

American Youth Policy Forum

December 16, 2013

The Use of Research in the Common Core State Standards

This forum, focused on the use of research in the development and implementation of the Common Core State Standards, is part of a broader effort supported by the W. T. Grant Foundation to bridge the gap among policy, research, and practice by understanding the role of research in the policymaking process. The forum brought together perspectives from the research, policy, and practice communities to discuss common issues and potential solutions in incorporating research into the ongoing implementation of the Common Core.

Dr. Lorraine M. McDonnell, University of California, Santa Barbara, discussed findings from a three-year project that examined the use of research and other evidence in the development and implementation of the Common Core State Standards (CCSS) initiative. McDonnell and colleagues interviewed 116 CCSS leaders, in addition to interest groups, national and state policy makers, vendors, and critics. McDonnell delved deeply into various sources involved in implementation; she received confidential access to observer notes from conference calls among groups engaged in implementing the CCSS, in addition to archiving over 1500 research reports, speeches, Congressional testimony, and other related materials. She noted three distinct features of research use.

Ensuring Quality and Political Buy-In

First, CCSS developers committed themselves to use research to ensure quality in the new evidence-based standards. For example, surveys of employers and faculty and analyses of college admission tests and grades grounded the 'college and career-ready' concept. Scholarly studies guided decisions about knowledge and skills to be included in the CCSS; for example, in mathematics, developers relied on National Research Council reports, the National Mathematics Advisory Panel report, analyses of PISA and TIMMS, and other research studies.

A second aim in the development of the standards was to limit potential criticism, which could hinder eventual implementation. Developers wanted to transform standards-setting from a state-only process and policy matter--often riddled with personal preferences--into a national process in which states worked together to identify key knowledge and skills students need to succeed in the 21st century. CCSS developers hoped that engaging numerous states in a voluntary standards-setting activity would produce the buy-in necessary for widespread implementation, and thus avoid political minefields.

Recognizing the Limits of Research and Encouraging Buy-In



Developers recognized that while research was critical as a foundation of the CCSS, there were areas where research is incomplete, inconsistent, or contested. For example, research on how students learn mathematics is robust at the K-2 level, but not at higher grade levels. In these cases, the developers used the best available research with the understanding that subsequent research will inform future iterations of the standards. In mathematics, the developers consulted expert researchers for their best judgment about what student learning trajectories would look like at higher grade levels, and then used that information to arrange topic and skill standards. On a practical level, developers knew that professional judgment needed to be used in areas where the research base is insufficient.

Developers also recognized that effective implementation depends on buy-in from diverse groups. Standards developers made excellent use of practitioner knowledge and teaching experience as those individuals strengthened the instructional logic in arranging the order of standards across grade levels. State department of education staff also contributed their expertise in arranging standards to facilitate their use in classrooms. Engaging all stakeholders in the process was a critical and intentional part of standards development.

Integrating Research Findings with Other Evidence

CCSS developers integrated other types of evidence such as statistical data; judgments based on professional expertise; practitioner experience; and parent and community values into development of the standards. These types of evidence can serve a critical function in policy design apart from their function in gaining stakeholder buy-in. Multiple experts, together with practitioner experience, business community and state department feedback, led the developers through an intensive and iterative process of criticism, feedback, revision, and consensus-building. In addition, practitioner experience can serve as a validating mechanism in determining how and to what extent research findings are applicable in a number of different contexts.

Implications for Implementing the CCSS

Research should be integrated with professional judgment and practitioner expertise for widespread buy-in and adoption. However, its use will vary across states depending on the resources available, including the capacity of various professional development networks, funding from foundations or RTTT funds, and state/district expertise.

Research is needed to assist implementation and to evaluate the effects of the standards with respect to curriculum, teacher preparation, the educational needs of different student groups; assessments, and other related areas. However, research is often out of sync with the needs of policymakers. Policymakers can encourage researchers to develop joint projects and work collaboratively. Funders can also make a difference, by ensuring that proposal requests include a collaborative approach. In addition, collaborators can draw on the lessons from three decades of implementation research.

Many nonprofit and for-profit curriculum and professional development providers have prepared materials to aid CCSS implementation, but there is no central body vetting their quality



or the degree to which the materials align with the CCSS. However, some major providers are creating research-based templates that teachers can adapt to their local context.

Broader Implication for the Use of Research in Education Policy

Evidence from non-research sources can function much like research and serve a critical function if the sources are then engaged in an interactive, iterative process of critique and revision, as noted above.

