

Project Status and Plans for 2014-2015; Accessibility Design, Development, Evaluation, and Data; Voices from the Field

Rachel Quenemoen

May 14, 2014



National Center and State Collaborative

The contents of this product were developed under a grant from the Department of Education (PR/Award #: H373X100002, Project Officer, Susan.Weigert@Ed.gov). However, the contents do not necessarily represent the policy of the Department of Education and no assumption of endorsement by the Federal government should be made.

NCSC Overall Timeline

January 2011-October 2015



National Center and State Collaborative

Year 1 (2011): Content Model Phase: Define model of domain learning in math/ELA for these students, identify prioritized content for assessment

Year 2 (2012): Principled Design Phase: Design Patterns, Task Templates, C/I/PD design and pilot; Technology architecture design

Year 3 (2013): Item and Test Development Phase: Task Template Tryouts, Item Specs/item development/item reviews, Draft grade level PLDs, finalize pilot/field design, Technology Platform

Year 4 (2014): Pilot, Field, Research Phase:

- **Pilot Phase 1: National Sample, generate item statistics Winter/Spring 2014; Item Evaluation Studies – Writing, Accessibility, Student Interaction Studies,** Finalize blueprints, revise items, assemble forms
- **Phase 2: Field Test Forms Fall 2014,** finalize administration training and supports

Year 5 (2015): Operational administration of NCSC assessments

- Summer 2015: Set Standards
- Fall 2015: Technical report complete

Long-term goal:

To ensure that students with the most significant cognitive disabilities achieve increasingly higher academic outcomes and leave high school ready for post-secondary options.

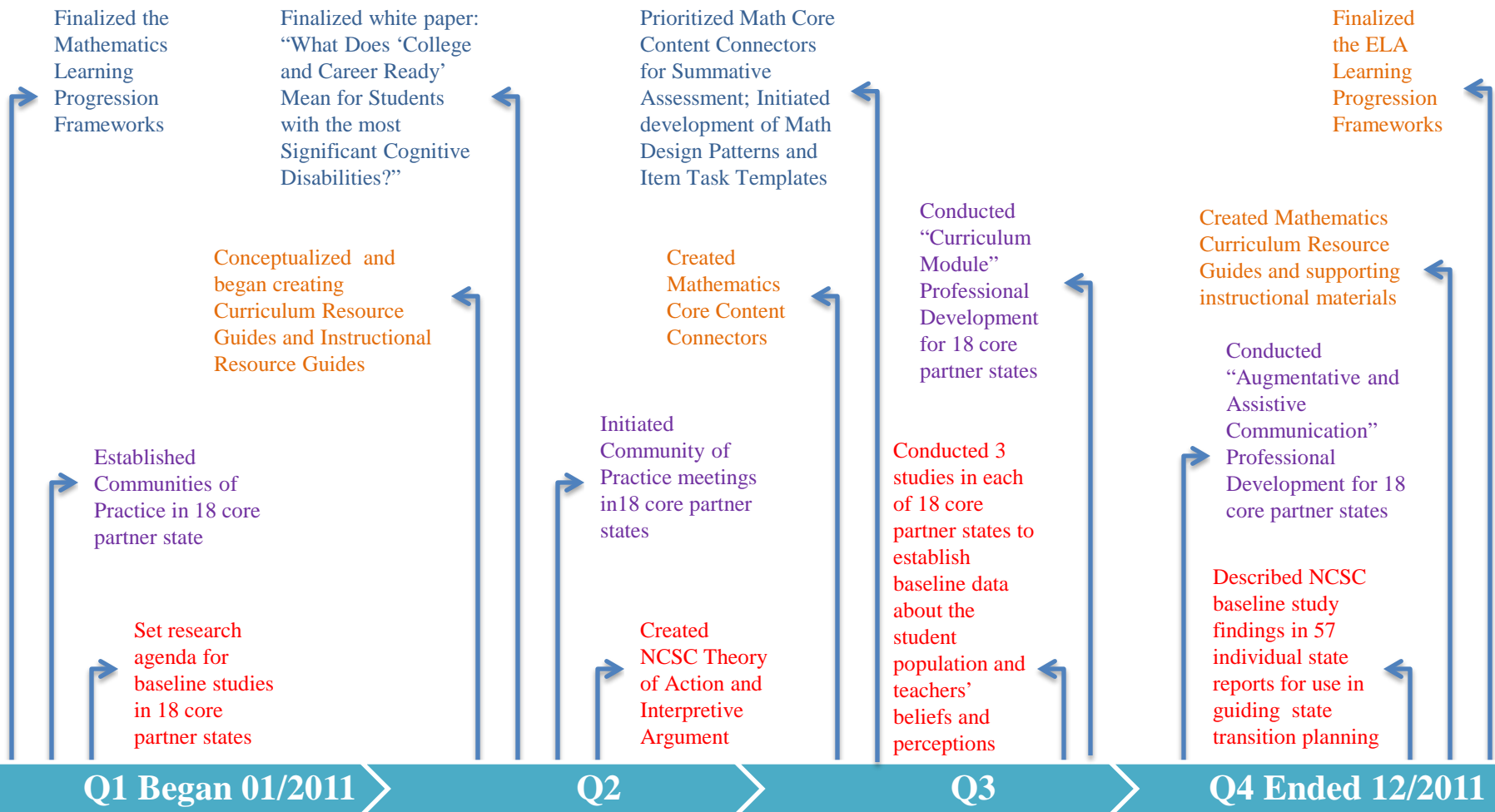
A well-designed summative assessment alone is insufficient.

