



Center for Information Technology and Management

Wrapping the business case around new and emerging technologies

Serious Games For IM Generation Girls

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Background

IM Generation Girls

- IM Generation – the generation of instant media, instant messaging, and instant “me”
- 36 million girls in the United States between the ages of 6 and 20



Background

- Universities throughout the United States, the National Science Foundation, and other entities, are trying to discover the best way to encourage girls' interest in computer science and math
- While boys and girls are receiving the same educational opportunities, girls are losing their interest in math and computers around age 12.



Background

- Girls, especially teenagers, represent the most highly sought after market segment in the U.S. because of their keen interest in shopping and their significant spending power.
- Teenage girls outspend boys in every category except videogames [Mallalieu & Palan, 2006].
- There is no reason teenage girls could not outspend boys in computer/video games as well. Game developers just have to develop games that teenage girls will purchase.



Methodology

- Surveyed 43 mothers (who have a total of 94 daughters) and 57 daughters (ranging in age from 7 to 20) in April and May 2007.
- Both the average and median age of the girls was 13.
- The survey was conducted in several different states; in cities, small towns, and rural areas.



Methodology

- One of the things we wanted to determine is whether or not girls' attitudes towards computer games in general, and learning with games in particular, corresponded with their mothers' attitudes towards computer games.



Methodology

- Girls were asked to rank the computer game features as listed in *Serious Game Construction Worksheet* in order of importance to them [Winn, 2005]
- Mothers were asked to rank the same game features in their (the mothers') order of importance and then to rank the features again in the order of importance they thought their daughters would rank them.



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Ranked Importance by Mothers	Ranked Importance by Girls
(Highest to Lowest)	(Highest to Lowest)
Intellectual Problem Solving	Competition
Learning	Discovery
Discovery	Intellectual Problem Solving
Application of an Ability	Learning
Advancement & Completion	Creation
Creation	Social Interaction
Social Interaction	Comedy
Physical Activity	Physical Activity
Comedy	Application of an Ability
Competition	Thrill of Danger
Altruism	Advancement & Completion
Love	Power
Beauty	Beauty
Power	Love
Immersion	Immersion
Thrill of Danger	Altruism



Results

- 100% of the girls have played computer/video games (including those on cell phones) at some point, but only 75% currently play computer/video games of any sort.
- It appears that 3% of girls are playing computer/video games unbeknownst to their mothers because 22% of mothers said their daughters did not currently play computer/video games including games on cell phones.
- Seventeen percent of mothers have never played computer/video games of any kind.



Results

- Sixty percent of girls think computer/video games are fun, compared to 36% of mothers.
- Twenty-eight percent of mothers think computer/video games are a waste of time compared to 9% of girls.
- Only 21 % of mothers and 17 % of girls think that computer/video games are good for learning.



Results

- When asked about computer/video games for girls that contained a life skills educational element,
 - 18% of mothers would definitely purchase the games for their daughters
 - 45% would serious consider purchasing the games
 - Only 3% of mothers would give the games absolutely no consideration



Results

- 30% of the girls surveyed said they would not give any consideration to a computer game that taught them how to be a better shopper even though 82% said that money management was something they needed to learn about now
- Girl's interest in computer games that allowed them immersion into the virtual worlds of horses, weddings, fashion, and cars was very high.
- Parents say the reason for the decline in “educational” computer games is that the titles for older children are not “fun” and there is not enough entertainment in “educational” games.



Conclusions

- Girls' attitudes towards computer/video games in general, and specifically the concept of learning with games, are directly correlated to their mothers' attitudes towards computer/video games.
- Therefore, in order to promote both the general use of computer/video games by girls and to further a girl's learning through games, computer/video games must be developed that produce emotion, passion or image within the mother.



Conclusions

- The learning aspect of the game has to take a back seat to a fun and an engaging story.
- It is our contention that the creation of virtual worlds which combine classical games with simulations of real-life activities and events are the most effective means of facilitating learning with games for IM generation girls.



Conclusions

- Games for the IM generation need to provide feedback for correct decisions through rewards.
- At ever-earlier stages in their development, kids are besieged by digital entertainments that divide their attention and shrink its span
- Products, especially computer games, need to cost less, get to market faster, and keep up with technological advances



Conclusions

- The primary reason for the lack of success in computer games for girls is that most of the computer games do not address the interests or personalities of IM generation girls, especially past the age of 11.
- Many game programmers and artists do not want to work on “girl” games or serious games.
- Those who are willing to try have an extremely difficult time thinking “girl”



Conclusions

- Successful computer games for IM generation girls need to allow interaction with game characters.
- The player needs to be able to create part of the story, action, and results.
- It needs to be non-violent with lots of role playing, age appropriate adventure, a peaceful build-up, and a rewarding conclusion.
- Obtaining input from the target market is key in developing successful games for IM generation girls.
- Sometimes their suggestions may seem quite juvenile, such as the request to be able to select the sound of the dog's bark regardless of the type of dog selected, but that is also part of the "fun" of the games and the obvious split from the desired reality of the games.



Potential Market

- Over 80% of IM generation girls would give some degree of consideration to games that allowed them to enter virtual worlds where they could:
 - Design/create fashion and/or accessories
 - Buy a virtual car and take a road trip
 - Have a virtual horse farm and riding stables
 - Design and plan a dream wedding
- This could generate over \$1 billion a year if left entirely to the girls' spending discretion.
- Serious games could generate an additional \$200 million a year from the 63% of mothers who would consider purchasing games that taught their daughters how to be better shoppers.



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