

## Smarter Balanced accessibility for educational teams of students who are blind

### Overview

In the past, the California Department of Education provided Braille transcriptions of state tests through the Clearinghouse for Specialized Media & Translations (CSMT). With Smarter Balanced testing being presented via computer, there is no option to receive an embossed Braille version of the test prior to testing day.<sup>1</sup>

*With no embossed Braille, how does a student who is blind access the test?*

First, it is important to reflect on this... having something read aloud is not giving access if other students are able to see it in print. Physical Braille (either embossed or refreshable Braille display) and accessing tactile charts and diagrams is the presentation of material that is needed to give a blind student the chance to look at the information and process it. While other students look at a print map to answer questions. The blind student cannot have the map described and then be able to answer with the same level of thoroughness as his classmates.

Smarter Balanced requires a specific set up of technology.

#### Technology Requirements and Configuration<sup>2</sup>

Prior to administering assessments using the braille interface, TAs must ensure that the technical requirements listed below are met. These requirements apply to the student's computer, the Test Administrator's computer, and the supporting braille technologies used with the braille interface.

##### Requirements for Student Computers

- The Student Practice Test Site currently supports the braille interface on Windows 7 machines only.
- JAWS Screen Reader (version 12, 13, or 14).
- A braille display that is compatible with Windows 7 and JAWS. We recommend that the braille display have a minimum of 40 cells.

##### Requirements for Test Administrator Computers

TAs administering tests to students who require braille must have the following software installed on their machine prior to testing. The software is necessary to process these students' print requests.

- Tiger Max Embosser and the supporting ViewPlus Desktop Embosser driver

The Desktop Embosser Driver can be downloaded from <http://downloads.viewplus.com/drivers/desktop-braille-embosser/>. The download includes the Tiger Viewer software, which is needed to handle print requests for items and passages that contain tactile or spatial components.

- Duxbury Braille Translator 11.1

This software allows printing of items and reading passages (without images) and can be downloaded from <http://www.duxburysystems.com/dbt.asp?product=DBT%20Win>.

The way we understand testing happens is that the student accessing the test with JAWS and a Braille display would get to a test item with a graphic and would complete "print request" from within test screens. Administrators would then use their set up to emboss the graphic on the spot.

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<sup>1</sup> A teacher in another county attempted to go through an alternative materials provision but was told that no version could be supplied. Details on this note can be retrieved if needed.

<sup>2</sup> [Smarter Balanced Assessment Consortium](#): Practice and Training Test User Guide, Updated February 14, 2014, retrieved on-line.

## Smarter Balanced Accessibility for Blind Students

### Discussion

The technological hurdle is steep. For older students, this technology is familiar but may not exist in the form set out by Smarter Balanced. An example of this is our middle school student who is totally blind. He does use JAWS and a PC. He uses the QWERTY keyboard when accessing it. He uses a Braille notetaker with refreshable Braille display for a majority of reading and writing. He can use this device to go on-line, email, write reports, access books, etc. He uses textbooks supplied by CDE or ordered from Braille transcribers. These books and supplemental tactile materials include the graphics need to access his 8<sup>th</sup> grade curriculum. They have a Braille embosser on site but it only embosses Braille and does not create tactile graphics (these machines are costly and may not be in smaller districts or even bigger districts). This student is technologically savvy. This student and his teacher are attempting the test by connecting his Braille Note to the PC as they do not have the 40 refreshable Braille display that connects to the computer. Here is her description of the tech issues they encountered.

SBAC with an 8th grader who uses Braille

April 10, 2014

Equipment we had:

PC with JAWS, Braille display (Apex Brailnote) and Duxbury Translator

Equipment we needed:

A second PC for Test Administrator and Tiger Embosser.

Technical difficulties:

1. Version of JAWS from newly bought CD was not the latest version and did not included the drivers we needed.

Solution: uninstalled that JAWS and installed the latest version from the internet.

2. When we connected the Apex it repeatedly shut down JAWS.

Solution: Apex must be in Braille Terminal mode before connecting USB.

3. After installing secure Browser we wanted to try a practice Braille test but you must have permission so we are still waiting for that email to be answered.

4. When we tried to sign in for the test, we received message that we must close Google chrome (which is not open)before signing in.

Called the SBAC national help line which says you must call CA help line.

While on hold for 45 minutes we called back national help and after 20 minutes they answered but would not help because we are in California.

California did answer and said they did not know why and in order to get technical help the district test coordinator from district must call back and request that the issue be bumped up to tech support.

Then I finally came up with the idea to Uninstall Google Chrome.

5. Apex battery ran low. Even though the Apex should last all day, using it connected to the PC by USB must use more battery power. Solution: Plug in APEX.

6. I don't remember reading that the student must know computer Braille in the SBAC information but when the student used literary Braille rather than computer Braille he was no longer able to continue.

Solution: Must use Keyboard to delete that number sign before you can continue.

7. No sound on slide presentation. Solution: None found. Sound check was completed successfully at the start of the test. A later sound button did work so we knew it was not our technology that was not working.

8. Big issue: no numbers are shown (even in the ELA test)so sometimes the sentences did not make sense. Math test had no numbers so test was not accessible.

9. Random words would be missing. Incomplete sentences.

10. We were unable to print (emboss Braille) because the student was using the PC for taking the test. Solution: Must have two PC computers.

## **Smarter Balanced Accessibility for Blind Students**

If we look forward to when all these issues are resolved and students are able to readily have the technology to take this test as presented currently by Smarter Balanced, older students can work toward the high level skills needed to access test. What about the youngest students?

A sighted student jumping on a computer to do test is not at all analogous to the learning needed by someone who is blind for non-visual access to a PC. Sighted kids see and use computers all the time. They intuitively understand the object and button based interface. Computer access non-visually is a series of commands and lots of words and specific computer terms. We do not need to know what the box is called that has a series of choices but a blind user must toggle through options, listen to descriptions and find the “drop down menu” or “radio button” that he is looking for. Imagine if our sighted kids had to learn to navigate a computer with only keyboard commands and listening. It's a much different process.

*What next?*

We should be trying the Smarter Balanced test with all students and provide feedback to SB and CDE. The skills and needed to take the test on-line are essential skills for our students who are blind. Most of the tools are necessary for school and beyond anyway. There are several tool options though and narrowing access to only one type of device seems inappropriate. There is great potential to help promote our students by teaching them to use this technology earlier. An age-appropriate scope and plan should be investigated to insure that the technological skills, concepts and problem solving skills just to access test are not more complicated than the subject matter being tested. Also, the idea that graphics can only be embossed at the point the student realizes he or she needs them seems counter to setting up a positive testing environment. Especially for low vision students who may be able to do part of the test and only at the point they realize they can't see a graphic would they be able to request it in large print. At the least this would create big distractions during the testing time itself. The people who are usually who can supervise and assist with this technology are Teachers for the Visually Impaired and possibly paraprofessionals. Given a TVIs caseload, it may be impossible to have all VI students take the test if a conflict in testing schedules existed.

Jerry Kuns and Julie Manning from California School for the Blind suggest all districts gather information and report back to CDE and Smarter Balanced.

### **Attachments**

1. Page 13-17 from [Smarter Balanced Assessment Consortium: Usability, Accessibility, and Accommodation Guidelines](#)
2. Accommodations Worksheet from California School for the Blind which provides a template for TVIs to approach SB testing and gather feedback

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