To achieve this goal, an AA-AAS system also requires:

- Curricular & instructional frameworks
- Teacher resources and professional development

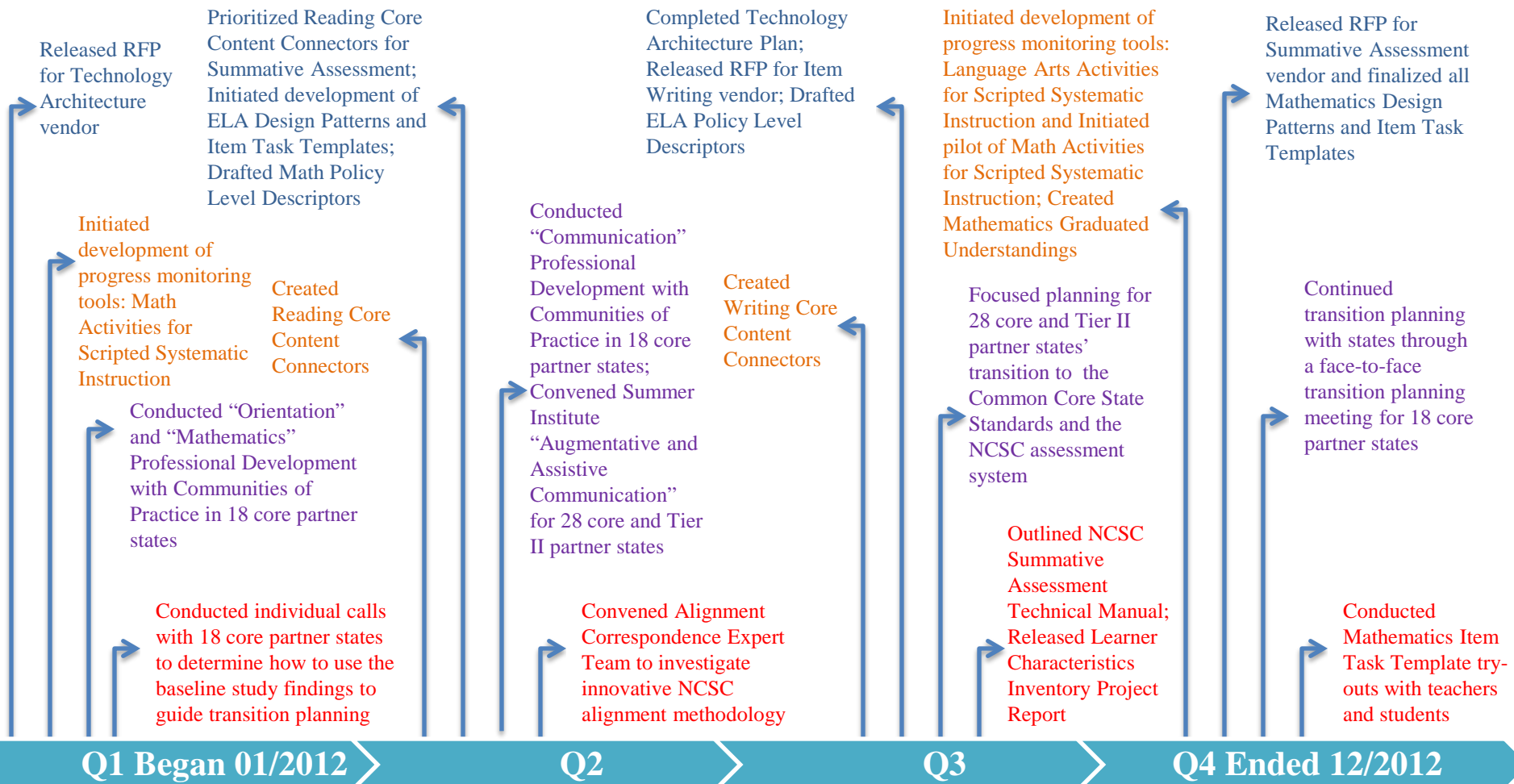
National Center and State Collaborative Major Activities in Year 1

