SCILLSS QUARTERLY NEWSLETTER

Introduction to SCILLSS

The Strengthening Claims-based Interpretations and Uses of Local and Large-scale Science Assessment Scores (SCILLSS) project is funded by the US Department of Education's Enhanced Assessment Instruments Grant Program. As lead state and grantee, the Nebraska Department of Education is working in collaboration with two other state education agencies (the Wyoming Department of Education and the Montana Office of Public Instruction), four organizations (edCount, ACS Ventures, SRI International, and the Pacific Institute for Research & Evaluation (PIRE)), and a technical advisory panel of 10 experts that contribute an essential combination of expertise in principled-design, measurement, assessment literacy, and classroom practices to support the implementation of this project.

Project Purpose

The SCILLSS project aims to strengthen the knowledge base among stakeholders for using principled-design approaches to create and evaluate quality science assessments that generate meaningful and useful scores, and to establish a means for states to strengthen the meaning of statewide assessment results and to connect those results with local assessments in a complementary system.

SCILLSS Quarter 2 News & Highlights

What We've Been Up To

In June 2017, project partners met in Lincoln, NE for an initial project kick-off meeting to establish a shared understanding of SCILLSS project goals, roles and responsibilities, deliverables, and timelines. During this two-day meeting, state and organizational partners discussed the purpose and plan for involvement of local educators and technical advisory committee members in SCILLSS activities and reviews, and discussed the application of principled-design as an approach to assessment development, including how a Theory of Action fits within a principled-design approach. State and organizational partners used this time to understand characteristics and contexts of state science assessment systems and how those systems can benefit from shared project outcomes and to develop preliminary drafts of state-specific and common project Theories of Action. During this quarter, ACS and edCount continued development of the state-specific and common project Theories of Action via a series of virtual review periods, and continued development of the local needs assessment protocol and digital workbook on educational assessment, which are being designed as complementary assessment tools.

State-specific and Common Project Theories of Action

A state's assessment system should be set up in a way that demonstrates that the end goals of the system were thought about during the design and development phase. Principled-design is a disciplined approach aimed at designing assessment systems while keeping in mind the inferences end users wish to make based on test scores. This approach to assessment development can be illustrated through a Theory of Action, which demonstrates the claims and assumptions that must hold true to support the interpretation(s) and use(s) of assessment scores.

During Quarter 2, each state in the SCILLSS project reviewed and revised their state-specific Theory of Action drafted for their use, which contributed to the development of a common project Theory of Action that reflects the processes, activities, and desired outcomes shared by the participating states. edCount drafted a Theory of Action crosswalk to show the similarities and differences in claims represented in Wyoming's, Montana's, and Nebraska's Theories of Action. From this crosswalk, edCount identified the commonalities for each assessment program and developed a draft common project theory of action to inform subsequent project activities and generalizable deliverables. These ToAs will allow the three states and project partners to reflect on how the project and state assessment systems function, and will guide states through each of the project activities.

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Local Needs Assessment Protocol

During Quarter 2, ACS Ventures continued development of the local needs assessment protocol to focus on four key validity questions for responsible test users to consider. The four key validity questions are each supported by *the Standards* (AERA, APA, & NCME, 2014), and are necessary to guide the collection of evidence to support or refute the validity of interpretations and uses of assessment scores.

The local needs assessment protocol is meant to provide a framework for educators at a school, school district, or local system level to use in considering how to best implement an assessment system. It is designed to focus on assessments that are state- or district-mandated as well as those that teachers select and use in their classrooms. The protocol provides four steps for implementation: 1) articulate your current and planned needs for assessment scores and data, 2) identify all current and planned assessments, 3) gather and evaluate the evidence for each assessment, and 4) review the evidence across assessments to determine an appropriate path forward.

Key Validity Questions
Construct Coherence: Has the test been designed in such a way to ensure that the content of the test is consistent with your state standards and the curriculum in the classroom? In other words, to what extent does the test as designed capture the knowledge and skills defined in the target domain?
Comparability: Are the test scores reliable and consistent in meaning across all students, classes, and schools? Do the test scores mean the same thing for all students, regardless of which year the student takes the test or the exact test form that is taken? Are the test scores free of random measurement errors, and dependable and consistent for individuals and test takers?
Fairness and Accessibility: Are <u>all</u> students able to complete the test and to fully understand the concepts being assessed? Are <u>all</u> students able to demonstrate what they know and understand in school and within the current curriculum?
Consequences and Use: Does the test yield information that is used appropriately within a system to achieve specific goals? Does the use of test scores lead to positive consequences for students, schools, and teachers?

Digital Workbook on Educational Assessment Design

During Quarter 2, project partners continued development of the first digital workbook on educational assessment design. This digital workbook will complement the local needs assessment protocol by focusing on topics and issues necessary for state and local educators to consider to be critical consumers of assessments and assessment information. It will include guiding questions and background information that aids the user in understanding the characteristics and relationships among various components of an assessment system, as well as in considering the ways in which to communicate and make decisions about the assessments in support of larger system-wide goals for student achievement.

Dissemination

Representatives from the state and organizational partners attended two conferences in September, including the National Council for Measurement in Education (NCME) Special Conference on Classroom Assessment and the Reidy Interactive Lecture Series (RILS) to share updates about SCILLSS, learn about NGSS assessment development issues and updates from the field, and contribute to shaping the discussion around NGSS instruction and assessment. The SCILLSS presentation for NCME is posted to the SCILLSS website resource page at http://www.scillsspartners.org/scillss-resources/. Information and resources from RILS can be retrieved at https://www.nciea.org/annual-conference/past-events/2017-reidy-interactive-lecture-series.

What's Next?

During Quarter 3, SCILLSS partners will pilot the local needs assessment protocol with a sampling of local school districts in Montana, Nebraska, and Wyoming, and will continue development of the state needs assessment protocol and the digital workbook on educational assessment design. Project partners will apply revisions to the local needs assessment protocol and digital workbook based on feedback from the pilot study; once finished, they will facilitate a virtual review of the materials with technical advisory committee members. SCILLSS science experts will conduct a standards crosswalk to identify the commonalities between Nebraska's, Montana's, and Wyoming's state science standards, and will begin to conduct domain analysis and modeling activities to inform the development of the SCILLSS evidence-centered design science assessment resources.

Contact Us!

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