

VIDEO GAMES TO CONVEY SERIOUS MESSAGES – A STUDY USING FOOD FORCE 2 GAME

Mehta Niket¹, Dutta Suparna², Bandyopadhyay Asit³

¹Assistant Professor, Animation and Multimedia Department, Birla Institute of Technology, Noida, India, ²Associate Professor, Management Department, Birla Institute of Technology, Noida, India, ³Associate Professor, Jaypee Institute of Information Technology, Noida, India
¹niket@bitmesra.ac.in, ²suparnadutta@yahoo.com, ³asitb.76@gmail.com

Abstract— Today is the age of digital communication. Everyone who is well to do prefers to communicate digitally. This mode of communication has more of advantages and few disadvantages as well. The new digital media savvy generation is quite modern and it is not easy to inculcate moral and social values into them. The idea of using video games to convey serious message to such generation is not new yet we can have a reassessment of this concept in current times and that too in Indian context to find out how successful the digital games could be to convey serious messages. We used the game “Food Force 2” which was developed by United Nation in 2009 to spread the awareness about Food wastage and Hunger amongst the youth of the world.

Keywords— Serious Games, Message through video games, Digital Communication, New Digital Media

I. INTRODUCTION

Food Force II was designed to educate and motivate people to solve world hunger. Since the laptop has reached out to the developing and third-world countries, it can also educate children and teachers in a village on how to achieve self sustenance in a fun and non-intrusive way. This game also provides awareness about the work United Nations World Food Programme has been doing for the past many decades to abate the problem of world hunger. The game was developed with an aim to defy the pedantic system followed in many countries and to help children explore the community, learn importance of food nutrition; and of course, fun always accompanied. Developers got awe inspiring response from the beta release of the FoodForce2, with over 113 thousand downloads from the google code and another 29 thousand from the Sugar activities page. It is a sequel to Food Force, a game developed by the United Nations World Food Programme. [Food Force 2, (Dec. 2009)] In this “spiritual” sequel to the 2005 original, Food Force takes players online to Facebook and gets them together with their friends to learn how the United Nations World Food Programme (WFP) delivers humanitarian aid all over the world. The first version of Food Force was a downloadable PC title that was played by over 10 million users worldwide. To aid in the Japanese distribution and translation, WFP worked with the internationally acclaimed game studio, Konami. Six years

later, Konami led on the funding and creation of the 2011 version of Food Force, marking two milestones for this 40 year old company: not only is this their first, free social game, but it’s also their first full blown social impact title. From farming crops, preparing goods, sending friends to deliver food, and responding to crises around the globe, the new Food Force is an ambitious reboot of the franchise. It takes advantage of the social web by providing a dynamic gaming experience that allows players to gain instant access to creating impact. This is done by purchasing virtual goods that benefit a player’s performance but also generates donations for international aid. As players distribute aid across the virtual world, they can track their real world impact through the “real-world impact tracker”, which shows them how much aid was delivered through their virtual goods purchases. [Games For Change.org, (2011)].

II. ABOUT THE GAME

Hunger and poverty are two worms which are eating millions of people across the world. There are still lots of developing nations where poor people even don’t get one time meal. The solution to this problem is education. If people are educated and they know how to manage resources in critical situations then hunger can be reduced considerably. Food Force II is an educational project to solve hunger crisis by collaborative, joyful and self-empowered learning. To curb hunger and poverty and at the same time to spread education is a very challenging task. This motivated developers to come up with an idea of developing an application which is entertaining and at the same time educative. So they came up with Food Force II. Food Force II is an open source educative game whose objective is to teach children that how they can manage resources in their villages. It educates children and teachers in a village on how to achieve self sustenance in a fun and non-intrusive way. It was being built in Python which is cross-compatible on all types of Operating Systems like Windows, Linux and Mac. Apart from that, it will also feature on OLPC XO. [Code.Google.com/p/Foorforce, (2009)]

The FoodForce2 version of game was released for the Windows and Linux platforms. The game was developed in Python and Pygame. It is fun to play and also serves as a

learning activity for children aimed at helping them to learn strategies through independent interaction and collaboration for managing community resources efficiently, and solve issues of varied proportions. It can also be used as a tool by the teachers to teach children how to become better and responsible community managers. The game focuses on building self-sustainable communities with focus on the importance of trading, building and upgrading technology. Special focus has been given to the importance of proper nutrition and the components of a healthy diet.

III. GAME PLAY OF THE FOOD FORCE 2



Fig. 1 - Snap Shot of the “Food Force 2” game showing a village, hut and other resources which are to be managed by players in the game.

This is a strategy game and objective of the player is to make a settlement which is self-sufficient in terms of nutrition, health, housing, education and training by consistent production and trading of resources with the help of necessary infrastructure. The game is developed from a viewpoint of an Indian villager, who is the *Sarpanch* (The administrator of the ruling body, *Panchayat*, of the village) of a village and his son helps him in the development of the village, who is the next candidate for the position currently held by his father. There are three major tasks to be done in the game by the player:

(a) **Construction of Facilities:** Some of the facilities like houses and hospitals are already built at the start of the game. Constructing new facilities such as houses, schools, workshops, farms and wells requires some resources. Once the facilities have been built by the player they start producing appropriate resources and also increase the indicators. Facilities also affect the manpower distribution of the village by providing employment.