The National Center and State Collaborative (NCSC) is building an assessment system based on a research-based understanding of: a) technical quality of the design of alternate assessments based on alternate achievement standards, b) formative and interim uses of assessment data, c) summative assessments including items derived through an Evidence-Centered Design process, d) academic curriculum and instruction for students with the most significant cognitive disabilities, e) student learning characteristics and communication, and f) effective professional development.



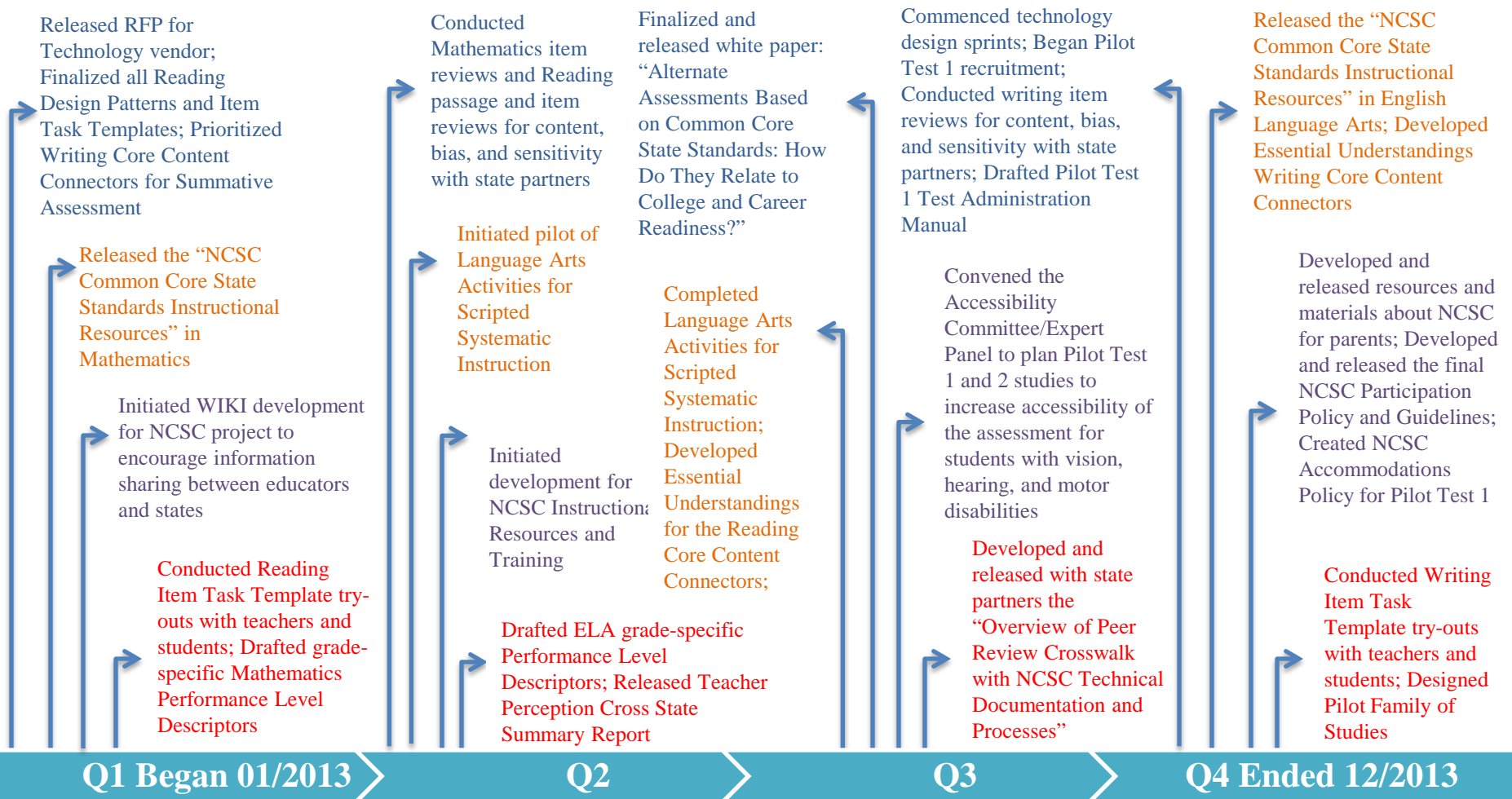
National Center and State Collaborative Major Activities in Year 2

