Standards Implementation in Ohio: Local Perspectives on Policy, Challenges, Resources, and Instruction

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The Center on Standards, Alignment, Instruction, and Learning (C-SAIL), funded from July 2015 through 2020 by the Institute of Education Sciences, examined how college- and career-readiness (CCR) standards were implemented, if they improved student learning, and what instructional tools measured and supported their implementation.

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Standards Implementation in Ohio: Local Perspectives on Policy, Challenges, Resources, and Instruction

Abstract
This report examines select questions from a spring 2016 survey administered to districts, principals, and teachers in the state of Ohio. The results presented focus on responses about the state's standards-based reform policies as described by the policy attributes (Porter, Floden, Freeman, Schmidt, & Schwille, 1988), the theoretical framework that undergirds C-SAIL's research. The framework suggests that five attributes are related to successful policy implementation, and that the stronger each attribute is, the better implementation will be.

Keywords
college and career-ready standards, implementation, curriculum, professional development, assessment, students with disabilities, english learners

Disciplines
Education | Educational Assessment, Evaluation, and Research

Comments
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STANDARDS IMPLEMENTATION IN OHIO:
Local Perspectives on Policy, Challenges, Resources, and Instruction

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MARCH 2017
About the Center on Standards, Alignment, Instruction, and Learning (C-SAIL)

The Center on Standards, Alignment, Instruction, and Learning (C-SAIL) examines how college- and career-ready standards are implemented, if they improve student learning, and what instructional tools measure and support their implementation. C-SAIL is led by Andy Porter, with a team of researchers from the University of Pennsylvania Graduate School of Education, University of Southern California Rossier School of Education, American Institutes for Research, and Vanderbilt Peabody College. The Center is funded through a grant from the Institute of Education Sciences (IES) of the U.S. Department of Education.

C-SAIL research is supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305C150007 to the University of Pennsylvania, Graduate School of Education. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.
The Center on Standards, Alignment, Instruction, and Learning (C-SAIL) examines how college- and career-readiness (CCR) standards are implemented, if they improve student learning, and what instructional tools measure and support their implementation. The Center studies elementary and high school math and English Language Arts (ELA) standards, and has a special focus on understanding implementation and effects of CCR standards for English Language Learners (ELLs) and students with disabilities (SWDs). Established in July 2015 and funded by the Institute of Education Sciences (IES) of the U.S. Department of Education, C-SAIL works closely with Kentucky, Massachusetts, Ohio, Texas, and California to explore their experiences with CCR standards-based reform.

Data

This analysis examines select questions from a spring 2016 survey administered to districts, principals, and teachers in the state of Ohio. We employed a stratified random sampling technique designed to ensure the sample was representative of districts in Ohio. Forty-two Ohio districts completed the survey. In every sampled elementary school, we sampled two fifth-grade math teachers, two fourth-grade ELA teachers, one SWD teacher, and one ELL teacher. In high schools, we sampled two ELA teachers and one teacher in each of the following specialties or subjects: SWD, ELL, algebra, algebra 2, and geometry. We chose the three math subjects because they are the most common college- and career-ready high school math courses, and so including them maximizes the number of high school target course responses we obtained. Further, we wanted to identify math classes enrolling students who were likely to be required to take the state mathematics assessment. We identified 49 districts. Of those, 42 agreed to participate and completed the survey. This is a 85.7% response rate. In total, 111 principals (or designated staff) out of the 185 eligible principals completed the principal survey in Ohio, for a response rate of 60%; and 417 out of 654 sampled teachers responded, for a response rate of 63.8%.

1 Our system of releasing waves of districts into the sample, based on stratified probability sampling on critical parameters such as size and poverty, resulted in our ultimate sample being representative of districts in the state of Ohio. For technical details on our sampling method, see our Sampling Plan.

2 There were 155 eligible districts released in Texas prior to the identification of 53 districts.
Content of the Report

The results presented here focus on responses about the state’s standards-based reform policies as described by policy attributes (Porter, Floden, Freeman, Schmidt, & Schwille, 1988), the theoretical framework that undergirds C-SAIL’s research. The framework posits that five attributes are related to successful policy implementation:

- **Specificity:** How extensive, detailed, and/or prescriptive a policy is. The explicitness of the goals, guidelines, and resources may help schools implement policies with a greater degree of fidelity. When a policy has specificity, the education system provides clear guidance and support for teachers as they work to align their instruction to content standards.

- **Authority:** How policies gain legitimacy and status through persuasion (e.g., rules or law, historical practice, or charismatic leaders). Policies have authority when state and district leaders, parents, community members, and other stakeholders devote time and resources to the reform initiative, which sends the clear signal that the policy is an institutional priority. Policies are also deemed authoritative when stakeholders participate in the decision-making processes, or when they demonstrate their investment in the reform. When a standard has authority, teachers take it seriously and see it as a meaningful guide for instruction.

- **Consistency:** The extent to which policies are aligned and how policies relate to and support each other. When the policy system is characterized by consistency, key policy instruments such as standards and assessments align with each other.

- **Power:** How policies are reinforced and enacted through systems of rewards and sanctions. Policies that have power include incentives for compliance consistent with policy goals.

- **Stability:** The extent to which policies change or remain constant over time. When policies and reports, including curriculum materials and professional development, are stable over time, it reinforces teachers’ willingness to develop their capacity for teaching to standards.

In this document, we present survey findings in three main sections—(1) the policy attributes; (2) challenges to implementing standards, resources respondents use to help them meet the challenges, and the resources that they report wanting more of in order to continue improving their implementation; and (3) the content of instruction.

These analyses help us answer the following C-SAIL implementation research questions: (1) To what extent is the policy system specific, consistent, authoritative, powerful, and stable, at the state, district, and school levels? (2) What is the nature and quality of support and guidance at the state, district, and school levels (e.g., challenges and resources)? and (3) How are teachers changing the content they cover, and how does this differ for ELA and math as well as for teachers of English Language Learners (ELLs) and of students with disabilities (SWDs), and for elementary and high school teachers?
To What Extent Is the Policy System Specific, Consistent, Authoritative, Powerful, and Stable, According to District Officials, Principals, and Teachers?

