students who meet these standards will be ready for college or career without the need for remediation?
 - At the primary grades it may be beneficial to demonstrate connections between the ELA and math standards in a **companion guidance document**.
 - The high school ELA standards should be reviewed and adjusted to ensure the **levels of complexity are reaching the level of rigor** needed for college and career readiness, as there is not meaningful distinction between the standards, i.e., the 9th grade ELA standards read much the same as the 12th grade standards.
 - The high school **speaking and listening standard should be reviewed**. It is currently separated into reading and writing components but students are not asked to engage with text for the reading component and are not asked to write anything for the writing component.
- **Clarity**
- The ELA standards are written clearly and are **understandable** to lay public audiences, with a key exception described below. Some **key terms should be defined** and all **acronyms should be spelled out** when they are first used. For example, the term “comprehension” is defined, but terms like “kindergarten topics” is not defined. Also, the acronym “CVC” is not spelled out, so it is assumed that this means “consonant-vowel-consonant,” meaning words that follow the pattern of consonant-vowel-consonant and are the simplest words and is the starting point of many reading programs.
 - Clarity of the ELA standards would improve by being **organized by a numbering system** that applies consistently. Some standards are numbered, some lettered and some have no notation at all.
 - The comprehension standard across several grades indicates that students should “respond to text,” however, this is not further defined and without this information, it is **unclear how students are to respond** and how mastery of this standard would be measured.
 - It would be beneficial to have a **common structure** for all of the standards and to have an introductory section that defines the standards and what the statements are under the standards (i.e., grade level benchmarks)
 - Consider **beginning all standards with a verb** rather than “students will.” This would make the standards more clearly assessable.
 - Ensure that all standards are **standards statements**. For example under high school standard 2, writing, it states; “Historical and cultural perspectives may focus on works from American, British, and/or world literature.” This is a

statement rather than a standard. Oklahoma may wish to review the criteria for specificity of an academic standard from Achieve:

***Specificity**—Are the standards specific enough to convey the level of performance expected of students?*

Quality standards are precise and provide sufficient detail to convey the level of performance expected without being overly prescriptive. Standards that maintain a relatively consistent level of precision (“grain size”) are easier to understand and use. Those that are overly broad or vague leave too much open to interpretation, increasing the likelihood that students will be held to different levels of performance, while atomistic standards encourage a checklist approach to teaching and learning that undermines students’ overall understanding of the discipline. Also, standards that contain multiple expectations may be hard to translate into specific performances.

- It may be a good opportunity for the ELA and the math teams to **read one another’s standards and give feedback** – it may help in bringing some level of common structure to the documents which will be extremely beneficial for cohesion and consistency.
- **Measurability**
 - It would be beneficial to review standards to ensure there are not multiple standards within each. For example, high school standard 4 under reading states “Introduce precise claim(s) and distinguish them from alternate or opposing claims. Provide sufficient evidence to develop balanced arguments using credible sources. Use words, phrases, and clauses to connect claims, counterclaims, evidence, and commentary to create a cohesive argument. Include a concluding statement that follows logically from the information presented and supports the argument.” This statement includes multiple standards and would be difficult to assess. Consider **breaking this into separate standards**.
 - It would be beneficial to review the standards and discuss **how one would assess each of the standards**.

Structure

- **Progression**
 - Including reading and writing components under each standard is an efficient way to **demonstrate how each contributes** to the structure of the standard.
 - Connections to other major areas of study, including courses required for high school graduation could be increased. Currently, the draft ELA standards do not address the need for instruction in literacy skills, including reading, writing and research in all the content areas, especially those required for high school graduation. Oklahoma may wish to set clear expectations that instruction in **literacy must extend beyond the English classroom** in order for students to become fully competent readers, writers and thinkers. This type of information could be included in a supplemental guidance document.
 - The first time that cursive writing is mentioned is the 4th grade, so it is **not clear if this style of penmanship is addressed** in prior grades.