The National Center and State Collaborative (NCSC) is building an assessment system based on a research-based understanding of: a) technical quality of the design of alternate assessments based on alternate achievement standards, b) formative and interim uses of assessment data, c) summative assessments including items derived through an Evidence-Centered Design process, d) academic curriculum and instruction for students with the most significant cognitive disabilities, e) student learning characteristics and communication, and f) effective professional development.



National Center and State Collaborative Major Activities in Year 3

The National Center and State Collaborative (NCSC) is building an assessment system based on a research-based understanding of: a) technical quality of the design of alternate assessments based on alternate achievement standards, b) formative and interim uses of assessment data, c) summative assessments including items derived through an Evidence-Centered Design process, d) academic curriculum and instruction for students with the most significant cognitive disabilities, e) student learning characteristics and communication, and f) effective professional development.



Looking Ahead...2014

Pilot Items and Test Forms, Research Phase



National Center and State Collaborative

Spring 2014	<ul style="list-style-type: none">➤ Pilot All Mathematics and ELA Items (Phase 1)➤ Evaluate Writing Items and Rubrics
Summer 2014	<ul style="list-style-type: none">➤ Generate Item Statistics➤ Item Data Review with SEAs➤ Finalize Blueprints, Revise Items, Assemble Forms, including Accessibility Form
Fall 2014	<ul style="list-style-type: none">➤ Pilot Test Forms for Operational Administration (Phase 2)➤ Finalize Administration Training and Supports

Looking Ahead...2015

Operational Administration of NCSC Assessments



National Center and State Collaborative

Winter 2015	<ul style="list-style-type: none">➤ Training for Test Administrators➤ Alignment Study for Items Selected for Operational Forms
Spring 2015	<ul style="list-style-type: none">➤ Administer Operational NCSC Assessment➤ Hand Score Writing Items
Summer 2015	<ul style="list-style-type: none">➤ Conduct Standard Setting➤ Release Scores for Operational Assessments➤ Standard Setting Study
Fall 2015	<ul style="list-style-type: none">➤ Complete Technical Manual➤ Complete NCSC Alternate Assessment Validity Argument

- Math and ELA forms, 30 items each in 8 forms
 - 16,000 tests assigned across 17 states
- Mid April through May 23
- Entire item bank being piloted
- Family of related item and testing evaluation studies occurring simultaneously
- Pilot 2 in mid-October-November to test final forms, special form, approximately 16,000 students

Accessibility as central to our test validity argument



National Center and State Collaborative

- Accessibility to the academic content through the C & I materials and PD support (CoPs) to teachers to better understand expectations of student learning as a way to provide access to the assessed content.
- Learner characteristic inventory baseline
- Teacher perceptions of the students baseline
- Assemble “evidence of what students demonstrate with reasonable OTL” or systematically create it through small trials

- Conceptual phase: How the students and the content come together to design the observations of their learning and to understand the range of current performance
- Design phase: a. Design Patterns; b. Task Templates – extensive information on variable features related to content being measured for EACH item family; scripted administration protocols for each item within a family
- Existence proof phase: Task Template Tryouts

