LESSONS LEARNED FROM THE 2012 GRADE 4 WRITING COMPUTER-BASED ASSESSMENT STUDY

Computers are becoming increasingly important in today’s classrooms as tools for both teaching and learning, but little is known about the knowledge and skills of elementary students in large-scale computer-based writing assessments. The 2012 grade 4 writing computer-based assessment study was conducted in public and private schools to study if fourth-grade students could effectively demonstrate their writing knowledge and skills during a computer-delivered assessment.

Lessons learned from the study can inform future development of technology-based assessments as well as shed light on what fourth-grade students know and can do. Additionally, the study was able to provide insights on students’ use of editing tools to compose their responses. Results suggested that fourth-grade students varied in their ability to write using the computer, and that while some features seemed intuitive to students, others were more difficult to access. As a result of the usability study, some features of the original testing platform were improved to better meet the needs of fourth-grade students.


WHAT’S HAPPENING IN THE WORLD OF NAEP FOR PRIVATE SCHOOLS?

SPRING/SUMMER 2014
• The NAEP 2014 assessments were scored in scoring centers across the country

MAY–OCTOBER 2014
• Private schools selected for the NAEP 2015 assessments are notified and begin preparing for the assessment

JULY 2014
• Lessons Learned report from the 2012 grade 4 writing computer-based assessment study was released

FALL 2014
• Vocabulary results from the NAEP 2013 Reading assessment will be released

WINTER 2015
• Paper-and-pencil and technology-based assessments will be administered to private school students in grades 4, 8, and 12 in mathematics, reading, and science
## NAEP 2015 ASSESSMENTS

The National Assessment of Educational Progress (NAEP) is the largest nationally representative assessment of what our nation’s students know and can do in subjects such as mathematics, reading, science, and writing. The results of NAEP are released as The Nation’s Report Card.

In 2015, NAEP will begin to transition the mathematics, reading, and science assessments from paper and pencil to technology-based assessments. Some schools will take the traditional paper and pencil assessment, while other schools will be asked to take a pilot technology-based assessment on tablets. Results will only be released for paper and pencil assessments. Each student will take NAEP in one format and one subject only, and NAEP representatives will bring all necessary materials and equipment to schools. Schools will only need to provide space for the assessment, desks or tables, and an adequate number of electrical outlets in the location (if necessary); schools will not need to provide Internet access.

<table>
<thead>
<tr>
<th>Paper and Pencil Assessments</th>
<th>Pilot Technology-Based Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjects</strong></td>
<td>Mathematics, reading, and science</td>
</tr>
<tr>
<td><strong>Grades</strong></td>
<td>4, 8, and 12</td>
</tr>
<tr>
<td><strong>Results</strong></td>
<td>Results will be available</td>
</tr>
<tr>
<td></td>
<td>for public and private schools.</td>
</tr>
<tr>
<td></td>
<td>Information collected</td>
</tr>
<tr>
<td></td>
<td>from the pilots will not be</td>
</tr>
<tr>
<td></td>
<td>released but will be</td>
</tr>
<tr>
<td></td>
<td>used to prepare for</td>
</tr>
<tr>
<td></td>
<td>future assessments.</td>
</tr>
</tbody>
</table>

### NAEP’S TRANSITION TO TECHNOLOGY-BASED ASSESSMENTS

As computers and digital tools play an increasingly important role in today’s classroom, NAEP is advancing with technology-based assessments. In 2015, NAEP will administer pilot technology-based assessments in mathematics, reading, and science. NAEP’s goal is to be paperless by the end of the decade. Through innovative assessments described below, NAEP is collecting new types of data that provide depth in our understanding of what students know and can do, including how they engage with technology to approach problem solving.

#### TECHNOLOGY AND ENGINEERING LITERACY (TEL) ASSESSMENT

TEL is a new frontier for NAEP and large-scale assessment. It is a computer-based, cross-curricular assessment that challenges students to perform interactive tasks and engage in solving problems within realistic scenarios. TEL gauges how well students understand and apply technology and engineering principles to real-life situations. The TEL assessment was administered to eighth-grade students in winter 2014 and results will be reported in spring/summer 2015. To learn more about TEL, visit http://nces.ed.gov/nationsreportcard/tel.