A common challenge in the use of research has traditionally been in translating and transmitting the research to the practitioner and policymaker communities. Numerous organizations are currently addressing this challenge effectively with respect to the CCSS.

Another challenge has been persuading policymakers to use evidence once it has been disseminated. To encourage better use of research, the National Research Council has recently recommended an interactive, iterative process to engage researchers, policymakers, and practitioners. Through this process, the applicability of research findings can be tested in various settings. The CCSS developers intentionally used this type of process to vet the research and to increase buy-in, setting the stage for widespread adoption.

Researchers can more effectively promote research by using a problem-based approach in which they analyze an issue that is jointly defined by policymakers, practitioners, and researchers.

Sandra Alberti, Director of State and District Partnerships and Professional Development, Student Achievement Partners, works with states and districts to help them align their work with the CCSS.

Alberti noted that the standards must be perceived as a basis for innovation—not standardization. She reiterated that the CCSS are predicated on a commitment to research. Since forty-five states are engaged in implementing the CCSS, there will be a diversity of approaches and research is critical in helping to identify which pathways and strategies are most effective.

Under the CCSS, teachers will need the skills to examine their own practice and adjust based on their own work to appropriately transition to the new standards. The focus on formative and summative assessments is critical in systems employing the CCSS. Formative assessment gives teachers immediate feedback on how well students understand a concept and summative assessment provides additional information in the context of how one student or classroom compares to others in the school, district, or state. Districts and states should continue to build in structures for teachers to make use of formative strategies so that they can check and adjust their practice to meet the needs of their students.

Policy Implications

The profession would benefit from a national research agenda as states implement the new CCSS. Stakeholders involved in the implementation now have better opportunities to learn from each other as a result of the use of the CCSS throughout the nation. High quality research is now



available through institutions such as the Institute of Education Sciences and the Regional Education Laboratories. A common agenda across research entities would help advance the CCSS. Such research and dissemination is part and parcel of the process of standards-based reform and is necessary to fulfill the potential of the CCSS implementation.

Nancy Gannon, Executive Director, Office of Academic Quality, New York City

Department of Education discussed how New York City integrated research in selecting curriculum materials that support the CCSS in those schools. In 2003, the NYC Department of Education introduced an optional core curricula and instructional materials beginning with mathematics, grades K-3 literacy, and classroom libraries in order to provide a common standard for schools in the district.

In Fall 2012, the Department released criteria to publishers with New York City's latest expectations for curriculum materials that support the CCSS. The goals included (1) grounding city schools in a quality curriculum; (2) participating in and leading a national conversation around high-quality curriculum for the CCSS; and (3) updating the New York City Core Curriculum with a set of high quality curriculum materials as choices for principals in 2013-14.

The Department examined the current quality of publisher submissions and state and city materials, and shared its analysis of all widely-used curricula in order to support its schools in making informed choices. It also provided reviews of curriculum that were examined but were not chosen.

The study consisted of two strands of activity. First, the Department formed diverse teams of state personnel and expert teachers from across the city to assess current curricula. In addition, the Department worked with national experts to conduct research on how well the standards were embedded into the math and English language arts curriculum. The rubric developed by the Department's team evaluated instructional materials across five dimensions that resulted from their research:

- > *Alignment:* Do the materials align to the Common Core standards?
- > *Promotion of the Shifts:* Do the materials align to/support the Common Core shifts in math and literacy?
- > *Quality of Assessment & Student Evidence:* Do the materials build in rigorous and diverse assessments that measure students' growth on the Common Core standards?
- > *Quality & Utility as an Instructional Resource:* Do the materials support teachers in knowing what successful implementation requires?
- > *Accessibility & Responsiveness:* Do the materials provide supports for the range of students across NYC classrooms?



Results of the reviews were posted online to inform schools of the outcomes. The majority of schools have selected the materials that met the criteria above for the core curriculum. An interesting result of the study indicated that neither the assessments nor teacher supports reviewed were aligned with the CCSS at the high school level, so more work is needed in that area. The Department is continuing an ongoing process of review that will include examinations of student, third-party evaluations, and teacher-led meetings with vendors.

Question and Answer Period

Q: What role have out-of-school time organizations played in providing supports?

A: (Alberti) Our extended summer learning programs go beyond keeping students busy; they have students do what matters. We have common metrics for what success looks like. Summer and afterschool programs are a great opportunity for networking across states. We have sites in 12 different states and are working on a common set of grade expectations. Common metrics from assessments will be coming up and you can look at those.