Stakeholder/expert Procedures



National Center and State Collaborative

- Item Writing Guidelines Documents: i. Visual supports; ii. Graphic Style Guide; iii. Editorial Style Guide; iv. Alternative Text
- Item development and stakeholder review: a. Item and passage development process; b. Item review process - i. Content, ii. Bias/sensitivity; c. APIP/UDL review

Policies and training on additional needs



National Center and State Collaborative

- Accommodations Committee, policies, training
- Accessibility Committee:
 - a. Analysis of Item Bank for sensorimotor barriers
 - b. Expert Panel with Stakeholder input, redesign of items and item protocols
 - c. Design of Pilot 1 and Pilot 2 studies
 - d. Recruit teacher/school confederates

Families of Studies Pilot 1



National Center and State Collaborative

- Pilot 1 large-scale administration – Accessibility Addendum plus event log for test administrators to flag barriers, propose alternatives, survey;
- Pilot 1 Technology User Testing, including Assistive Technology compatibility testing;
- Pilot 1 small-scale tryouts – i. Item revisions (e.g., tactile graphics, object substitutions, Braille), ii. Test administrator protocols for students with sensorimotor disabilities

Supporting Data for Pilot 1 Analyses, Next Steps



National Center and State Collaborative

- Student Interaction Studies – investigate student and teacher interaction with the items through the technology platform (cognitive labs)
- Data analyses as part of Pilot 1 revisions, recommendations on forms construction
- Pilot 2 Accessibility studies: a. Forms construction and piloting; b. Fidelity of administration; c. Teacher surveys to identify unmet needs

Across all NCSC partner states, approximately 65% of students could read written text or Braille:

- 39% of students read basic sight words, simple sentences, directions, bullets, and/or lists in print or Braille
- 22% of students could read fluently with basic, literal understanding ; and
- 4% of students across all NCSC partner states could read fluently with critical understanding in print or Braille;

However, 16% of students had no observable awareness of print or Braille.

- That leaves @ 19% just beginning to build reading skills

“They were very easy for him to follow along. In fact I thought a couple of them he probably could have read [himself]... I felt like it was pretty much on target. You’ve got some that are kind of easy, so that to me was helping him build his confidence. I’m sorry, I get so emotional, I’m just thinking – this is what I want for my kids! Then you have something that’s a little harder, a little more challenging, and he was willing to keep rolling with it. Whereas if you hit them right off with something hard, our kids will get discouraged and they may not put forth the effort, and we want them to put forth the effort to finish the test, because we want to see where they are so we can meet those needs. So I thought it was a great variety... You all saw, when he walked away he was feeling good.”

SIS teacher on the cognitive processes targeted by the items:

“What [the test] asked was really reinforcing what he’s learning and the way that he’s learning throughout the year in all of the classes with reading. I felt like it was right on target with how he processes information and how he’s being taught.”

“I think the responses were good, because they weren’t confusing. They stuck to the text... I think the pictures helped. You know it’s hard for our kids who don’t read. They need the pictures.”

SIS teacher on student engagement with the passages:



Center and State Collaborative

- “She was real engaged. She did really well. She followed along as I was reading, she was really engaged the whole time... [Interviewer: What did she say about the photo of the Lincoln Memorial?] She said, ‘he’s dead now.’ We did a unit back in January about Lincoln – she made that connection.”
- “With her it can be difficult to tell. I don’t know if I could say whether she was engaged but she did pick up on certain words and relate those to her life.”

NCSC LCI BASELINE DATA

MATH



National Center and State Collaborative

In mathematics across all NCSC partner states, 66% of students are actively engaged in mathematics:

- 42% of students performed computational procedures with or without a calculator;
- 26% of students could count with 1:1 correspondence to at least 10,/or made numbered sets of items;

However, 15% of students reportedly had no observable awareness or use of numbers

- That leaves @17% just beginning to use numbers

SIS teacher on difficulty of items:



National Center and State Collaborative

“Yes. I do think that questions vary in difficulty. I also noticed that some questions had more answer choices than others. Some had two answer choices, and some had three answer choices, and that alone makes some things more difficult than others. And then I also noticed that if a child was listening and following through the question, that they would be able to identify the answer, because they had all the tools there needed to do that. And then I noticed that with others, they would have to bring some prerequisite skills with them to be able to solve for the answer, and—so, I mean, that's—that's obviously a greater gap than what the student had to know.”