- There are **not meaningful distinctions** and progressions between the 9-12 ELA standards. There are very few differences, so it is not clear that there is a progression between these standards.
- A suggested reading list may be beneficial as an appendix or supplementary document to help ensure different levels of complexity in texts being offered to support the standards.
- **Focus**
 - The number of ELA standards outnumber the weeks of school in the Oklahoma school year. This would require teaching more than one standard per week for most grades. As such, Oklahoma may wish to include a **pacing guide** to suggest teachers what appropriate timing would be for the amount of time spent on the standards so that all students master the content.
 - Consider reviewing the Employability Skills Framework and conducting a **cross-walk** of those skills with the math and ELA standards. The Employability Skills are those that students are expected to master to meet the demands of the 21st century workforce. These skills all into three broad categories. Some of the ELA standards address communication, personal qualities and information use. However, **it does not appear that the full range of the Employability Skills are addressed by either the math or ELA standards.** A tool⁹ developed by the CCRS Center can support doing a cross-walk of Oklahoma’s standards with the Employability Skills.

⁹ <http://www.ccrscenter.org/technical-assistance-networks/professional-learning-modules/integrating-employability-skills>

Findings across the **Mathematics draft standards** can be summarized as follows:

(Note: when findings apply also to ELA standards, those standards are also mentioned here)

Content

▪ **Rigor**

- The math standards are **grounded by a vision** of math proficiency and literacy for all Oklahoma students.
- Oklahoma’s math standards include Algebra I, Geometry and Algebra II, which also **reflects the State’s graduation requirements**¹⁰ of 3.0 credits at the level of Algebra I or above. Additionally, these courses align with college admissions requirements, generally, though some top tier institutions of higher education may require or give preference to applicants who have taken four years of high school math at the level of Algebra I and above.
- Including the Pre-Algebra standards sets the stage for success for all students in Algebra I and II.
- Oklahoma may wish to offer clear guidance for what is regarded as appropriate grade level math problems by including in the standards **sample problems**. Though the standards document say these samples are forthcoming, without the sample problems or classroom activities, it is difficult to see all of the “Mathematical Actions and Processes” reflected in the math standards.
- Oklahoma may consider **writing out grade (or grade band specific) standards from the “Mathematical Actions and Practices.”** It is beneficial to have the same basic statements that span all grades but it is always beneficial to write them so teachers can implement them in their grade specific classrooms. This can be done as part of the document as already structured or could be done in a guidance document.
- Oklahoma may wish to conduct a cross-walk of the mathematical activities and processes with the standards and eventually, the sample problems and activities to **check for alignment**. (Consider including a visual representation of alignment between the activities and processes, standards and sample problems or activities)
- Consider reviewing the math strands to ensure that the **standards reflect the strands** in their entirety. For example, strand 1.GM.2 says “Apply mathematical actions and processes to selected and use units to describe length and time.” However, none of the standards address time).
- Several strands indicate that standards should **address real-world problems**, but the standards do not consistently address this.
- Oklahoma may wish to provide a **unifying vision** for its math standards. For example, does Oklahoma believe that students who meet these standards will be ready for college or career without the need for remediation?

¹⁰ http://ok.gov/sde/sites/ok.gov.sde/files/documents/files/SUCCESS_Parent_Checklist_2014-15_rev72015_0.pdf

- At the primary grades it may be beneficial to **demonstrate connections** between the ELA and Mathematics standards in a companion document.
- **Clarity**
 - The math standards are well organized by content strands and by a numbering system that aids in easy identification of specific standards. Clarity of the math strands could be improved by **describing what the strands emphasize** in the opening paragraph of the introductory section of each subject. See the introduction of the Algebra I standards for an example.
 - Clarity could be improved so that these standards are more accessible to the public in two ways. The first is by including **definitions of mathematical terms** (this would increase clarity for the lay person reading these standards). The second is by **simplifying the language** and ensuring proper grammar of the standards where possible. For example, standard 2.N.3.2 reads, “Construct equal sized portions through fair sharing including length and set area models for halves, thirds and fourths.” (This is a run-on sentence)
 - At times, the math standards include example problems within the standards themselves, rather than the sample problem or classroom activities section. Additionally, sometimes the standards include parenthetical descriptions of what is meant by the standard. Clarity would be improved if these were part of the problem/activity section rather than in the actual text of the standards. These could also be part of a guidance document.
 - Functions begin in the high school standards but there is **no clear connection to the content strands** identified and it is difficult to see the connections to earlier grades.
 - It may be a good opportunity for the ELA and the math standards drafting teams to **read one others’ standards and give feedback** – it may help in bringing some level of common structure to the standards documents.
- **Measurability**
 - Consider **clarifying which is the standard being measured**. For example, is it the bold standard or the grade level benchmark?

