A 20/20 Vision for Standards-Based Reform

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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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A 20/20 Vision for Standards-Based Reform

Abstract
What’s next for standards-based reform? With the release of the 2019 National Assessment of Educational Progress results in math and reading, it became clear that standards-based reform has not moved the needle on student achievement. This may be due, in part, to how districts, schools, and teachers are making sense of and implementing college- and career-readiness standards. On Thursday, May 28, 2020, the Center on Standards, Alignment, Instruction, and Learning (C-SAIL) hosted a virtual event to share what we’ve discovered over the last five years examining standards implementation and impact at the state, district, school, and classroom level and engage practitioners, policymakers, and researchers to look to the future of standards-based reform. This PowerPoint presentation corresponds to a presentation video available at c-sail.org/videos.

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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This presentation is available at ScholarlyCommons: https://repository.upenn.edu/c-sail/23
Welcome & Logistics

Amy Stornaiuolo
Researcher, C-SAIL
Associate Professor, Literacy, Culture, and International Education Division, Penn Graduate School of Education, University of Pennsylvania
Logistics

• **Audio muted.** We have muted attendee audio for the duration of this opening session.

• **Questions.** Please use the [Questions box](#) in your GotoWebinar control panel to submit questions.

• **Closed captioning.** Live captioning is available at [tinyurl.com/CSAILOpening](http://tinyurl.com/CSAILOpening). We’ve also shared this link in the Questions box. Use the gear icon in the live captioning window to change the font, size, and more.

• **Slides and handouts.** If you haven’t already, you can download the session PPT slides and PDF handout using the Handout section of your GotoWebinar control panel.
C-SAIL Overview & Guiding Framework

Andrew C. Porter
Director and Principal Investigator, C-SAIL
Professor Emeritus, Penn Graduate School of Education, University of Pennsylvania
About C-SAIL

Center on Standards, Alignment, Instruction, & Learning

- Funded by Institute for Education Sciences, July 2015-2020
- How are college- and career-ready standards (CCRS) implemented, do they improve student learning, and what instructional tools measure and support their implementation?

Partners

- University of Pennsylvania, Graduate School of Education
- American Institutes for Research
- University of Southern California
- Vanderbilt University
- University of Delaware
- Five partner states: California, Kentucky (2015-17), Massachusetts, Ohio, and Texas; Philadelphia, PA
Our guiding framework is the policy attributes theory.

It posits that there are five features that make a policy successful:

1. Specificity
2. Consistency
3. Authority (law, expertise, consistency with social norms, charismatic leader)
4. Power
5. Stability

More details on pages 1-2 of handout.
Longitudinal Outcomes Study & Findings

Mengli Song
Co-director, C-SAIL
Principal Researcher, American Institutes for Research
Study Context & Purpose

- All 50 states and DC adopted new college- and career-ready standards (CCRS) in math and ELA between 2007 and 2015.

- This study assesses the effects of states’ adoption of CCRS on student achievement (as measured by NAEP) and high school graduation, for all students and key student subgroups.
How did we assess the effects of CCRS?

• **Approach:** Comparative interrupted time series (CITS) design
  - Focused on student outcome trend before and after the adoption of CCRS.
  - Did the change in trend differ between treatment (T) and comparison (C) states?

• **Classification of T and C States:** Based on the rigor of each state’s pre-CCRS standards as measured by:
  - *Prior Rigor Index (0-7):* (Carmichael et al., 2010)
  - *Prior CCSS-Similarity Index (1-5):* (Schmidt & Houang, 2012)

  - T states = states with less rigorous prior standards
  - C states = states with more rigorous prior standards

  - States with certain index values were excluded to create a sharper T-C contrast.
Analysis Samples and Model

• **Samples for Achievement Analyses**
  - Restricted to states that adopted CCRS in 2010
  - For analyses based on Prior Rigor Index, N = 29 for reading and 34 for math
  - For analyses based on CCSS-Similarity Index, N = 26 (math only)

• **Sample for Graduation Rate Analysis**
  - Restricted to states that adopted CCRS in 2010 or 2011
  - N = 38, based on Prior Rigor Index