We measured specificity with a series of questions that asked about the nature of guidance respondents receive on the amount, timing, and sequence of the content in the standards. Consistency reflects responses about the quality of alignment of key elements of the policy system (e.g., standards and assessments). Authority reflects questions about respondents’ buy-in and support for the standards. Power is defined as the number and type of rewards and sanctions respondents indicated were part of their standards policy system. Stability measures respondents’ views of how long aspects of a standards policy system will remain in place.

As Figure 1 shows, responses for district officials, principals, and teachers all fall between 1.96 and 3.03 where 4 is the highest possible response. This reflects a moderate view of the strength of each of the attributes.

Figure 1. Policy Attributes as Reported by District Officials, Principals, and Teachers

Consistency: 1=not at all aligned; 2=somewhat aligned; 3=aligned; 4=strongly aligned

Authority: 1=disagree strongly; 2=disagree somewhat; 3=agree somewhat; 4=agree strongly; Respondents indicated their level of agreement with statements that reflected their level of support and buy-in for standards policies.

Power: 1=no rewards and sanctions; 2=some rewards and sanctions; 3=moderate rewards and sanctions; 4=strong rewards and sanctions

Stability: 1=1–2 years; 2=3 years; 3=4 years; 4=5+ years

Specificity: 1=disagree strongly; 2=disagree somewhat; 3=agree somewhat; 4=agree strongly; Respondents indicated their level of agreement with statements asking about the level and type of guidance and supports they received related to their understanding and implementation of standards.

Red circles indicate significance gaps between every respondent group. Blue circles indicate significance gaps between one group and the remaining two groups. Gray circles indicate significance gaps between only two groups (the highest and the lowest).
There are several statistically significant differences among respondent groups on how they rated the policy system on the five attributes. District officials thought standards policies were more specific than principals did; but district officials reported significantly less authority, power, and stability than did principals. Principals rated the policy system as significantly more specific, authoritative, and stable than did teachers. Teacher ratings of power were significantly higher than district officials’ ratings.

In Figure 2, we compare math, ELA, ELL, and SWD teacher responses about the policy attributes. Scores in the 2.17 to 2.44 range for consistency and authority suggest the policy system could be strengthened in these areas. Scores between 2.39 and 2.47 for specificity warrant more investigation, to learn whether enough specificity is being provided to guide teachers’ use of the standards. With power scores averaging at 2.5, it might be asked whether rewards and sanctions could be employed more often or more effectively. Stability ranges widely from 2.39 to SWD teachers to 3.09 for ELL teachers, though all groups except ELLs fall below 2.5 (between 3 and 4 years).

**Figure 2: Policy Attributes as Reported by Ohio Math, ELA, ELL, and SWD Teachers**

- **Consistency:** 1=not at all aligned; 2=somewhat aligned; 3=aligned; 4=strongly aligned
- **Authority:** 1=disagree strongly; 2=disagree somewhat; 3=agree somewhat; 4=agree strongly; Respondents indicated their level of agreement with statements that reflected their level of support and buy-in for standards policies.
- **Power:** 1=no rewards and sanctions; 2=some rewards and sanctions; 3=moderate rewards and sanctions; 4=strong rewards and sanctions
- **Stability:** 1=1–2 years; 2=3 years; 3=4 years; 4=5+ years
- **Specificity:** 1=disagree strongly; 2=disagree somewhat; 3=agree somewhat; 4=agree strongly; Respondents indicated their level of agreement with statements asking about the level and type of guidance and supports they received for related to their understanding and implementation of standards.

Green circles indicate significance gaps between three different groups. Blue circles indicate significance gaps between one group and two other groups.
Figure 2 also shows that math teachers rated the policy system as significantly more authoritative but less consistent than ELA teachers did. SWD teachers rated the system as significantly more consistent than did math teachers, but less authoritative than did ELA teachers. ELL teachers rated the Ohio standards as significantly more stable than did ELA and SWD teachers.

**What Is the Nature and Quality of Support and Guidance at the State, District, and School Levels (Challenges and Resources)?**

In this section we show the challenges to standards implementation that our respondents reported. We then provide data on the five most useful resources respondents reported employing to help them respond to Ohio’s standards. Finally, we indicate which resources respondents reported they would like to have more of in their efforts to respond to Ohio’s new college- and career-ready standards.

**CHALLENGES TO IMPLEMENTING THE NEW CCR STANDARDS**

The survey presented a list of common challenges to implementing standards-based reform, related to students and parents, school organization, and policy. Respondents were asked to indicate whether each was “not a challenge,” “a minor challenge,” “a moderate challenge,” or “a major challenge.” Here we report the percent of respondents who indicated each to be a moderate or major challenge. Some challenges are applicable across all three respondents groups, while others apply more to school- or district-level administrators. Figure 3 lists the challenges we asked teachers about in the order of magnitude by which teachers reported them as challenges. This figure also shows principal and district official responses where we asked them about the same challenges. Figure 4 shows the challenges listed only on the principal and/or district surveys.

The factors related to students and parents that districts and teachers most often indicate as moderate or major challenges are lack of support from parents, student absenteeism and tardiness, and a wide range of student abilities. Additionally, 57% of teachers felt that student preparation in prior grades was a problem, and 51% of district respondents chose “low student achievement” as a moderate or major barrier.

The organizational factors most salient were related to the lack of ample time for reform-related activities. Districts and teachers indicated most frequently that insufficient class time was a challenge. And teachers and principals both indicated that “lack of teacher planning time built into the school day” was a major or moderate challenge. Similarly, 56% of principals felt inadequate lead time to prepare before implementing a reform was a moderate or major challenge.

There are several notable statistically significant differences in responses among district officials, principals, and teachers, which may reflect the salience of particular issues at different levels of the education system. Forty-one percent (41%) of principals compared to only 21% and 18%, respectively, of teachers and district officials, said that inadequate instructional resources were a moderate or major barrier. Another contrast is that 27% of principals noted teacher turnover
as a challenge compared to only 5% of district officials. Principals were significantly more likely to say that lack of guidance for teaching the standards to SWDs and ELLs was a challenge, compared to teachers (48% of principals compared to 16% for teachers; and 34% for principals compared to 11% for teachers, respectively).