Structure

- **Progression**
 - The progression across the grades is **meaningful and reasonable**.
 - **Connections to other major areas of study**, including courses required for high school graduation could be **increased**. Currently, the draft math standards do not address the need for instruction in numeracy skills in all of the content areas required for high school graduation.
 - It would be beneficial to write out standards for “Mathematical Actions and Processes” in order to better understand progression.
 - Consider how revised math standards might make connections to how numeracy skills are used in other content areas and can be reinforced in those content areas. Oklahoma may wish to set clear expectations that instruction in **numeracy must extend beyond the math classroom** in order for students to become fully competent mathematicians. This could be done in a guidance document and would be helpful particularly for elementary grades.

- **Focus**

- There are 26 weeks of school in Oklahoma. On average, there are 26 math standards across Pre-K to Algebra II. The amount of standards would require teaching more than one standard per week for most grades. As such, Oklahoma may wish to include a **pacing guide** to suggest teachers what appropriate timing would be for the amount of time spent on the standards so that all students master the content.
- Consider reviewing the Employability Skills Framework and conducting a **cross-walk** of those skills with the math and ELA standards. The Employability Skills are those that students are expected to master to meet the demands of the 21st century workforce. These skills all into three broad categories. A strength of the math standards is that some of the Employability Skills, like communication and resource management, are covered explicitly by the math standards. The math standards could be enhanced and strengthened by covering additional Employability Skills. However, it does not appear that the full range of the Employability Skills are addressed by either the math or ELA standards. A tool¹¹ developed by the CCRS Center can support doing a cross-walk of Oklahoma's standards with the Employability Skills.

Conclusion

The information provided in this memo is intended to provide a review of Oklahoma's CCR academic content standards in ELA math from both technical and college and career readiness perspectives. Utilizing a modified ELA and math CCR standards review rubric, plus information developed by the CCRS Center in its Integrating Employability Skills: A Framework for All Educators professional learning module, the CCRS Center considered the extent to which the standards meet criteria set forth in this document and reflect the skills necessary for success in the 21st century workforce. The module includes a template cross-walk of the Employability skills, which Oklahoma's CCR standards drafting team can conduct in more depth. The CCRS Center could provide additional support in conducting that cross-walk. If you would like to discuss this guide further, please do not hesitate to contact the South Central Comprehensive Center.

Also, please let us know if you have any questions about the information provided in this memo.

Thanks,
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¹¹ <http://www.ccrscenter.org/technical-assistance-networks/professional-learning-modules/integrating-employability-skills>

Appendix A – Rubric to Review Academic Standards

	Criteria	Guiding Questions
CONTENT	Rigor	<p><i>Do the standards represent the content and cognitive demand necessary for students to succeed in credit-bearing college courses without remediation and in entry-level, quality high-growth jobs. (Based on OK definition of College and Career Ready and the requirement for all students to take Algebra I and English II)</i></p> <p><i>Do the (9-12) standards reflect the high school graduation requirements in English/Language Arts and Mathematics? (Based on Oklahoma’s high school graduation requirements)</i></p>
	Clarity	<p><i>Are the standards clearly written and presented in an easy-to-use format that is accessible to the general public?</i></p>
	Measurability	<p><i>Is each standard measurable, observable, or verifiable in some way?</i></p>
STRUCTURE	Progression	<p><i>Do the standards establish connections among the major areas of study, especially those required for high school graduation, and do they show a meaningful progression of content across the grades?</i></p>
		<p><i>Are the progressions meaningful and appropriate across the grades or grade spans?</i></p>
STRUCTURE	Focus	<p><i>Is the amount of content manageable for a specific grade level?</i></p>
		<p><i>Are the content, concepts and skills based on the knowledge and skills essential for students to succeed in postsecondary education and the world of work?(based on the Employability Skills)</i></p>