### WRITING ASSESSMENT

The writing assessment is administered on a computer and asks students to respond to writing prompts delivered in multimedia formats, including short videos and audio. In addition to writing scores, assessment results provide information about the extent to which students engaged in certain actions on the computer as they responded to these tasks, such as thesaurus tool usage. The first computer-based writing assessment for which results were reported was administered at grades 8 and 12 in 2011. Results and contextual information are available at http://nces.ed.gov/nationsreportcard/writing.

### SCIENCE INTERACTIVE COMPUTER TASKS (ICTs)

The NAEP science assessment includes ICTs that challenge students to solve scientific problems and perform experiments, often by simulation. ICTs provide students more opportunities than a paper and pencil assessment to demonstrate skills involved in doing science, without many of the logistical constraints associated with a natural or laboratory setting. The full library of released ICTs from the 2009 assessment is available at http://nationsreportcard.gov/science_2009/ict_tasks.asp. Pilot science ICTs will be administered as part of the NAEP 2105 assessment program to inform planning for future ICTs.
THE NAEP QUESTIONS TOOL

What Is the NAEP Questions Tool?
Each time NAEP releases the results of a subject-level assessment, a portion of the questions used in the assessment is released to the public via the NAEP Questions Tool (NQT). The NQT provides access to more than 3,000 released questions from NAEP assessments across all NAEP subject areas. Users can search questions, look at performance data, and test themselves using NAEP questions. The tool also allows users to create their own customized assessments, create rosters, and save tests for future use.

New Feature – Results for Private Schools
For the first time, results for NAEP items in the NQT are now available for private schools. NQT users can quickly and easily compare private and public school student results for hundreds of NAEP items.

Accessing Results for Private Schools
- Visit the NQT website at http://nces.ed.gov/nationsreportcard/nqt
- Select “Search NAEP Questions”
- Select the subject and grade (for example, mathematics and grade 4)
- Choose the types of questions by content, type, difficulty, and year and then select OK
- Select the box next to an item and then select “Show Question”
  – At this stage, you can see the actual NAEP item, the key/scoring guide for the item, view sample student responses (for constructed-response items), and view performance data
- Select the tab “Performance Data”
- To compare private and public school results for the item, select “Table” and then “Report Options”
- Deselect “National” and then select “National Public” and “National Private” and then select “View Table”
- Results for the NAEP item are now displayed for private and public school students

Sample Results for Public and Private Schools
In the graph below, 75 percent of national public students selected the correct answer and 82 percent of national private students selected the correct answer.

In this interview, we talk with Donna Biggerstaff, a NAEP field director based in North Carolina whose primary responsibilities have included the recruitment of private schools for NAEP. Field directors oversee a large team of field staff (field managers, field supervisors, assessment coordinators, and assessment administrators) and ensure that the NAEP assessment runs smoothly and uniformly across the country.

What is the most satisfying part of your job? What is the most challenging?

Being a part of the effort securing private school participation is very rewarding. Reporting the private school data for NAEP makes a difference in the profile of educational progress presented each year. Sometimes it is a challenge to make all the NAEP puzzle pieces fit at each school. School coordinators and NAEP representatives have to be creative to work with the schools’ busy calendars, daily schedules, space limitations, and other special and ongoing projects to make NAEP happen in a school.

What are the roles and responsibilities of a NAEP field director?

My role in gaining cooperation of private schools involves many things. My primary focus is hiring and training the school recruiters and serving as a liaison between field managers, the private schools, and the NAEP home office staff when special considerations are needed within a school to make the puzzle pieces fit. So, I get the best of all worlds.

Who are the people private schools are likely to meet throughout the NAEP cycle?

Although at this point I do not work directly with many schools, I work very closely with the people who do. Those folks are the gaining cooperation recruiters and the assessment supervisors, all great people eager to make NAEP a success at each school. I am thankful for the opportunity to work with people who mean it when they say, “I will do everything I can to make this assessment run seamlessly in your school.”

For more information on private school participation in NAEP visit: http://nces.ed.gov/nationsreportcard/about/nonpublicschools.aspx