SIS teacher on the cognitive processes used and exposure to testing (paper/pencil administration):



National Center and State Collaborative

“I think that the structure of the problems themselves allow for that cognitive process to occur, but once again I think the reason why... he struggled was because he had not been exposed to this type of testing or how the questions were laid out, so if he had some exposure, I think that... his cognitive process would have been a lot stronger.”

SIS teacher on whether content was age and grade appropriate:

“I definitely think it was age and grade appropriate. [Pause] I try very much in my classes to keep it age and grade appropriate, and make sure that it is rigorous enough, and make sure that they are comfortable and confident in it, because if they’re doing anything that they think is baby work, they won’t do it at all. So I think when it’s presented in a way and the content is age appropriate, I think they feel very good about themselves... So I think the problems [items] reflected those things that they would also address in regular classes.”

SIS teacher on student's familiarity with content:



National Center and State Collaborative

“I feel like we’ve touched on everything that was presented, particularly the mean - maybe I’ve presented it in a different way... because I know that he knows that. And maybe it’s just that he relies on certain visual cues in the worksheets that I give him or something like that, but as far as exposure to line graphs and mean, maybe not so much line plots, um, or the number lines, data on the number lines.” ... “We’ve done things like line plots, and graphing that way and obviously he uses number lines when he does computations sometimes, but having a question revolved around a number line, I’ve never taught anything about that, so I think that was kind of foreign to him.”

Accessibility Confederate Teacher Observations



National Center and State Collaborative

- The reading passages are long and students would benefit from strategies to engage and comprehend. For example:
 - Repeating a phrase
 - Cueing to look at sign with explanation
- Some math items and graphics are visually and tactilely complex"
- Students who have vision impairments:
 - require familiar symbols and objects and
 - need objects, tactile symbol, or some other way to respond to the answer options.

Accessibility Confederate Teacher Advice on Protocol



National Center and State Collaborative

- General guidance for students with vision and hearing impairments is helpful.
- Examples of how to enhance graphics and suggested signs would be helpful.
- Specific guidance on the types of enhancements is needed to maintain validity.
- Some items may need specific guidance for administration fidelity and full accessibility for students with visual impairments.
- A kit of tactile graphics and objects would be preferable.
- Possible materials list and directions on how to provide additional enhancements to items would also be helpful.

Starting from the beginning, again



National Center and State Collaborative

- Professional development modules in the NCSC Professional Development library for providing instructional access for sensorimotor issues including the development of tangible symbol systems for communication, using and presenting tactile representations (e.g., tactile graphics, tactile symbols, or object replacements).
- Accessing the CCSS in the context of grade level instruction, multiple methods

Overall testing experience



National Center and State Collaborative

I'm TEACHER NAME, a special education teacher at SCHOOL IN STATE and I just completed the NCSC Alternate Assessment with my student that qualified to take it. I just want to give a HUGE THANK YOU for allowing me the opportunity to complete the pilot. I thought it was a very user friendly manner for being the first time administering it and the training helped a lot. I'm very thankful that the state is adopting this for our way to assess the students instead of the other way. I was nervous at first, but after completing it I realized how incredibly less stressed I felt!!!

NCSC Technology: Customized Open Source



National Center and State Collaborative

- Compliant with commonly used AT/AAC devices
- Paper & pencil alternative delivery
- Verify student profile LCI/PNP data
- Hand scoring/interaction for teachers
- Keyboard only navigation
- Adaptive testing features
- Accessibility features (e.g., Text to speech, magnification, high contrast)
- Upload evidence for an item feature
- PD training, survey, practice tests
- Federally funded and open source system/content available to all schools and states without licensing fees

Standards Used in Development of the NCSC Delivery Solution

- QTI APIP – Item and accessibility content
- SEDS – Data standard for student and results data
- HTML5 – Web standard for cross-browser and platform support
- SQL – Data standard to allow other systems to access student performance data
- LTI – could be used in the future to launch formative tests from the platform

Recommendations from: *A brief history of alternate assessments based on alternate achievement standards*. Quenemoen, R. (2008).



