Games for Change: Creating Games of Social Value

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Computer-based game play is increasingly being used not only as entertainment, but also as a tool for education, science, and industry. As these "serious" games mix "learning by doing" with interactive media elements, they provide opportunities for gaming to be even more multilayered; they fulfill many purposes such as being educational, fun, a means of aggregating data about the participants ("players"), and social networking opportunities.

In the Interactive Arts and Media department at Columbia College Chicago we have been developing curriculum to support "serious" games for over a decade, and have a deep commitment to exploring, learning about, and building games that not only have social value, but allow the participants to create social change as they "play". One of our capstone courses, IAM Team, has been working with non-profit organizations to create "educational games"; partners have included Adler Planetarium & Astronomy Museum, Child's Play Touring Theater, Loretto Hospital, SearchLit.org, and Test Positive Awareness Network. As our students developed more successful educational games, we began expanding our courses to include games that have "social value" and that provide a context for, and encourage, participants to create "social change".

Three of the projects show this evolution:

Planet X, 2001
Developed by IAM Team for Adler Planetarium & Astronomy Museum

Planet X is a game that teaches young children the essential components for life to exist. Players explore the universe (in a 3D environment) and scan planets. If the planet seems a good candidate the player can land and fly over the terrain to "pick up" the components (water, nutrients, and energy). When enough of the components have been found, they are able to terraform a plant. The challenge: find all the necessary components before your ship runs out of fuel.

Conservation Station, 2002
Developed by IAM Team for Adler Planetarium & Astronomy Museum

This project allowed participants to explore potential pollutants in their neighborhoods (home, school, playground etc.), and to choose a possible solution for the problems. It emphasized the importance of students' decisions and actions when interacting with the Earth. It provided a printable certificate if players pledged to change their behaviors.
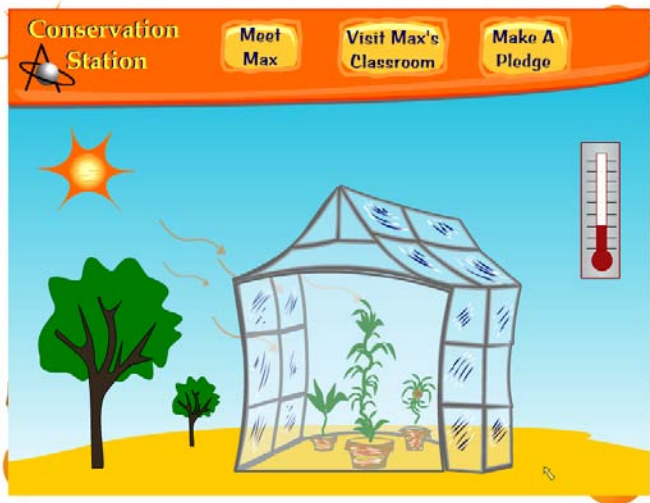
The Party of This Century, 2006
### Developed by IAM Team for Test Positive Awareness Network

Aside from informing about HIV/AIDS awareness, this project incorporated several ways in which players could take immediate action: referring a friend to the application, write their congress representative, find organizations that need their support, and find a clinic to get tested. These calls to action were provided in a way that required minimal effort on the participants' part in order to maximize results.

From the students' documentation:

" Our generation is in a unique position. We have been exposed to the world in so many ways, yet it still seems so far away. We're bombarded by thousands of facts and figures from every possible source, yet the numbers never seem to stick. There are a number of reasons these statistics don't have quite the impact they deserve. First off, we have a hard time grasping the scale of numbers. 4 million or 40 million – both numbers are very large, but it's hard to grasp that difference. Secondly, we are a skeptical bunch – especially at Columbia. We've witnessed a lot of sensational media, and tend to take the "seriousness" of certain stats with a grain of salt. Yes, there is a problem with HIV/AIDS – but is it really that big of a deal? Lastly, there is a very short attention span with our generation. We are like a flock of sheep herded towards the flavor of the week. We jump on board with the trend, invest heavily at first, then get distracted in the next week or month.

So if we are to help make a difference using this generation, we need to combat these three main issues. We need to ground our facts and information in ways that our audience can understand, relate to, and grasp the importance of. We need to paint the big picture so that they can see how really big this truly is. We need to get their attention in a way that engages them and makes a real impact rather than just another trend.