**Figure 3. Challenges to Implementing Standards as Reported by Teachers, Principals, and District Officials**

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Teachers (%)</th>
<th>Principals (%)</th>
<th>District Officials (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wide range of student abilities</td>
<td>41</td>
<td>30</td>
<td>37</td>
</tr>
<tr>
<td>Lack of support from parents</td>
<td>27</td>
<td>31</td>
<td>26</td>
</tr>
<tr>
<td>Inadequate student preparation in prior grades</td>
<td>33</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>Insufficient class time</td>
<td>28</td>
<td>26</td>
<td>42</td>
</tr>
<tr>
<td>Student absenteeism &amp; tardiness</td>
<td>31</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Lack of teacher planning time built into the school day</td>
<td>26</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Large class size</td>
<td>20</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>Lack of school resources to provide extra help for students</td>
<td>21</td>
<td>17</td>
<td>31</td>
</tr>
<tr>
<td>Inadequate instructional resources</td>
<td>15</td>
<td>6</td>
<td>16</td>
</tr>
<tr>
<td>Lack of guidance for teaching grade-level standards to students with disabilities</td>
<td>10</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Principal turnover</td>
<td>10</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Lack of guidance for teaching grade-level standards for English Language Learners</td>
<td>10</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Teacher turnover</td>
<td>23</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: Overall teacher response varied from 405–407. A total of 70 SWD and 18 ELL teachers responded. 108 to 109 principals responded and 40-42 district officials responded.
As shown in Figure 4, our district and principal respondents reported several challenges related to the nature of standards and assessment policy. Fifty-two percent (52%) of district respondents felt the “level of difficulty of the current standards” were a moderate challenge to implementing them, 81% indicated that conflicting state initiatives were a challenge, and 45% indicated that the amount of time used for additional district tests was a challenge to implementing standards.

Figure 4. Challenges to Implementing Standards as Reported by Principals and District Officials

<table>
<thead>
<tr>
<th>PRINCIPALS</th>
<th>DISTRICT OFFICIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>Inadequate lead time to prepare before implementing reform</td>
<td>37</td>
</tr>
<tr>
<td>Lack of high quality professional development opportunities for principals</td>
<td>21</td>
</tr>
<tr>
<td>Lack of high quality professional development opportunities for teachers</td>
<td>29</td>
</tr>
<tr>
<td>Frequent changes in district policy and priorities</td>
<td>25</td>
</tr>
<tr>
<td>Frequent changes in district leadership (e.g. the superintendent)</td>
<td>18</td>
</tr>
<tr>
<td>Conflicting state initiatives</td>
<td></td>
</tr>
<tr>
<td>Level of difficulty of the current standards</td>
<td></td>
</tr>
<tr>
<td>Low student achievement</td>
<td></td>
</tr>
<tr>
<td>Amount of time used for additional district-administered tests</td>
<td></td>
</tr>
<tr>
<td>Insufficient understanding by teachers</td>
<td></td>
</tr>
<tr>
<td>Insufficient understanding by principals</td>
<td></td>
</tr>
<tr>
<td>Lack of high quality teaching</td>
<td></td>
</tr>
<tr>
<td>Conflicting district initiatives</td>
<td></td>
</tr>
</tbody>
</table>
Useful Resources

We provided a list of common resources used to guide and support standards implementation, and asked respondents to indicate whether they had access to the support, and whether they found it useful. Here we highlight the top five resources that our respondents indicated were provided to them and that they found useful for implementing standards. (Note: principals were asked separately about aligned resources for ELA and math, and we merged their responses across subjects, which is why only three resources are listed for principals; aligned curricula and assessments reflect responses pertaining to both ELA and math.) As Figure 5 shows, all three sets of respondents reported that curriculum aligned to CCR standards, and formative or diagnostic assessments aligned to CCR standards were rated in the top five most useful resources. Teachers and principals both named aligned textbooks in their top five useful resources. Teachers and districts included professional development related to CCR standards. Teachers indicated that digital tools, such as online textbooks, webinars, videos, online communities, and applications were helpful resources that they used. Districts identified information about how to identify and implement effective curricula or instructional strategies and information about how CCR changes what is expected of teachers’ instructional strategies.

Figure 5. Top 5 Useful Resources for Implementing Standards, as Reported by Teachers, Principals, and District Officials.

Note: On the survey we asked math teachers about math textbooks and curriculum, and ELA teachers about ELA-specific resources. On the principal survey we asked about math and ELA separately. In the chart, we combine responses across subjects (e.g., the top five resources named by principals was aligned math textbooks, aligned ELA textbooks, aligned math curriculum, aligned ELA curriculum, and aligned assessments.)
Resources Desired by District Officials, Principals, and Teachers for Implementing the New CCR Standards

The C-SAIL survey asked respondents to indicate which resources they wanted more of to improve their implementation of standards. Respondents indicated whether they wanted “less,” “the same,” or “more” of each resource. Figure 6 shows that most respondents want more of almost every resource listed on the survey. The exception is that only 37% to 44% of respondents indicated they would like more textbooks aligned to CCR standards, but even this is more than a third of the sample. These results suggest that district officials, principals, and teachers alike desire more resources that offer them guidance on implementing the new standards—resources in the form of aligned curriculum, diagnostic assessments, digital tools, information about how CCR changes what students are to know and what teachers are to teach, and PD for principals and teachers.

While the percentages of respondents who want more of these resources are generally high, it stands out that 82% of district officials said they want more information about how to implement strategies to address instructional needs of students with individualized education programs (IEPs). And nearly the entire sample, 92%, indicated they would like more information about how CCR standards change what is expected of teachers’ instructional practice.

In terms of differences among respondents, districts reported wanting significantly more aligned formative and diagnostic tests than either principals or teachers (78% compared to 57% and 56%, respectively). Districts reported wanting more information on how CCR standards change what students are expected to learn (74% compared to 51% for principals and 49% for teachers). And districts (92%) were significantly more likely to report wanting information on how CCR standards change what is expected of teachers’ instructional practice, compared to principals (60%) and teachers (51%).

How Are Teachers Changing the Content They Cover, and How Does This Differ for ELA and Math, For Teachers of English Language Learners (ELLs) and Students with Disabilities (SWDs), and for Elementary and High School Teachers?

