



## History Games Go to School: Results of a 2011 Comparison Group Study of AHCI's *Mission US*

For many, digital games may seem like a good way to engage students, but not necessarily a path to better teaching and learning. However, new findings from a study of the *Mission US* digital history game sponsored by the Corporation for Public Broadcasting's (CPB) *American History and Civics Initiative* (AHCI) and produced by THIRTEEN/WNET New York Public Media highlight the potential benefits of digital history games for student learning. These benefits include greater gains in subject knowledge and critical thinking skills, positive teacher reactions, and more classroom emphasis on analytical work rather than textbook activities. The study's scope and comparison group design add depth and credibility to arguments about the potential of new digital media for learning.

In January and February 2011, Education Development Center, Inc. (EDC) examined student learning in 50 schools across six states, comparing the performance of 1,118 seventh and eighth grade students in classrooms where teachers and students used the THIRTEEN/WNET-produced digital history game, *Mission US: For Crown or Colony?* and supplemental curriculum materials, to classrooms where the same teachers taught about the Revolutionary Era with their standard textbooks. Before and after the lesson, students took a 20-question test<sup>i</sup> to measure their knowledge of colonial US history and the causes of the American Revolution, and assess their ability to analyze commonly-taught historical documents.<sup>ii</sup>

### New teaching tools

Game-based history learning may conjure an image of students in front of computer screens, but this study suggests a richer picture. The *Mission US* game is designed to encourage classroom reading, writing and debate. Teachers reported that during and in between episodes of game play, *Mission US* students were more likely than students in comparison classrooms to engage in literacy activities associated with critical thinking, such as writing about historical figures' views, reading and analyzing historical documents, and arguing about perspective and bias. Researchers found that the game was mostly a substitute for textbook reading, traditional board lectures, and writing in response to short-answer questions. The study suggests that when well-designed, a digital game can help foster the higher subject-matter skills that new standards, such as the Common Core State Standards, seek to promote.

### Deeper learning

EDC found that *Mission US* students also performed better than comparison students on measures of US history knowledge and skill:

- Students taught with the *Mission US* curriculum scored significantly higher on the test of historical knowledge of Colonial America than did students in comparison classrooms.<sup>iii</sup>
- Students in *Mission US* classrooms improved more than students in comparison classrooms in two specific areas of historical knowledge and skill that are prominent in new education standards:
  - *Seeing multiple points of view on the past.* *Mission US* students gained more knowledge about the perspectives and experiences of different groups such as loyalists, slaves and women during the Revolutionary period.<sup>iv</sup>
  - *Analyzing cause and effect.* *Mission US* students improved significantly more than students in comparison classrooms on questions about the causes of the Revolutionary War, such as conflicts over taxation and the French & Indian War.<sup>v</sup>

- A subgroup of *Mission US* students performed better than students in comparison classrooms at analyzing historical images of the Boston Massacre for bias and political perspective. Although not definitive, the findings indicate that game-based learning has the potential to enhance close document reading and writing skills.

### Positive teacher responses

Innovative digital materials cannot make a difference for students unless teachers embrace them, and the study found that teachers readily embraced *Mission US*. According to 41 teachers who answered a post-lesson survey<sup>vi</sup>:

- They were comfortable implementing the *Mission US* game, even though most had not used a digital game in their classroom before. All teachers said they planned to use *Mission US* again when teaching future classes about the Revolutionary Era. The top two reasons teachers cited for *Mission US*'s ease of use were the well-designed curriculum materials, and students' deep level of engagement.
- Their *Mission US* students learned more history and were more engaged with the content than students in comparison classrooms. Ninety-five percent of teachers said that their *Mission US* students developed greater understanding of historical perspectives on the Revolutionary Era than the students in comparison classrooms.
- Ninety-three percent reported that *Mission US* students displayed better knowledge of specific vocabulary terms related to the study of the Revolution. Ninety percent said *Mission US* students were more deeply engaged in classroom activities and discussions than students in the typical classrooms they taught.

### About the Study

This study was conducted by EDC's Center for Children and Technology, an independent not-for-profit education-research organization. CPB's *American History and Civics Initiative* (AHCI) seeks to improve history and civics learning for adolescents by creating innovative digital media products that reach young people at school and at home. *Mission US: For Crown or Colony* was produced by THIRTEEN/WNET New York Public Media and was the first AHCI product to be launched in schools.

This is the second study to assess AHCI digital products. The first, conducted on seven pilot products created and evaluated in 2006-2009, demonstrated the success of AHCI digital products in motivating young history and civics learners. The *Mission US* evaluation adds to these initial findings through the use of a rigorous large-scale research design that was better able to establish statistically significant gains in student learning outcomes. A larger follow up study, currently underway, focused on four digital media products, will further test whether ACHI products improve students' engagement and motivation to learn, and their US history knowledge and skills.

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<sup>i</sup> With items derived from the U.S. History National Assessment of Educational Progress

<sup>ii</sup> For their participation in the study, teachers received a \$250.00 stipend.

<sup>iii</sup> The mean score for *Mission US* students was 10.8 (SD=3.9); for comparison classroom students 9.8 (SD=3.6). An independent samples t-test was used to compare the average number of items answered correctly at post for both groups.  $t(1116) = 4.43, p < .001, Cohen's d = .27$ .

<sup>iv</sup> Based on a chi-square analysis of six items dealing with these viewpoints.

<sup>v</sup> Based on chi-square analysis of five items dealing with these elements of historical causality.

<sup>vi</sup> Out of an original group of 50 teachers