A: (McDonnell) The National Council for La Raza is designing activities to help parents be more informed and critical participants, and is focusing work on the Common Core. Increasing parent engagement is one of the goals of the developers of the Common Core.

Q: What is the impact on the rest of the school when some teachers do not participate (because their subject areas are not those encompassed by CCSS)?

A: (Gannon) We have developed a staged implementation plan. We developed city-wide instructional expectations 3 years ago. In year 1 we worked on material that was aligned with the CCSS. We are building more and more resources for science and social studies teachers. More science and social studies materials are embedded in the English language arts curriculum. We have also built a Common Core library on the website.

A: (Alberti) The arts are a good example of this challenge and opportunity. We want students thinking critically and using cross-disciplinary skills related to English language arts and math in an art class, in addition to engaging in more subject specific skills and knowledge. All subjects should, to an extent, reinforce and augment core subject areas.

Q: Is research up to the job of providing some meaningful answers for practitioners and policymakers? Is it answering the critical questions that implementers are asking? Can clear guidance be developed from the findings?

A: (McDonnell) The research is there. For the most part, it is helpful. After 30 years of implementation research, we know how to get new materials and strategies into the classroom. We do have the mechanisms and the technology now for bringing various strands of research together for teachers in the classroom and also to bring folks together and work with them on the ground. We can also develop collaboratives in which researchers are collecting data on the same



populations but from different perspectives. We need a commitment on the part of researchers, policymakers, and funders to work collaboratively on integrating results from different strands such as research on curriculum, teacher preparation, assessment, and school organization. The mechanisms are there; we simply need to use them.

However, one caveat—research on assessments shows that a single test used for multiple purposes cannot validly meet all the different expectations that policymakers now have for assessment policy.

A: (Alberti) The vast majority of teachers don't know what IES is or what RELs are. Teachers are interested when they hear about studies. But making teaching an action research endeavor should be a goal and an expectation.

A: (Gannon) There are whole groups of students in New York City that fall below the baseline of where the standards were, much less where they are going with CCSS. There should be research around implementing the CCSS and rolling in new teacher evaluation systems at the same time.

Q: Within teacher preparation, are candidates being taught innovative ways to do action research in classrooms? Can action research help people on the front lines?

A: (Alberti) The culture of teaching is changing. Instead of having an isolated experience in the classroom, teachers are now encouraged to publicly share publicly what they are doing and what is successful. Social media is helping to share best practices. But teachers take risks during action research. We want teachers to experiment in their classrooms. Not everything will happen perfectly. Teachers need to try strategies and make adjustments; it should be an iterative learning process. Policymakers must respect a culture of learning. Research and experimentation can be integrated into practice if the culture encourages it.

A: (Gannon) Action research has been around for a long time; it hasn't found a large space. Where is the space for the teacher to be a learner and take a step back and think about practice? Rapid transitions to new standards and evaluation systems have made it challenging to allow teachers the flexibility to engage in their own research and build a culture of inquiry within schools.

A: (McDonnell) By definition, innovation carries the possibility of both success and failure. The current incentive system—with high-stakes, test-based accountability at its core,—does not promote innovation. If we want teachers to be doing what the CCSS aspire to and to succeed in teaching in new ways, we must find better incentives. There are currently serious disincentives for teachers to innovate.

Q: To what extent do you see research mitigating policymaker impatience?

A: (McDonnell) Having research results helps buy patience. Time to conduct the research is critical; you can document the process and identify where changes need to be made.



A: (Gannon) We are grateful for researchers writing op-eds and understanding that this is a long-term strategy we are attending to in order to improve teaching and learning.

A: (Alberti) We need to communicate about results as we go.

Q: The Common Core state standards implementation can be seen as a three step process: standards-implementation-assessment. Who is responsible for the application of research?

A: (Alberti) We need to look across research initiatives; we can have a new common language.

A: (McDonnell) Groups with a stake in CCSS implementation are certainly interested in research and its application: nonprofit and for-profit groups; interest groups; membership groups. Resources are a factor as well as the incentives at the district and state levels to use research and evidence. We also have an opportunity and an ability to share that wasn't there previously, thanks to new technologies. We have more sources with a greater opportunity for robust data collection and analysis than in the past.

¹ In Bryk and Gomez' [Networked Improvement Communities model](#), communities of multiple stakeholders with similar challenges share their problems of practice, experiments, quick-cycle prototyping, and results. The structure facilitates scaling up promising practices as a result of the continuous cycle of experimentation, gaining data, and using the data for continuous improvement in future iterations.