Our survey items on self-reported instruction asked a series of questions about the teacher’s amount of coverage of different English and math content, with content defined as the intersection of topic and cognitive demand (e.g., perform measurement conversions, where “perform” is the cognitive demand and “measurement conversions” is the topic). As a baseline measure, we asked teachers to report the extent to which they covered particular content in their math and ELA classes.

C-SAIL content experts created the list of content items based on an analysis of each state’s standards, to identify a sample of content areas that the new standards emphasized, and those that were de-emphasized (see Appendix for the exact questions). The survey questions did not
## Figure 6. Desired Resources as Reported by District Officials, Principals, and Teachers

<table>
<thead>
<tr>
<th>Resource Description</th>
<th>Teachers</th>
<th>Principals</th>
<th>District Officials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum resources aligned to CCR</td>
<td>68</td>
<td>60</td>
<td>79</td>
</tr>
<tr>
<td>Digital tools (e.g., online textbooks, webinars, videos, online communities, applications)</td>
<td>61</td>
<td>62</td>
<td>72</td>
</tr>
<tr>
<td>PD for teachers on CCR</td>
<td>58</td>
<td></td>
<td>63</td>
</tr>
<tr>
<td>Formative or diagnostic assessments aligned to CCR</td>
<td>56</td>
<td>57</td>
<td>78</td>
</tr>
<tr>
<td>Information about how CCR change what is expected of teachers’ instructional practice</td>
<td>51</td>
<td>60</td>
<td>92</td>
</tr>
<tr>
<td>Information about how CCR change what students are expected to learn</td>
<td>49</td>
<td>51</td>
<td>74</td>
</tr>
<tr>
<td>Textbooks aligned to CCR</td>
<td>44</td>
<td>37</td>
<td>39</td>
</tr>
<tr>
<td>PD for principals on CCR</td>
<td></td>
<td>62</td>
<td>64</td>
</tr>
<tr>
<td>Clarification on how instruction is expected to shift in order to align to CCR</td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>Information about how to identify and implement effective curricula or instructional strategies</td>
<td></td>
<td></td>
<td>77</td>
</tr>
<tr>
<td>Information about how to implement strategies to address the instructional needs of English language learners</td>
<td></td>
<td></td>
<td>58</td>
</tr>
<tr>
<td>Information about how to implement strategies to address the instructional needs of students with individualized education programs (IEPs)</td>
<td></td>
<td></td>
<td>82</td>
</tr>
</tbody>
</table>

Note: Resources are listed in order of magnitude as reported by teachers. 405-407 teachers responded, 108-109 principals responded, and 40-42 district officials responded.
indicate which items were emphasized or de-emphasized in the standards. Further, to reduce social desirability responses all items on the survey were chosen by C-SAIL content experts to include only appropriate content that appeared in the standards.

Responses range from 2.51 to 3.76, where 2=minor coverage, 3=moderate coverage, and 4=major coverage.

**Within-Teacher Analysis.** Figure 7 shows the results of the content of instruction questions across elementary and high school math and ELA. Our analysis of ELA elementary school teacher survey responses indicates that general education and SWD teachers covered significantly more de-emphasized than emphasized content. The difference in ELL teachers’ coverage of emphasized and de-emphasized content is not significant. For high school ELA, the opposite is true—ELA general education and SWD teachers report covering significantly more emphasized than de-emphasized ELA content. Again, ELL teachers’ differences in coverage of emphasized and de-emphasized content are not significant.

For elementary school math, the trends are different. Elementary school general education math teachers and SWD math teachers report covering significantly more emphasized than de-emphasized content; the sample size for ELL teachers is too small to be included in the analysis. In high school math, general education teachers report covering more de-emphasized content than emphasized content. There are no significant differences in coverage of emphasized vs. de-emphasized content by SWD teachers, and the number of ELL teachers is too small to consider in this analysis.

**Across-Teacher Analysis.** In elementary school ELA, general education teachers cover significantly more emphasized content than do elementary ELA teachers of SWDs. The ELL sample is too small for this analysis. For de-emphasized content, none of the differences between groups are statistically significant.

In high school ELA, there are no significant differences between teachers in either their coverage of emphasized content or coverage of de-emphasized content.

In elementary school math, general education math teachers cover both emphasized and de-emphasized content significantly more than elementary school math teachers of SWDs. In high school math, there are no significant differences between teachers in their coverage of emphasized or de-emphasized content.

**Across-Subject Analysis.** In elementary school, there are no significant differences in coverage of emphasized content between math and ELA. However, elementary general education ELA teachers cover significantly more de-emphasized content than elementary general education math teachers. And elementary ELA teachers of SWDs cover significantly more de-emphasized content than do elementary math teachers of SWDs.

In high school, general education ELA teachers cover more emphasized content than general education math teachers, and high school ELA teachers of SWDs cover significantly more emphasized content than do high school math teachers of SWDs. There are no significant differences across subjects in high school for coverage of de-emphasized content.
Figure 7. Teachers’ Self-Reported Content Coverage in ELA and Math

<table>
<thead>
<tr>
<th></th>
<th>ELA TEACHERS</th>
<th>MATH TEACHERS</th>
<th>SWD TEACHERS</th>
<th>ELL TEACHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA, elementary school</td>
<td>3.41</td>
<td>3.04</td>
<td>3.71</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.70</td>
<td>3.55</td>
<td>3.76</td>
<td></td>
</tr>
<tr>
<td>ELA, high school</td>
<td>3.43</td>
<td>3.34</td>
<td>3.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.09</td>
<td>3.03</td>
<td>3.37</td>
<td></td>
</tr>
<tr>
<td>Math, elementary school</td>
<td></td>
<td>3.37</td>
<td>2.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.57</td>
<td>2.08</td>
<td></td>
</tr>
<tr>
<td>Math, high school</td>
<td></td>
<td>3.39</td>
<td>2.93</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.39</td>
<td>3.15</td>
<td></td>
</tr>
</tbody>
</table>

Note: The survey question did not indicate which items were emphasized or de-emphasized in the standards. Further, to reduce social desirability responses, items on the survey were chosen by C-SAIL content experts to include only appropriate content that appeared in the standards. In ELA at the elementary level, 62 general education teachers, 19 SWD teachers, and 4 ELL teachers responded to the survey. In ELA at the high school level, 94 general education teachers, 20 SWD teachers, and 13 ELL teachers responded. In math at the elementary level, 69 general education teachers and 10 SWD teachers. In math at the high school level, 81 general education teachers and 32 SWD teachers responded. Four exclusively elementary math ELL teachers answered the survey but were excluded from the analysis because of the insufficient sample size.

