The Use of SMART Boards in Piloting Classroom Media Suites

Engaging students in transmedia learning and play

Betsy McCarthy, PhD
Sara Atienza
Michelle Tiu
Danielle Yumol

1.24.2012

WestEd

WestEd.org

The Use of SMART Boards in Piloting Classroom Media Suites
Engaging students in transmedia learning and play

WestEd conducted a five-month pilot test of various transmedia gaming suites for the Corporation for Pubic Broadcasting (CPB) and the Public Broadcasting Service (PBS). Transmedia gaming suites are comprised of thematically linked content presented across formats (e.g., short-form videos, online games, mobile phone activities, in-classroom digital games) and across media devices (e.g., computer, interactive whiteboards, tablets, mobile digital devices). The goals of the pilot testing were to identify early evidence of student learning and engagement with the content, to determine usability and technical issues, to provide recommendations for the next round of product development, to elicit teacher's perceptions of the suites, and to understand how transmedia gaming suites fit into the classroom environment. The use of SMART Boards was critical to the success of the pilot testing. This study found that using SMART Boards in the classroom considerably increases diverse students' engagement and interest in learning.

Key Findings

Analyses found that SMART Board usage in the classroom is associated with:

- Increased student engagement, collaborative work, and motivation
- Increased familiarity with and curiosity about different forms of technology

Analyses also found the following barriers to using SMART Boards in the classroom:

- A lack of technological infrastructure in schools
- Little or no funding for technology purchases[1]
- A lack of professional development for teachers on how to incorporate SMART Boards into their lessons

---

[1] SMART Technologies generously provided for the use of three SMART Boards to WestEd for the purposes of this research.

About the Study

This study took place from June 2011 to October 2011 in the greater San Francisco Bay Area. Researchers observed students using the games in a variety of situations, including one-on-one with a student and a media device, with students in pairs or in small groups with a media device, or with students in groups collaboratively playing on the interactive whiteboard. During their observations, researchers looked for evidence of student learning, engagement, and changes in children's ease of use of both the games and the media devices over time, while also making note of any technical issues with the games.

Piloting for four of the transmedia suites, *Sid the Science Kid*, *The Cat in the Hat*, *Curious George*, and *Dinosaur Train*, took place in a large preschool site. The preschool site was selected based on the strength of its summer school program and the school's mostly low-income student demographic.

Piloting for an additional two transmedia suites, *Fetch!* and *Fizzy's Lunch Lab*, took place in a charter elementary school and in two out-of-school-time programs in underserved communities. The two suites were selected for piloting at these sites because they target an older age group (6-8 years) and because their content is aligned with the early elementary curriculum.

Findings on SMART Board usage during the transmedia pilot testing

STUDENT ENGAGEMENT

- Students were highly engaged in the transmedia suites and were excited to try the new technology devices and new games.

"The SMART Board for sure has been what they've really enjoyed, and I wish that they could have more time on it."

"Definitely the SMART Board has been the one [device] that they've taken to the most."

"All the kids said, 'I want another turn, I want another turn.' Definitely the SMART Board added a lot because it's big, and it's more visual. It's life-size for them, and more interactive […] they're using their whole bodies to use it."

"Even as [an] adult, [I] like seeing it [the SMART Board]. It's really fun!"

"I think the engagement level was huge. Kids were […] totally fixated, trying to figure out what was going on [and] they were really excited. There was a lot of 'Wow!' when they saw it start working."

WestEd🌐
WestEd.org

- When given the opportunity, children worked collaboratively on the games. This was especially true on the SMART Board, which lent itself well to group interaction and play. Students were also especially collaborative when playing on the tablets and computers and would often help each other if they struggled with games.

- Teachers reported that the SMART Board brought a particular aspect of engagement and learning to the suites.

OVERALL STUDENT LEARNING

- Over the course of the pilot testing, students became more familiar with the SMART Boards and grew in their capacity to use the technology. Many students had never interacted with, or even seen a SMART Board before. By the end of the pilot testing, students were noticeably more fluent and comfortable with using the device.

- The opportunity for students to interact with the games in a small group via a highly engaging medium boosted student motivation and interest in learning.

Findings regarding the use of SMART Boards and technology at study sites

- Schools may not have the technological infrastructure and hardware in place to be able to run the transmedia suites. In order to conduct the pilot testing at the preschool, researchers hired technicians to hardwire an Internet connection and provided and configured wireless routers in each of the classrooms.

- Schools may not have the media devices necessary to run the transmedia suites, since the cost of purchasing equipment required for the suites may be prohibitive. Researchers purchased and provided SMART Boards, iPads, iPhones, iPod Touches, and webcam-enabled computers for the classrooms, in order for students to be able to use the transmedia suites.

- Teachers may need additional support and training, in terms of both technological capacity and academic content, in order to use the transmedia suites effectively in their classrooms. One teacher commented that she would feel more comfortable if she could call a technical support person when necessary.

- Schools and districts will need mobile device management systems in place. For example, a technology director may need to regularly update software on devices, load devices with new games and applications, charge devices, and have a security and storage system for devices.

Conclusions

The transmedia gaming suites were well received in the classroom by both the teachers and the students. Teachers expressed enthusiasm for using the transmedia gaming suites in their classroom, noting their potential for a positive effect on student learning with respect to targeted content, skills, and use of technology. Teachers also expressed interest in using the SMART Board in the classroom for longer periods of time.

> *"The technology, kids seem to embrace faster than adults do. It's a different way of learning."*
>
> *"Education is now becoming technology-oriented [...] all the work is done on computers, and learning is now done on computers. And so for the kids to have the opportunity to learn it now in the earlier years will only get better for them to feed into whatever [...] they're required to do later on in their education."*

Though the gaming suites were well received in the classroom, there was a significant amount of research support and technology that was provided to the classrooms who participated in pilot testing. It is important to consider the current realities of classrooms and schools. While there is great promise for the use of transmedia gaming suites in classrooms, large scale implementation will need to address issues of funding for transmedia devices such as SMART Boards, as well as teacher technology support and training.