Leveraging Mobile Games for Civic Engagement

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context

Mobile technologies and social media are connecting us more instantly and infinitely than ever before. This has shifted youth from being consumers to participants, usually virtual (via social media) participants to civic issues. There is a critique, however, that this new form of participation is taking the place of in-person participation that is more common with older generations. Therefore, to engage youth in civic engagement, we conducted two workshops with 19 youth (3 girls, 16 boys) ages 10 - 13. In both these workshops, we prompted our participants to design a mobile game that involves local plants and animals using Augmented Reality and Interactive Storytelling (ARIS), a narrative based visual programming tool for non programmers.

The aim of these workshops were to determine if mobile technologies can engage youth in civic engagement. We found that mobile technologies offer youth two levels of engagement. First, the platform (ARIS) being a place-based tool, inherently facilitates participants to playtest their games outdoors. Second, by designing environment-related games, some (5 out of 19) participants reported to have a perspective shift, where they feel more concerned and responsible about their local civic issues than before attending the workshop.

In this poster, we focus on one illustrative case, where Kelsey (12 year old girl) and Selina (13 year old girl) worked together to design their game. We examined their research notes, storyboard, game design, and interview.

Our inquiry was guided by the following research question:
Can mobile technologies be used to engage a digital era of youth to become civically minded and involved?

"I guess like if you do download this game at home, then you can make your own apps and then show it to your friends, and then if they don't really care about nature and then they play it, they're probably like, 'oh, we **should** help out the earth this way' and then it would **help everybody**"

Kelsey and Selina working on the game development (Workshop, Day 3).

RESEARCH

GAME DEVELOPMENT

PLAY TESTING OUTDOORS

case study

Kelsey and Selina created a game called, "The Dr.'s." To make their game "more than catching stray animals" and "interactive" for the player, they included multiple characters and local species in their game. Their game allowed players to take different paths through a series of conversations. Different paths would lead to different endings. While one ending was blissful, the other ending results in the world imploding due to the destruction of all the plants, trees, and animals.

Before starting with game design, Kelsey and Selina put a good amount of effort in researching about the ecosystem and local animals. Their shared notebook reflects that they started off with a list of animals that they liked and then began to narrow it down to local species of their region. Their research findings played a critical role in their game ideation and is documented in the amount of time spent on the computer conducting searches of various forms of pollution and in conversations with each other.

RESEARCH

GAME DEVELOPMENT

PLAY TESTING

In addition to research, the two girls also included their first hand civic engagement related experiences into game. For instance, one of their game mechanics that included a side quest of picking up and destroying trash was inspired from Selina's daily life. Selina in her interview, described that this is something she do in the real world. She said whenever she sees litter, she thinks of collecting and disposing it. Selina took a vary analytical stance to the game development, where her objective seemed to be one of instilling informed change and establishing a motive and context for caring about the local environment.

"I think we're going to **add a side quest** sort of to have them pick up like a bunch of **trash monsters**, so that they can **destroy it.** And I think that that will be really good because I know that I go walking sometimes in my neighborhood and **I'll find trash and it'll make me sad** so I'll just pick them up and be like, 'now, trashcan.'"

take away

Findings from these workshops suggest that civically charged mobile local augmented-reality based games can provide leverage for youth to engage in their local communities on a physical level. The data shows a change in perspective over time from thinking about the game, storyboarding, creating, and playtesting that attitudes about their local and global environments have been amplified and that there is a desire to become more active in the preservation of these things.

While the level of participation toward civic engagement was not widespread among workshop participants, it is encouraging to see these cases emerge as examples of what's possible by producing with mobile augmented reality. We are currently more deeply analyzing what motivated learners to this level of participation and how exploring civic and social topics broaden participation in computing by engaging diverse learners.