• **Analytic Model**
  - “CITS baseline trend model”
  - Controls for state-level NAEP exclusion rate, per pupil expenditure, % of students eligible for free- or reduced-price lunch, % of minority students, and pupil-to-teacher ratio.
NAEP Trends Before and After the Adoption of CCRS in Treatment and Comparison States

Grade 4 Reading

Grade 8 Reading

Grade 4 Math

Grade 8 Math

2010, year of CCRS adoption

T states: ● C states: ○
Trends in High School Graduation Rates in Treatment and Comparison States

All years (1991-2013)

2000 and after

T states:  

C states:
Effects of CCRS: Grade 4 Reading

NAEP Scores for T States Identified Based on Prior Rigor Index

ES: 1-year effect = -0.06* (p < .05); 3-year effect = -0.08* (p < .05); 5-year effect = -0.10† (p < .10); 7-year effect = -0.10† (p < .10)
Effects of CCRS: Grade 8 Reading

NAEP Scores for T States Identified Based on Prior Rigor Index

ES: 1-year effect = 0.01; 3-year effect = -0.03; 5-year effect = -0.04; 7-year effect = -0.05
Effects of CCRS: Grade 4 Math

NAEP Scores for T States Identified Based on Prior Rigor Index

ES: 1-year effect = 0.01; 3-year effect = -0.03; 5-year effect = -0.06; 7-year effect = -0.08
Effects of CCRS: Grade 8 Math

NAEP Scores for T States Identified Based on Prior Rigor Index

ES: 1-year effect = 0.01; 3-year effect = -0.03; 5-year effect = -0.07; 7-year effect = -0.10* (p< .05)
Effects of CCRS: High School Graduation Rate

HS graduation rates for T States Identified Based on Prior Rigor Index

Effect estimates (in percentage points):
1-year effect = -1.22† (p < .10); 2-year effect = -0.87; 3-year effect = -1.63
Summary

States’ adoption of CCRS did not lead to improved student achievement or high school graduation rates during the time period we examined.
Why weren’t results positive?

• **Potential Reasons**
  
  • CCRS may be no more effective in improving student outcomes than prior standards.
  
  • CCRS may not have been well implemented, with slow rollout (typically 3-5 years) and a multitude of implementation challenges.
  
  • Study results need to be interpreted with caution due to design limitations (e.g., lack of a true no-treatment comparison group, selection bias not fully accounted for, and less-than-perfect alignment between NAEP and CCRS).
Discussion

Morgan Polikoff
Co-director, C-SAIL
Associate Professor of Education, USC Rossier School of Education

Adam Gamoran
President, William T. Grant Foundation
Implementation Study & Findings

Laura Desimone
Co-director, C-SAIL
Director of Research, College of Education and Human Development; Professor, Evaluation, Research, Measurement and Statistics, University of Delaware
C-SAIL Implementation Team

Meghan Comstock  Adam Edgerton  Nelson Flores  Erica Saldívar García  Shira Korn

Mark Lewis  Victoria Glock-Molloy  Phil Nichols  Katie Pak  Morgan Polikoff  Amy Stornaiuolo
Research Questions

1. **Policy environment.** To what extent is the standards-based policy system specific, consistent, authoritative, powerful, and stable, at the state, district and school levels?

2. **Supports and guidance.** What is the nature and quality of support and guidance at the state, district and school levels?

3. **Aligned instruction.** How are teachers changing the content they cover, and how does this differ for ELA and math teachers, for high school teachers, and for teachers of elementary and English language learners (ELLs), students with disabilities (SWDs)?
The Policy Attributes Theory

**INPUTS**
- Specificity
- Authority
- Consistency
- Power
- Stability

**OUTCOME**
- Resources
- Professional Development
- Challenges

- Standards-Aligned Instruction
What was our research design and data sources?

- **Surveys**
- **Interviews**
- “Deep Dive” case studies
- **Partner states:**
  - California, Kentucky, Massachusetts, Ohio, Texas
  - Philadelphia, PA
How do the policy attributes differ across respondents and how did they change over time?

There was moderately high buy-in for standards across the board among teachers, principals, and superintendents, but buy-in was significantly higher for principals and/or superintendents. Some respondents reported significantly higher authority, consistency and power in Year 4.
How did teachers vary in their authority (buy-in) to the standards?