National Center and State Collaborative

1. **Transparency.** We need to know what varying practices and targets yield for student outcomes by ensuring that assessment development, implementation, and results are transparent and open to scrutiny.
2. **Integrity.** Flexibility can mask issues of teaching and learning unless it is carefully structured and controlled. Similarly, standardization as a solution risks reducing the integrity of the assessment results when the methods do not match the population being assessed and how that population demonstrates competence in the academic domains.
3. **Validity studies.** We have an obligation to monitor carefully the effects of alternate assessments over time, as well as to ensure the claims we are making for the use of the results are defensible.
4. **Planned improvement over time.** In building a validity argument, we study whether the interpretations and uses of the test are defensible, and whether consequences that are hoped for and those that are to be avoided are in fact falling into their respective places.

VOICES FROM THE FIELD: The curriculum and instruction side of our NCSC Theory of Action!

Functional, social, and academic goals merged



National Center and State Collaborative

- NCSC professional development and materials have encouraged bridging the gap between a traditionally exclusively functional curriculum to providing my students with more opportunities to access the general education curriculum. Teacher comments taken From 2014 External Evaluation of NCSC Classroom Resources
- I just need to share some successes with *The Pearl* and *Marcelo in the Real World* LASSIs [Language Arts Activities for Scripted Systematic Instruction]. A non-verbal freshman student came to us with functional goals: matching, identifying common objects. She is not only doing those things, but is answering all of the questions on both LASSIs using the visuals with 80-100% accuracy with no prompting. I have never been so happy to rewrite an IEP in my life. Submitted by teacher in NCSC state
- One of the students for whom I kept data was going home and talking about *The Pearl* so the family bought the book and they all read it. They were able to have conversations about the book and their son with Down syndrome participated. Submitted by teacher in NCSC state
- I like how the standards and activities that are being developed tie in real world activities and examples. Teacher comments taken From 2014 External Evaluation of NCSC Classroom Resources

Higher expectations, higher achievement



National Center and State Collaborative

- Through the initial training I received I have changed my whole classroom philosophy. I have always set high expectations for my students and this training just raised the bar.
- Gives the students a sense of achievement when they do well and are able to answer the questions.
- I expanded my professional knowledge, including the impact of challenges that could be faced by some of my students when they get older and make slower progress in the general curriculum.
- Students are now being challenged with higher curriculum.
- Students performed better during the alternate assessment exams. They were more focused during the lessons and were able to monitor their own progress to some extent.

Teacher comments taken From 2014 External Evaluation of NCSC Classroom Resources

Learning how to learn



National Center and State Collaborative

- As I read *The Pearl* and *now Marcelo in the Real World*, I have been stopping when I get to one of the vocab words and saying "I don't know that word. I wonder what it means!" If they remember from the vocab introduction we talk about it and keep reading. If they don't, the students go to dictionary.com and we look it up. Then we refer back to the vocab and picture to make a connection. Many of the students are now stopping and asking "What does that word mean" when they are reading independently or when listening to someone else read and will say "We better look it up". That has never happened before. Submitted by teacher in NCSC state

Motivation and engagement



National Center and State Collaborative

- Another student who has difficulty saying 2 syllable words, was able to say "geographical order" perfectly after we practiced it a few times. His speech therapist was in the room at the time and was blown away. He was so motivated to keep trying to say it. The students also understand what it means and we now talk about passing out papers in "geographical order." Submitted by teacher in NCSC state
- I taught a couple sessions in a Teaching Language Arts Class to interns working on their teaching credentials in Spec. Ed. One of them teaches Grade 1-3 and took the blank LASSI template I created and went home after class on Thursday night and made visuals for the book *The Boy with Pink Hair*. She has a class of students with autism: some low functioning, some behavioral issues. She was able to keep them engaged for almost an hour and every one of her students was responding at a higher level than ever before. Submitted by teacher in NCSC state (LASSI: Language Arts Activities for Scripted Systematic Instruction)

Raising the System's Bars!



National Center and State Collaborative

- Something else happened today that you will be interested in. XXX, which is the accreditation team, was visiting our school. My class is operated by the County, but I am on a district school campus. In their report, XXX stated that the county special education program (us) had a much more rigorous curriculum than the district program. It was all because of the LASSI. One of the team members was director of special education from a county in [Northern part of state] and he was amazed at the vocabulary and the content the students were able to handle. All of your hard work is paying off big time. Just wait until more teachers have access. Submitted by teacher in NCSC state (LASSI: Language Arts Activities for Scripted Systematic Instruction)