Summary

RQ1: To what extent is the policy system specific, consistent, authoritative, powerful, and stable, at the state, district, and school levels?

There is clearly room for increasing the levels of consistency, authority, and stability. For specificity and power, the interpretation is more complicated, as a balanced and effective policy system may target moderate levels of specificity, to allow for more autonomy and decision making at local levels. Similarly, states may try to balance power (rewards and sanctions) with other mechanisms for compliance, such as authority.

Statistically significant differences in how district officials, principals, and teachers view the policy system provide leverage points to discover where attributes are truly different by design (e.g., guidance to principals may be more specific than guidance to teachers), and where communication about policies could be improved (e.g., district rewards for teachers should be known and reported similarly across district and teachers).
**RQ2: What is the nature and quality of support and guidance at the state, district, and school levels (e.g., challenges and resources)?**

The three respondent groups identified key challenges to implementing standards. These data can be used to target support and guidance. For example, “students with a wide range of abilities” was cited frequently as a challenge. Districts might focus principal and teacher PD on strategies for instruction in classrooms with diverse students, and additionally explore alternative classroom organization. Similarly, some of the challenges identify potential leverage points for intervention, such as providing guidance to help navigate multiple state initiatives, or providing more information on how to address the standards with SWDs.

Notable is that all three respondent groups found aligned curricula and assessments as the most useful resources for implementing the standards. Further, while respondents clearly indicated they found helpful and were using several key resources—aligned curricula, diagnostic assessments, textbooks, online tools, PD on the standards, and information about how to change instruction—these were the same resources they indicated that they wanted to have more of in order to improve their implementation. This indicates that the resources currently provided are of considerable value to educators, so much so that educators believe they would benefit from even more of these types of supports.

**How are teachers changing the content they cover, and how does this differ for ELA and math, for teachers of English Language Learners (ELLs) and students with disabilities (SWDs), and for elementary and high school teachers?**

Some significant differences average .5 points on a 1 to 4 scale, and other differences reflect a range from “minor” coverage to approaching “major” coverage, both of which suggest the differences are educationally meaningful.

We found that for elementary school ELA, both regular and SWD teachers cover significantly more of the content *de-emphasized* in the new standards, compared to the content *emphasized* in the new standards. If teachers’ instruction were well aligned to the new standards, we would expect the opposite of this to be true—teachers would be covering more of the emphasized content.

We also investigated differences across ELA, math, and elementary and high school. We found that several types of teachers—ELA elementary general education and SWD teachers, and high school math—report spending more time on *de-emphasized* than *emphasized* content, while others—ELA high school general education and SWD teachers, and elementary math and SWD math teachers—report covering significantly more *emphasized* than *de-emphasized* content.

These results warrant further investigation, to explore why certain groups of teachers seem to be more responsive to the new standards than others.

**NEXT STEPS**

This report of selected items from the C-SAIL survey offers insights into how respondents view their policy environment, the challenges they face, and the resources that help them address these challenges. They also set a baseline for investigating progress toward using the standards in the classroom. Later survey analyses will analyze how the policy attributes, resources, challenges, and instruction relate to student learning.
References

Appendix

The following appendix details the survey questions applying to each scale in this report.

CONSISTENCY

District Survey Question 26
(1—not at all aligned, 2—somewhat aligned, 3—aligned, 4—strongly aligned)

Please indicate your opinion on the degree to which the following are aligned to the CCR standards:

a. The state test
b. District-mandated summative assessments
c. Formative or diagnostic assessments selected or created by schools
d. Formative or diagnostic assessments used district-wide
e. Mathematics textbooks used in your school or district
f. ELA textbooks used in your school or district
g. Mathematics curriculum selected or developed by your district
h. ELA curriculum selected or developed by your district

Principal Survey Questions 20 and 21
(1—not at all aligned, 2—somewhat aligned, 3—aligned, 4—strongly aligned)

Question 20

Please indicate your opinion on the degree to which the following are aligned to CCR standards for ELA:

a. The ELA section of the state test
b. District-mandated summative assessments
c. Formative or diagnostic assessments selected or created by your school
d. Formative or diagnostic assessments used district-wide
e. English/language arts textbooks used in your school
f. English/language arts curriculum selected or developed by your district
g. Professional development activities that you have participated in this year
h. The feedback I provide to teachers from their classroom observations

Question 21

Please indicate your opinion on the degree to which the following are aligned to CCR standards for mathematics:

a. The math section of the state test
b. District-mandated summative assessments
c. Formative or diagnostic assessments selected or created by your school
Teacher Survey Question 106

(1—not at all aligned, 2—somewhat aligned, 3—aligned, 4—strongly aligned)

Please indicate your opinion on the degree to which the following were aligned to the CCR standards for (ELA or math):

a. The (ELA or math) sections of the test
b. District-mandated summative assessments
c. Formative or diagnostic assessments selected or created by schools
d. Formative or diagnostic assessments used district-wide
e. Textbooks used in your school
f. Curriculum selected or developed by your district
g. State-developed or organized professional development activities that you’ve participated in this year
h. District-developed or organized professional development activities that you’ve participated in this year
i. Administrator feedback provided to you from classroom observations (i.e., walkthroughs, formal observations, etc.)

AUTHORITY

District scales for authority were developed using survey questions 20, 21, 23 and 24.

(1—not at all aligned, 2—somewhat aligned, 3—aligned, 4—strongly aligned)

District Survey Questions 20, 21, 23 and 24

Please indicate your agreement with the following statements:

Question 20

a. CCR standards for ELA set appropriate expectations for student learning at each grade level.
b. CCR standards for ELA positively affect the degree to which students are prepared for college and career.
c. CCR standards for ELA make learning relevant to students’ everyday lives.
d. Since [state] started implementing CCR standards for ELA, teachers in my district have made significant instructional shifts to tailor instruction to those standards.
e. The ELA sections of the CCR standards test provide valuable information about how well students in my district are mastering the state standards.
f. CCR standards for ELA are appropriate for ELLs.
g. CCR standards for ELA are appropriate for students with disabilities’ learning (including those with mild learning disabilities but excluding those with severe or profound disabilities).
Question 21

a Results from the ELA portion of the state test accurately represent students’ mastery of the ELA concepts emphasized in CCR standards for ELA.

b Results from the ELA portion of the state test are a good measure of how well students learned what ELA teachers in my district taught last year.

c CCR standards for ELA exclude important content that students should learn.

d CCR standards for ELA provide a manageable number of topics to teach in a school year.

e CCR standards for ELA give educators the flexibility they need to help students who are below grade level.

f CCR standards for ELA are more rigorous than the previous state standards.

g Teaching to CCR standards for ELA will increase student learning.

h Teaching to CCR standards for ELA is a major priority in my district.