There was moderately high buy-in for standards across teachers of math, ELA and ELs in elementary and high school, but buy-in was significantly lower for teachers of SWDs.

- There were no changes in patterns of teacher buy-in from Year 1 to Year 4.
What are the top five resources teachers indicated they wanted to support their instruction? (2020)

<table>
<thead>
<tr>
<th>Teachers asked for more:</th>
<th>Ohio</th>
<th>Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum aligned to standards</td>
<td>59%</td>
<td>55%</td>
</tr>
<tr>
<td>Digital tools</td>
<td>56%</td>
<td>56%</td>
</tr>
<tr>
<td>Professional development on standards</td>
<td>51%</td>
<td>48%</td>
</tr>
<tr>
<td>Formative or diagnostic assessments</td>
<td>54%</td>
<td>44%</td>
</tr>
<tr>
<td>Information about instructional changes</td>
<td>50%</td>
<td>47%</td>
</tr>
</tbody>
</table>

There were no changes over time in the top 5 resources that teachers wanted.
According to teachers, what are the top five challenges to their instruction? (2020)

<table>
<thead>
<tr>
<th>Challenges (Moderate or Major)</th>
<th>Ohio</th>
<th>Texas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wide range of student abilities to address</td>
<td>73%</td>
<td>73%</td>
</tr>
<tr>
<td>Lack of support from parents</td>
<td>63%</td>
<td>60%</td>
</tr>
<tr>
<td>Inadequate student preparation in prior grades</td>
<td>61%</td>
<td>72%</td>
</tr>
<tr>
<td>Student absenteeism and tardiness</td>
<td>56%</td>
<td>53%</td>
</tr>
<tr>
<td>Insufficient class time to cover all the content</td>
<td>56%</td>
<td>48%</td>
</tr>
</tbody>
</table>

There were no changes over time in the top 5 challenges to teachers’ instruction.
Do teachers align their instruction to the content emphasized in the standards? Has this alignment increased over time?

There is **wide variation** in teachers’ alignment to the standards by content area and grade level.
What predicts aligned instruction?

Variation in alignment variation is tied to the kinds of infrastructure provided by states and districts.

- Specific and aligned curricula
- Effective PD
- Stable standards and assessments
How does specificity work to support implementation of the standards?

Though specificity is desired on the ground, states and districts are reluctant to provide too much specificity because of concerns about local control.

“Of course the state pushes about college and career readiness, but I think it’s more to the local entities to really standardize that, articulate it, and create thoughtful plans towards that. It’s like the state provides the overall umbrella, but then it's up to the districts… to really, implement more defined plans.” (TX District Leader)
How is power (rewards and sanctions) playing out under ESSA?

State officials stated that accountability changes under ESSA have allowed them to adopt a “smart power” message that is less punitive and more supportive.
How are districts supporting teacher implementation of standards?

PL and adaptive leadership play a key role in building authority, specificity and consistent in standards implementation.

• Individualistic and collaborative professional learning
• Adaptive leadership practices
• PL as a mechanism for building consistency, authority and specificity
CCR Standards and English Learners (ELs)

Nelson Flores
Researcher, C-SAIL
Associate Professor, Educational Linguistics Division, Penn Graduate School of Education, University of Pennsylvania
EL Snapshot Across Partner States in Implementation Study

<table>
<thead>
<tr>
<th>State</th>
<th>% EL 2003-2004</th>
<th>% EL 2013-2014</th>
<th>Consortium</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>25.5%</td>
<td>22.7%</td>
<td>None</td>
</tr>
<tr>
<td>Kentucky</td>
<td>1.3%</td>
<td>2.9%</td>
<td>WIDA</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>5.8%</td>
<td>8.5%</td>
<td>WIDA</td>
</tr>
<tr>
<td>Ohio</td>
<td>1.3%</td>
<td>2.5%</td>
<td>ELPA21</td>
</tr>
<tr>
<td>Texas</td>
<td>15.4%</td>
<td>15.5%</td>
<td>None</td>
</tr>
</tbody>
</table>
Teachers Perspectives on ELs across Partner States

