**History Mystery Formative Evaluation: Round 1 Results**

For round 1 of our prototype evaluation, we conducted nondirected interviews with five participants. The goals of this round were the following:

* Assess current attitudes towards the subject of history.
* Assess current knowledge of augmented reality and mobile technology.
* Gauge interest in a learning activity that uses AR and mobile technology to design a learning activity that increases interest and motivation to learn more about history.

The following is a discussion of interview highlights, common themes in the feedback, and changes we will make to our prototype, both in response to the feedback and based on our own ideas for improvements in anticipation of the second round of testing.

**Interview Highlights**

**"Brenda"**

Age 12, homeschool student in Prince William County

History is not one of Brenda's favorite subjects. She prefers Language Arts, including reading, writing, and grammar. She reads a lot, but prefers fiction. As a homeschooler, her mom has flexibility with designing her curriculum, so for history, they use historical fiction and other story-based books to explore the content. She owns an iPod Touch, so she's very comfortable with the operating system (iOS). She didn't know what augmented reality was initially, but she seemed to grasp the concept quickly after viewing a few videos demonstrating various mobile apps using AR.

**"Brian"**

Age 12, 7th grade, public school in Prince William County

Brian's favorite subject is science. He likes creating and building things and doing hands-on activities. He's also very into video games. He does not own an iPod/iPhone, but he does have a Wii game console and a Nintendo handheld game device. Given his experience with these devices, using an iPhone does not appear to be an issue. While he liked the role-playing nature of the game, he would like to see a competitive element added to increase motivation and be more aware of where he is in the game in relation to his classmates.

**"Julie"**

Age 13, 7th grade, private school in Fairfax County

Julie was not familiar with augmented reality before the interview. After watching some video demonstrations, she was excited about the possibilities of using the technology in a learning context. However, once she learned more about our prototype, she did not seem very interested in the content. She would like to see more interactivity, both with her classmates, possibly in the form of simultaneous role-playing, and with the application in the form of quizzes or other activities to test for knowledge acquisition.

**"Maria"**

Age 12, 7th grade, magnet school in Chesterfield County

Maria attends a magnet school for kids who are strong in math and science. She's very adept with technology and uses computers regularly at school. She hadn't heard of augmented reality, but understood it fairly quickly after having it explained to her. She doesn't see much relevance in studying history and prefers topics relating to current events. For history topics, like the Civil War, she would like activities that draw connections between current events and the past. She liked the interactivity of the prototype, including the investigative nature of the game objective and the role playing component so they could "act things out."

**"Brandon"**

Age 11, 6th grade, Richmond City Public School district

Brandon attends a middle school in the same district as our client. He has had little experience with technology. For devices, he only has an older GameBoy handheld device and his family only recently got a computer. He had some difficulty initially understanding the concept of AR on a mobile device, but once he watched some video demonstrations, he seemed to get it. He's not very interested in the subject of history, but did take an interest in the Dahlgren story, asking lots of questions when it came to explaining the role playing scenarios and activities. Despite the technology learning curve, he thought the activity would be a fun experience with his classmates.

**Common Themes**

These are the common themes we found in reviewing the data from our interviews.

**Field trips are fun**

*"All field trips are better than going to school."*

*"You get to walk around and ... really see stuff instead of just sitting in a classroom looking at pictures."*

Almost all of our round 1 participants confirmed our design decision to make this an on-location activity, outside of the classroom. In a sense the bar was set pretty low, but most participants clearly saw the value in going to actual places and making the connections between the past and the present. We also feel this will make for a more authentic experience in understanding what historians do and how they work.

**Good stories with interesting characters make boring topics more interesting**

*"History class is pretty boring."*

For most participants, history was not their favorite subject, but they could all relate to an intriguing story that involved mystery and scandal. The participants were not familiar with the particular story on which this activity is based, which is most likely a good thing since the novel tends to generate more interest. It would be interesting, however, to expand this activity to other content areas and see how kids respond to different stories or which ones they might suggest incorporating into a version of the activity.

**Students like interaction with their classmates**

*"I'd like to meet other characters and interact with them"*

Most participants seemed to like the interactive nature of the activity. They responded to the idea of stepping into someone else's shoes and viewing an event through the different perspectives of the various characters. They also saw the potential for more feedback throughout the activity either through some type of reward system or periodic trivia.

**Technology is not a barrier**

*"I have an iPod Touch."*

With the exception of one participant who was not very technically savvy, all of the participants had a level of comfort with the technology that would make this activity very easy to implement from a user standpoint. Although no one had heard of augmented reality, each one grasped the subject very quickly by watching basic video demonstrations. Whether they owned Apple handheld products or not, they all had a framework to understand the concepts of how this activity would work using the chosen technology.

**Prototype Changes**

These are the changes we will incorporate into our prototype for the second round of testing.

**Incorporate a point-based reward system into the activity**

We debated this feature early in our design process and were worried about the competitive element taking the focus off the content. But after discussing our round 1 interviews, we feel we can include this additional motivation in a way that encourages more in-depth involvement with the content instead of distracting from it. To achieve this, students could receive a small number of points for completing activities or answering questions on-location while they're out in the field. There would also be larger "bonus points" available for participating in more in-depth, self-directed activities like performing a skit, presenting a report, or perhaps generating their own location-based story lines or activities to be explored by other students. The points accumulated could be used at the end of the activity to "purchase" something from a variety of items, as opposed to declaring a winner per se. Although, we also discussed the possibility of awarding a "grand prize" of allowing the team with the most points to keep their iPhones. The main focus, however, is that students are rewarded not for answering questions correctly or just showing up, but for engaging in more in-depth, self-directed study of the material.

**Improve the help system**

Our help feature was not well-represented in the prototype used for round 1 testing, and we did get a comment on it. For round 2, it will appear more robust with the ability to both search and browse for answers to questions relating to the mechanics of the game itself as well as issues with the technology.

**Add an "electronic leash" for parental piece of mind**

One of the moms was concerned about the possibility of the kids, whether chaperoned or not, getting lost or getting into parts of town they should avoid. To allay any fears of kids getting lost or into trouble, we can incorporate a companion app for the teacher and parents that can be used to track the GPS location of the phones, and presumably the kids holding them. We will also incorporate a "proximity warning" feature into the main app, letting kids know when they are leaving the general area they need to be in for the activity.

**Improve overall usability**

For our round 2 usability tests, we are going to be testing the overall usability of our prototype. Since it's difficult to test specific tasks associated with our location-based activity, we'll focus instead on things like information architecture, navigation, and visual design. Our goal will be to determine how intuitive our app is to use. Since kids are sometimes known for not listening to or reading instructions, we want to see how self-evident our design is and whether kids can figure out what it is and what it's for just by poking around. In anticipation of this, we are refining the visual design of our prototype and building out more content and features so the participants can click through the whole prototype and really get a feel for how it would work in their hands.

**Revised Prototype**

Here is the prototype revision we will be using for our initial Round 2 testing:

[g3prototype.swf](https://edit752spring11.pbworks.com/f/g3prototype.swf) (updated 4-12-11)