Question 23

a CCR standards for mathematics set appropriate expectations for student learning at each grade level.

b CCR standards for mathematics positively affect the degree to which students are prepared for college and career.

c CCR standards for mathematics positively affect how well students are prepared to compete in the workforce.

d CCR standards for mathematics make learning relevant to students’ everyday lives.

e Since [state] started implementing CCR standards for mathematics, teachers in my district have made significant instructional shifts to tailor instruction to those standards.

f The mathematics sections of the CCR standards test provide valuable information about how well students in my district are mastering the state standards.

g CCR standards for mathematics are appropriate for ELLs.

h CCR standards for mathematics are appropriate for students with disabilities’ learning (including those with mild learning disabilities but excluding those with severe or profound disabilities).

i Results from the mathematics portion of the state test accurately represent students’ mastery of the mathematics concepts emphasized in CCR standards for mathematics.

j Results from the mathematics portion of the state test are a good measure of how well students learned what mathematics teachers in my district taught last year.

Question 24

a CCR standards for mathematics exclude important content that students should learn.

b CCR standards for mathematics provide a manageable number of topics to teach in a school year.

c CCR standards for mathematics give educators the flexibility they need to help students who are below grade level.

d CCR standards for mathematics are more rigorous than the previous state standards.

e Teaching to CCR standards for mathematics will increase student learning.

f Teaching to CCR standards for mathematics is a major priority in my district.
Principal scales for authority were developed using survey questions 6, 7, 8, and 9.

(1—disagree strongly, 2—disagree somewhat, 3—agree somewhat, 4—agree strongly)

Principal Survey Question 6

Please indicate your agreement with the following statements:

a. College- and career-readiness (CCR standards) for ELA set appropriate expectations for student learning at each grade level.
b. CCR standards for ELA make learning relevant to students’ everyday lives.
c. Since [state] started implementing CCR standards for ELA, teachers in my district have made significant instructional shifts to tailor instruction to those standards.
d. Results from the ELA portion of the state test provide valuable information about how well students in my school are mastering the state standards.
e. I use results from the ELA portion of the state test to inform my school’s improvement planning.
f. I use results from the ELA portion of the state test to inform teacher evaluations in my school.
g. I use results from the ELA portion of the state test to inform professional learning decisions in my school.
h. CCR standards for ELA are appropriate for English language learners.
i. CCR standards for ELA set appropriate expectations for students with disabilities’ learning (including those with mild learning disabilities but excluding those with severe or profound disabilities).

Principal Survey Question 7

a. CCR standards for Mathematics set appropriate expectations for student learning at each grade level.
b. CCR standards for Mathematics positively affect how well students are prepared to compete in the workforce.
c. CCR standards for Mathematics make learning relevant to students’ everyday lives.
d. Since [state] started implementing CCR standards for Mathematics, teachers in my school have made significant instructional shifts to tailor instruction to those standards.
e. Results from the mathematics portion of the state test provide valuable information about how well students in my school are mastering CCR standards for Mathematics.
f. I use results from the mathematics portion of the state test to inform my school’s improvement planning.
g. I use results from the mathematics portion of the state test to inform teacher evaluations in my school.
h. I use results from the mathematics portion of the state test to inform professional learning decisions in my school.
i. CCR standards for Mathematics are appropriate for English language learners.
j. CCR standards for Mathematics set appropriate expectations for students with disabilities’ learning (including those with mild learning disabilities but excluding those with severe or profound disabilities).
Principal Survey Question 8

a  CCR standards for ELA exclude important content that students should learn.
b  CCR standards for ELA provide a manageable number of topics to teach in a school year.
c  CCR standards for ELA give educators the flexibility they need to help students who are below grade level.
d  CCR standards for ELA are more rigorous than the previous state standards.

Principal Survey Question 9

a  CCR standards for Mathematics exclude important content that students should learn.
b  CCR standards for Mathematics provide a manageable number of topics to teach in a school year.
c  CCR standards for Mathematics give educators the flexibility they need to help students who are below grade level.
d  CCR standards for Mathematics are more rigorous than the previous state standards.

Principal Survey Question 16

a  I have made teaching to CCR standards for ELA a major priority in my school.
b  My district has made teaching to CCR standards for ELA a major priority.
c  My state has made teaching to CCR standards for ELA a major priority.

Principal Survey Question 17

a  I have made teaching to CCR standards for Mathematics a major priority in my school.
b  My district has made teaching to CCR standards for Mathematics a major priority.
c  My state has made teaching to CCR standards for Mathematics a major priority.

Teacher scales for authority were developed using a composite of certain items in Questions 98, 99 and 100, depending on which statements applied to their positions. All items are included below.

Teacher Survey Questions 98, 99 and 100

Please indicate your agreement with the following statements:

a  CCR standards for (ELA or math) positively affect the degree to which students are prepared for middle school.
b  CCR standards for (ELA or math) make learning relevant to everyday lives.
c  Since starting to implement for CCR standards for (ELA or math), I have made instructional shifts to ensure students meet those standards.
d  Students’ results from the (ELA or math) section provide valuable information about how well my students are mastering CCR standards for (ELA or math).
e  CCR standards for (ELA or math) exclude important content that students should learn.
f  CCR standards for (ELA or math) provide a manageable number of topics to teach in a school year, for my grade level.
g  CCR standards for (ELA or math) give educators the flexibility they need to help students who are below grade level.
h  CCR standards for (ELA or math) are more rigorous than previous state standards.
i. Students’ results from the (ELA or math) sections of the state test are useful for improving my practice.

j. CCR standards for (ELA or math) set appropriate expectations for ELL.

k. CCR standards for (ELA or math) set appropriate expectations for SWD.

l. CCR standards for (ELA or math) set appropriate expectations for students learning at each grade level.

m. I plan lessons with CCR standards for (ELA or math) in mind.