**2016—KY, OH, TX**
- TX teachers reported feeling significantly more prepared to teach ELs than teachers in OH and KY
- TX teachers reported receiving significantly more PD than OH and KY for ELs
- EL teachers are providing comparable grade-level instruction to mainstream teachers in TX and OH (too few respondents in KY)

**2020—CA, OH, TX**
- OH teachers report feeling significantly less prepared to teach ELs than teachers in CA or TX (Ohio has not improved)
- CA and TX teachers reported receiving significantly more PD than OH for ELs
- EL teachers are providing comparable grade-level instruction to mainstream teachers in CA, OH and TX
- Consistency, authority and power has significantly increased for EL teachers in OH and TX.
The Increasing Specificity of EL Policy

• States have taken the lead in developing more specific policies in collaboration with two national consortia (WIDA and ELPA21)

• Most states are using one of two assessment systems for identifying, monitoring, and reclassifying ELs

• This increasing specificity has been welcomed rather than seen as a threat to local control because of its connection with authority as opposed to power
A Typology of EL Policies across Districts

Contextual factors such as **density**, **demographics**, and **history** played a significant role in the capacity of states and districts to support ELs.
Implications

• Simply covering grade-level standards may not be sufficient at increasing EL academic achievement

• Creating a state-level system of differentiated support for districts based on the typology proposed may be a way of supporting districts in raising EL academic achievement

• Creating a research agenda to identify other contextual information that should be considered in conceptualizing this differentiated support can help create a more robust system of differentiation
CCR Standards and Students with Disabilities

Douglas Fuchs & Lynn S. Fuchs
C-SAIL Researchers
Vanderbilt University
Three Major Conclusions: Career- and College-Ready Standards for Students with Disabilities

• Longitudinal Study
  – NAEP analysis on effects of CCRS standards on reading and math achievement

• Implementation Study
  – Interviews with SEA officials
  – Surveys with district administrators, principals, and teachers
Conclusions

• NAEP analysis provides little basis for thinking challenging academic standards boost the reading or math performance of SWD.

• Interview and survey data suggest lack of effects may be exacerbated by lack of buy-in on the idea of universal applicability of standards and need for more knowledge about appropriate instructional practices to support SWD and their teachers.

• Interview data reveal some encouraging initiatives at the state and district levels to support coordination between GE and SE to address needs of SWD in standards reform.
Discussion

Morgan Polikoff with:

• Renee Bradley, *Office of Special Education and Rehabilitative Services, U.S. Department of Education*

• Brent Malicote, *Assistant Superintendent, Educational Services, Sacramento County Office of Education*

• Cathryn Still, *Executive Director, ELPA21*
Feedback on Alignment and Support for Teachers (FAST) Study & Preliminary Findings

Toni Smith
Researcher, C-SAIL
Principal Researcher, American Institutes for Research
Goal of the FAST Program

Provide teachers with support to:
• **Understand** the standards
• Implement **aligned instruction** to support all students in reaching the standards

Grade 4: Math
Grade 5: English Language Arts
The Feedback on Alignment and Support for Teachers (FAST) program provides 4th-grade teachers in math and 5th-grade teachers in English language arts (ELA) the opportunity to participate in a new, expertly-designed program developed to support teachers in aligning their instruction to their state's unique college- and career-readiness (CCR) standards. The FAST program gives teachers the tools to reflect on the extent to which their instruction addresses the topics emphasized in CCR standards at the appropriate levels of cognitive demand for all students, including English language learners (ELLs) and students with disabilities (SWDs). The FAST program, which uses internet and video technology, includes:

- **Personalized instructional coaching**
- **Tools to promote reflection on alignment**, including an instructional log and video recordings of instruction
- **Access to an online library of instructional and professional learning resources aligned to participants' state standards**

The activities occur over the course of two school years.