In order to do this, we've developed a three-step process to grab them, teach them, and empower them. We call it the hook the hub, and the action. The point is to engage, educate, and enable our audience with the information, the purpose and the tools necessary to actually do something about HIV/AIDS."
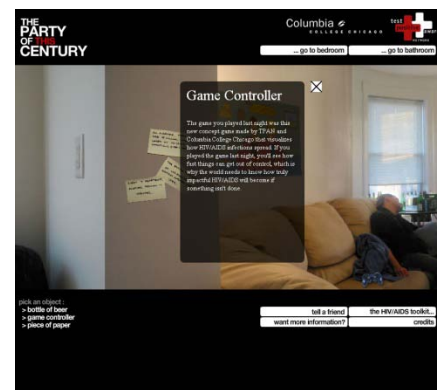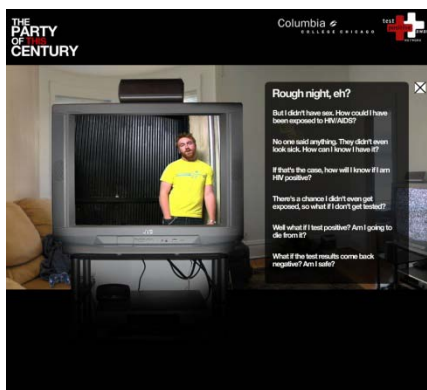
Realizing that it was possible to have college students engaged in creating games of social value that not only educated, but also inspired action, our department begin three pivotal initiatives: Creating the High School Institute course "Games for Change", developing the 3G Summit (Girls, Games, and Gender), and making a commitment to develop games that would have social impact.

High School Institute: Games for Change

This course encourages thinking about games for change before entering into college; the High School Summer Institute is a program for creative high school students that have completed their sophomore, junior, or senior year of study. Our Games for Change course description sums up the experience: "This hands-on class emphasizes new creative technologies that allow students to design games and 3D virtual worlds that have direct relevance to everyday experiences, character roles and relationships. Using drag and drop programming tools, participants will create animated stories, avatars and game environments about social, global and gender-based issues with the goal of fostering interactive social change."

3G (Girls, Games, and Gender) Summit and Learning Lab

Our 3G Summit (Girls, Games, and Gender) will take place this August 12-15th, 2010. Fifty high-school girls will be invited to attend and will investigate what types of games they like to play. The tools to build, design and test those play experiences will then be provided as part of our 3G Lab, along with several leading women scholars and game designers serving as mentors.

Over the past two decades, girls and computer gaming has been a topic of much research and concern. Many educators concur that a significant gender rift exists and that this gap begins at an early age. A body of data shows a disturbing trend - girls' participation in computer gaming does not serve as a gateway for greater participation in computer science fields in the same way that it does for boys. As our society increasingly moves towards one where STEM competencies predict cultural authorship, civic involvement as well as academic and economic success, what does it mean for our future that girls of all backgrounds are left trailing in the dust?

The 3G Lab is built on a simple premise: if we ask girls, "what do you like to play best?" and then give them the tools to build, design and test those play experiences, they will not only apply their imaginations and intellect to the challenge, but they will teach us, as educators, valuable lessons that surprise and challenge our own pedagogical and curricular

frameworks, particularly as they relate to gender and technology. In this way, girls are engaged as self-ethnographers who teach adults through their own language.

What's Next: Game Proposal for ToxicTag Quest, An Augmented Reality Game

This game will take place in an economically and environmentally stressed urban neighborhood in Chicago. Residents and outside visitors will be able to explore the neighborhood physically, and will be provided contextual actions via Quick Response (QR) codes with Augmented Reality (AR) that participants can take to improve the neighborhood's conditions. AR/QR codes are geo-tagged markers placed in the community - when scanned by a camera phone, these codes trigger augmented 3D image overlays or text messages that link users to timely information about the site they are visiting. Players are also provided with game clues and directives that incentivize players to earn points by taking civic actions that respond to community challenges in real-time.

ToxicTag Quest creates a spatialized narrative of the community that shifts according to the breaking news items that are "tagged" as relevant by those living in the community; the game automatically pushes community news into the game allowing the game to change with the community and mobilize response. Youth act as on-the-ground data gatherers, QR-code taggers and game masters, using community indicators (violence, gang activity, industrial pollution, accidents, asthma attacks, public transit incidents) to track the impact of the environment on the daily lives of the people in the community. Game play is never stagnant but shifts to reflect new agendas. As residents create and add new QR/AR "tags" to their environment, they help document their concerns and create content that motivates others towards shared awareness.

Because Toxic Tag Quest turns the neighborhood into an interactive game space it provides an engaging way to learn about environmental and health issues, and to take civic action in real-time. Players can submit responses using text messaging, photo, voice, or video (depending on the capabilities of their phone). In this way the learning experience can be deepened by the contributions of not only those living in the neighborhood, but also of those visiting. This information becomes integrated into the game so that those playing are educated on the most relevant and timely issues, and given opportunities to take action on those issues. Ways in which players can help hold industry and government officials accountable for toxic pollution are weaved into the experience, through links to data sets, articles, polls, news feeds and civic action opportunities with multi-platform integration. By providing enhanced information dissemination for economically and environmentally stressed urban neighborhoods using social media capabilities, and simplified aggregation of responses in a globally visible manner, players will strengthen their knowledge of health and the environment and become better informed on civic matters.