**POWER**

**District Survey Question 16**

(1—not at all, 2—small extent, 3—moderate extent, 4—large extent)

Please indicate your level of agreement with the following statements:

a. The district rewards or recognizes principals based on their schools’ implementation of CCR standards.

b. The district rewards or recognizes teachers based on their schools’ implementation of CCR standards.

c. There are negative repercussions for principals in my district if their schools poorly implement.

d. There are negative repercussions for teachers in my district if their schools poorly implement.

e. The district rewards or recognizes principals based on their schools’ scores.

f. The district rewards or recognizes teachers based on their students’ scores.

**Principal Survey Question 19**

(1—disagree strongly, 2—disagree somewhat, 3—agree somewhat, 4—agree strongly)

Please indicate your level of agreement with the following statements:

a. District leaders publicly reward or recognize principals in this district for exemplary leadership practices aimed at implementing CCR standards.

b. District leaders publicly reward or recognize principals in this district for exemplary student achievement gains.

c. There are negative repercussions for me if students in my school do not perform well on the state test.

**Teacher Question 102**

(1—disagree strongly, 2—disagree somewhat, 3—agree somewhat, 4—agree strongly)

Please indicate your level of agreement with the following statements:

a. Teachers who poorly implement CCR standards for (math or ELA) will have a lower summative evaluation rating.

b. There are negative repercussions for teachers at this school whose students performed poorly on the state test.

c. Teachers at this school are recognized for using exemplary classroom practices that support the implementation of CCR standards for (math or ELA).

d. Teachers at this school are recognized for their students’ achievement gains on the state test.
**STABILITY**

One question from each group was used to establish the stability scale.

\[(1=1\text{-}2 \text{ years}, \ 2=3 \text{ years}, \ 3=4 \text{ years}, \ 4=5+ \text{ years})\]

**District Survey Question 19**

Including this current school year, how long do you believe each of the following will remain in effect?

- a. CCR standards for ELA
- b. CCR standards for Math
- c. The state test

**Principal Survey Question 22**

Including this current school year, how long do you believe each of the following will remain in effect?

- a. CCR standards for ELA
- b. CCR standards for Math
- c. The state test

**Teacher Survey Question 107**

Including this current school year, how long do you believe each of the following will remain in effect?

- a. CCR standards for (ELA or math)
- b. The (ELA or math) section of state test
- c. The current proficiency standards (i.e. cut scores) for the state test.

**SPECIFICITY**

The district scale for specificity was created using the average of questions 22 and 25. Only one question was used for the principal and teacher scales.

\[(1=\text{disagree strongly}, \ 2=\text{disagree somewhat}, \ 3=\text{agree somewhat}, \ 4=\text{agree strongly})\]

**District Survey Question 22**

Please indicate your level of agreement with the following statements:

- a. CCR standards for ELA clearly indicate the content teachers should teach.
- b. Teachers have received guidance from my district that clearly indicates the order in which they should teach each content area in CCR standards for ELA.
- c. Teachers have received guidance from my district that clearly indicates how much time they should spend on each content area in CCR standards for ELA.

**District Survey Question 25**

Please indicate your level of agreement with the following statements:

- a. CCR standards for math clearly indicate the content teachers should teach.
b Teachers have received guidance from my district that clearly indicates the order in which they should teach each content area in CCR standards for math.

c Teachers have received guidance from my district that clearly indicates how much time they should spend on each content area in CCR standards for math.

**Principal Survey Question 18**

Please indicate your level of agreement with the following statements:

a My teachers have received specific guidance from my district on the order in which they should teach content area in CCR standards for ELA.

b My teachers have received specific guidance from my district on how much time they should spend on each content area in CCR standards for ELA.

c My district has provided teachers in my school with lesson plans aligned with CCR standards for ELA.

d My teachers have received specific guidance from my district on the order in which they should teach content area in CCR standards for Mathematics.

e My teachers have received specific guidance from my district on how much time they should spend on each content area in CCR standards for Mathematics.

f My district has provided teachers in my school with lesson plans aligned with CCR standards for Mathematics.

**Teacher Survey Question 101**

Please indicate your level of agreement with the following statements:

a CCR standards for (ELA or math) clearly indicate the content I should teach.

b I have received guidance from my district that clearly indicates the order in which I should teach each content area for CCR standards in (math or ELA).

Teacher have received guidance from my district that clearly indicates how much time I should spend on each content area for CCR standards in (math or ELA).

**CHALLENGES**

(1—not a challenge, 2—minor challenge, 3—moderate challenge, 4—major challenge)

**Districts**

To what extent is each of the following a challenge to your district’s efforts to implement CCR standards in your district?

a Lack of support from parents

b Student absent and tardy

c Insufficient class time

d Wide range of student abilities

e Large class size

f Inadequate instructional resource

g Principal turnover

h Teacher turnover

i Lack of school resources to provide extra help for students

j Level of difficulty of the current standards
k Conflicting state initiatives
l Conflicting district initiatives
m Insufficient understanding by teachers
n Insufficient understanding by principals
o Lack of high-quality teaching
p Low student achievement
q Amount of time used for additional district-administered tests

Principals

To what extent is each of the following a challenge to your district’s efforts to implement CCR standards for ELA and mathematics?

a Teacher turnover
b Inadequate school resources
c Inadequate lead time to prepare before implementing reform
d Lack of teacher planning time built into the school day
e Frequent changes in district policy and priorities
f Frequent changes in district leadership (e.g., the superintendent)
g Lack of high-quality professional development opportunities for teachers
h Lack of high-quality professional development opportunities for principals
i Lack of guidance for teaching grade-level standards to students with disabilities
j Lack of guidance for teaching grade-level standards for English Language Learners

Teachers

Thinking of your target class, to what extent is each of the following a challenge to your district’s efforts to implement CCR standards for (ELA or math)?