**PERSONALIZED INSTRUCTIONAL COACHING**

Through the FAST program, teachers meet with a FAST coach individually and in school-based, grade-level, collaborative academic study teams (CASTs). The FAST coach is an expert in math or ELA content and instruction and meets with the teachers virtually, using video-conferencing technology. Each of the 4th-grade teachers in a school work with the same math FAST coach and each of the 5th-grade teachers with the same ELA FAST coach. During the individual coaching sessions, teachers and coaches discuss the content of the teacher's instruction for a lesson or series of lessons, examine relevant resources from the project's online library of resources, and identify actionable next steps to strengthen alignment to their state's standards. The teacher and coach look closely at the topics addressed in the recent lesson as well as the level of cognitive demand emphasized during instruction and discuss ways of supporting students in mastering the standards, particularly for ELLs, SWDs, and struggling students.
Research Questions

1. How is the FAST program implemented?

2. Does the FAST program lead to greater alignment of teachers’ instruction with state standards?

3. Does the FAST program lead to stronger student achievement?
Study Design

In each district, randomly assign schools to:

- Treatment (29 Schools)
- Control (27 schools)

5 Districts
3 States
56 Schools
Timeline and Data Collection

- **Fall 2017**: FAST 5 team mtgs, 5 ind. coach, 5 videos, 5 logs
  - Baseline SEC (reported instruction from 2016-17)

- **Spring 2018**: FAST 5 team mtgs, 5 ind. coach, 5 videos, 5 logs
  - EOY SEC (reported instruction from 2017-18)
  - Student achievement:
    - Grade 4 (math)
    - Grade 5 (ELA)

- **Fall 2018**: FAST 5 team mtgs, 5 ind. coach, 5 videos, 5 logs
  - EOY SEC (reported instruction from 2018-19)
  - Student achievement:
    - Grade 4 (math)
    - Grade 5 (ELA)
Study and Impact Samples

• We focused the analysis of the impact on instruction on teachers present in the spring of year 2.
  – For math, the instructional impact sample included 47 of 55 schools (85%) and 108 of 142 teachers (76%).
  – For ELA, the instructional impact sample included 42 of 52 schools (81%) and 71 of 108 teachers (66%).

• For achievement, we focused on students present in the spring of year 2.
  – For both math and ELA, almost all students had achievement data.
FAST Implementation

• Although FAST was made available to all treatment teachers in the target grades, not all participated.
  – 35 teachers in the instructional impact sample for math (64%)
  – 24 teachers in the instructional impact sample for ELA (69%)

• Over two years, teachers participated in ~6 team meetings and 5 coach sessions, and completed ~5 videos and logs.
  – Participation was a bit higher in math than ELA.
  – Teachers participated in about half the total number of sessions initially planned.

• Participants reported finding the FAST activities helpful for reflecting on and improving instruction.
Year 2 Impact

- Preliminary analyses suggest that the FAST program had a statistically significant, positive impact on math instruction and a positive, but not significant impact on ELA instruction.
  - Math Instruction: ES = 0.63, p = 0.001
  - ELA Instruction: ES = 0.41, p = 0.119

- Analyses of the impact on student achievement are ongoing.
  - The FAST program did not have a significant effect on student achievement in either subject in year 1.
What may explain the results?

• **Dosage.** Not all (or only some) treatment teachers completed the full set of intended FAST activities.

• **Alignment was not associated with achievement.**
  – We anticipated that teachers whose instruction is better aligned would have students who make larger gains.
  – This was not the case in Year 1. Year 2 results are in progress.

• **Alignment of state tests.** We do not know how well aligned the state tests are with the standards.
Discussion

Morgan Polikoff with:

• Chrystalla Mouza, *Director*, School of Education at the University of Delaware

• Sarah Woulfin, *Associate Professor, Department of Educational Leadership*, Neag School of Education, University of Connecticut
Discussion

Morgan Polikoff with:

- Jeff Pelzel, *Superintendent*, Newhall School District (California)
Before you go…

Breakout sessions begin at 12:30 p.m. ET. If you haven’t already registered, visit csail2020.org/register.

1. Role of Core Curriculum Materials in Standards Implementation
2. Framing Multilingualism as a Resource for Standards-Aligned Instruction
3. Standards-Based Leadership and Governance
4. Professional Learning and the FAST Experience
5. Standards, IEPs, and a Policy of Inclusion for Students with Disabilities
Before you go…

• **Closing session, “Where Do We Go from Here?”**
  • Begins at 1:30 p.m. ET
  • Features Andy Porter and Linda Darling-Hammond
  • Register: [csail2020.org/register](http://csail2020.org/register)

• **Session recordings.** All sessions are being recorded and will be made available at [c-sail.org/videos](http://c-sail.org/videos).