a Inadequate student preparation in prior grades
b Lack of support from parents
c Student absenteeism and tardiness
d Insufficient class time to cover all the content
e Wide range of student abilities to address
f Large class size
g Inadequate instructional resources (e.g., textbooks)
h Frequent changes in school priorities or leadership (e.g., principal turnover)
i Lack of school resources to provide extra help for students
j Lack of planning time built into the school day
k Lack of guidance for teaching grade-level standards to students with disabilities
l Lack of guidance for teaching grade-level standards for ELLs

RESOURCES

(1—less, 2—same amount, 3—more)

Districts

How much of each of the following resources would you like in the future, compared to what you use now?
Survey Analysis of Standards Implementation in OHIO

a Textbooks aligned to CCR standards
b Curriculum resources aligned to CCR standards
c Formative or diagnostic assessments aligned to CCR standards
d Digital tools
e Information about how CCR standards change what students are expected to learn
f Information about how CCR standards change what is expected of teachers’ instructional practice
g PD for principals on CCR standards
h PD for teachers on CCR standards
i Clarification on how instruction is expected to shift in order to align to CCR standards
j Information about how to identify and implement effective curricula or instructional strategies
k Information about how to implement strategies to address the instructional needs of English language learners
l Information about how to implement strategies to address the instructional needs of students with individualized education programs (IEPs)

Principals

How much of each of the following resources would you like in the future, compared to what you use now?

a Textbooks aligned to CCR standards for ELA
b Curriculum resources aligned to CCR standards or ELA
c Formative or diagnostic assessments aligned to CCR standards for ELA
d Digital tools (e.g., online textbooks, webinars, videos, online communities, applications)
e Information about how CCR standards for ELA change what students are expected to learn
f Information about how CCR standards for ELA change what is expected of our teachers’ instructional practice
g Professional development on CCR standards for ELA
h Other (specify)
i Textbooks aligned to CCR standards for Mathematics
j Curriculum resources aligned to CCR standards for Mathematics
k Formative or diagnostic assessments aligned to CCR standards for Mathematics
l Digital tools (e.g., online textbooks, webinars, videos, online communities, applications)
m Information about how CCR standards for Mathematics change what students are expected to learn
n Information about how CCR standards for Mathematics change what is expected of our teachers’ instructional practice
o Professional development on CCR standards for Mathematics
p Other (specify)

Teachers

How much of each of the following resources would you like in the future, compared to what you use now?

a Textbooks aligned to CCR standards
b Curriculum resources aligned to CCR standards
c  Formative or diagnostic assessments aligned to CCR standards
d  Digital tools
e  Information about how CCR standards changes what students are expected to learn
f  Information about how CCR standards changes what is expected of teachers’ instructional practice
g  Professional development on CCR standards
h  Other (specify)

**Instructor Practices**

Below are the groupings of instructional practices that are either CCR emphasized or CCR de-emphasized. Teachers responded based on their subgroup.

Thinking about your target class, please indicate the level of emphasis you currently give to each of the following in your instruction in your target class.

(1—none, 2—minor emphasis, 3—moderate emphasis, 4—major emphasis)

In the survey, the following practices were grouped together as CCR-emphasized for elementary school ELA:

1. Apply grammatical rules
2. Compare multiple texts on the same theme
3. Demonstrate ability to write different forms of text
4. Engage in effective conversation and discussion with peers
5. Identify correct meaning within context for words with multiple meanings

The following practices were grouped together as CCR de-emphasized for elementary school ELA:

1. Apply cognitive strategies when reading
2. Demonstrate correct spelling rules
3. Identify main, key and supporting ideas, and details
4. Interpret words and phrases with multiple meanings
5. Locate and use textual evidence to support comprehension

CCR-emphasized practices for high school ELA:

1. Analyze vocabulary choices in different forms of text (e.g., use of technical or figurative language as appropriate)
2. Apply rules for capitalization and punctuation
3. Identify similar themes in multiple texts
4. Demonstrate ability to write for different purposes
5. Demonstrate speaking and listening skills in different engagements with peers (e.g., conversations, discussions, debates)
CCR de-emphasized practices for high school ELA:
1. Identify rhyme scheme in a poem
2. Demonstrate correct grammar rules
3. Discuss the characteristics of different genres of text
4. Locate and use textual evidence to support comprehension
5. Vary sentence construction in writing

CCR-emphasized practices for elementary math:
1. Demonstrate understanding of angle measurement
2. Demonstrate understanding of fraction multiplication
3. Perform the procedures of adding and subtracting fractions
4. Represent fractions
5. Solve one-step equations

CCR de-emphasized practices for elementary math:
1. Calculate simple probabilities
2. Demonstrate understanding of data in tables or graphs
3. Demonstrate understanding of geometric or arithmetic patterns
4. Demonstrate understanding of rate of change/slope
5. Perform measurement conversions

CCR-emphasized practices for algebra:
1. Apply linear and non-linear functions to real-world settings
2. Convert expressions involving radicals to expressions with rational exponents
3. Demonstrate understanding of exponential functions
4. Demonstrate understanding of sequences
5. Interpret the slope in real-world settings

CCR de-emphasized practices for algebra:
1. Compute with exponents and radicals (e.g., square roots)
2. Demonstrate understanding of estimation
3. Find the factors of an algebraic expression
4. Perform operations on polynomials
5. Perform procedures involving rate of change/slope

CCR-emphasized practices for algebra 2:
1. Perform procedures with complex numbers
2. Demonstrate understanding of linear functions
3. Apply functions to real world settings
4. Demonstrate understanding of polynomials
5. Demonstrate understanding of inequalities
CCR de-emphasized practices for algebra 2:
1. Solve systems of equations
2. Memorize the symbolic representation for a linear function
3. Perform procedures on polynomials
4. Perform operations on exponential expressions
5. Memorize attributes of exponential functions

CCR-emphasized practices for geometry:
1. Demonstrate understanding of rigid transformations (e.g., slides/translations, flips/reflections, turns/rotations)
2. Use geometry to model situations (e.g., use circles, three-dimensional objects to model real-world situations)
3. Demonstrate understanding of similarity
4. Justify properties of circles
5. Generalize transformations to other concepts (e.g., congruence)

CCR de-emphasized practices for geometry:
1. Perform procedures associated with triangles
2. Memorize definitions and formulas associated with triangles
3. Perform procedures to determine angle measures
4. Memorize definitions and formulas associated with quadrilaterals
5. Perform procedures associated with circles