(b) **Upgrading Facilities:** Once a facility has been built it can be upgraded to produce more resources. Upgrading of facilities uses some of the resources of the village, mainly building material and tools. Various upgrades like brick and mortar, functional upgrades and electricity are provided for each facility. Every upgrade costs resources, but an upgraded facility will be more efficient and effective. Upgrading a facility also increases the value of the indicators.

(c) **Trading of resources:** The final cornerstone of the play is trading which is crucial to a village's success. For trading, every village is provided with a market, which is visited by traders from neighbouring villages for trade. The price of the resources is determined by market forces. A village cannot effectively grow without a smart trader; timely trades can give your village a leg-up and help it attain prosperity over time.

The game has 9 missions. The first few missions aim at teaching the player about how to get started. Once the player has got the knowledge of how to maintain the village, then he is made to face the real challenges. The rest of the missions expect the player to apply the knowledge he gained from the first few missions to real-life scenarios.

IV. RESEARCH METHODOLOGY AND METHOD OF DATA COLLECTION

This observation based study was conducted on two batches of students of B.Sc. Animation and Multimedia course when they were in VI semester i.e. final year. First batch comprised of 72 students and second batch 51. They were made to play Food Force game in April 2012 and April 2013 and then it was observed that how they reacted to the game. These observations were noted down and then common and repeated observations were concluded as results.

V. TOOLS USED FOR ANALYSIS

Qualitative analysis was done on the basis of repentances of same observation or feedback from many respondents. The repeated responses helped to form an opinion and the results there after. Observation and conversation with respondents also helped in drawing the conclusions.

VI. RESULTS

- All of the respondents appreciated the serious message being conveyed in the game.
- They got to know how various resources are to be managed in a village for optimum utilization and to avoid wastage.
- They also got to know the nutritional facts of various food items, importance of social infrastructure like hospitals, schools etc. which are needed to build a village.
- Some players did not like the genre of the game as it is a strategy game. Different people like different kinds of games.
- This game was a small game and those who play it well can finish it within an hour and it doesn't offer the rich playability to play it again and again.
- Graphically this game is mediocre although it did not make a major difference to players. Game play was of more importance to them.

- Game play wise game was ok to some extent but it lacked engaging and entertainment values which made this game boring to some extent to respondents.
- All the students appreciated the fact that United Nations has used this game to convey the message of importance of food and they all liked that such serious messages can also be convey through an entertaining medium like video games.

VII. LIMITATIONS

- This study was conducted using a game which was meant to convey a serious message of “Save Food”. Every player cannot “connect” well to it until and unless he or she doesn’t have very emotional feelings or concern or attachment with the topic.
- This game was made in year 2009 and we played it in years 2012 and 2013. There had been huge technological advancements and games have become more graphic rich now-a-days then the games of that time. Today’s generation who likes graphically and game play rich games; found it bit boring.
- Common people don’t like it when serious message is forcefully given to them. Since respondents were aware that this game is about a serious issue which becomes clear from its name itself; they did not like it much.
- This was a strategy game – a genre which might not be cherished by all.

VIII. RESULTS OF FURTHER SIMILAR STUDIES USING DIFFERENT GAMES

Similar observation studies were conducted on 3 batches of students of B.Sc. Animation and Multimedia for three consecutive years and they were exposed to games like Counter Strike (TPS Shooting Game), Need For Speed (Racing Game), Zuma (Arcade Game), Silversphere (Puzzle Game), Angry Birds (Adventure, Aracde and Mobile Game), Legend of Vraz (Adventure Genre, Indian Game), Pahelika (Puzzle Genre, Indian Game), Bubbles (Arcade Game), Farm Ville (Online Strategy Game) etc. The major observations were:-

- Engaging game play was the most important factor for players.
- Even the local content of Indian Games “Legend of Vraz” and “Pahelika” could not bound players to play games for longer time. Respondents (Players)

love to play a game which keeps them engaged or hooked.

- Although music and sound effects makes the game experience more lively yet respondents cared little about it.
- Rich graphics were appreciated by everyone but the smooth functioning of game, accessibility to information was more important.
- LAN games helped in socializing.

IX. RECOMMENDATIONS

- Serious messages are not accepted by players in a serious presentation. If such messages are conveyed in a comic, fun way they can strike the cord with users. But at the same time converting serious messages into funny way should not demean the message and the purpose.
- Five elements of multimedia – Graphics, Animations, Text, Video and Sound can help to create a fun filled game. It’s important to do proper utilization of all these to convey the message through an engaging, entertaining, interactive game-play.
- Local themes are not guarantee for the success of games. This game although having an Indian flavor was not a big hit even. Game play with universal appeal is more important.
- A game which is meant to convey serious message should either be in a genre of the choice of maximum people or of a combination of two-three or more and player must get opportunities to learn and move further so that people could enjoy the game and get the message in the process.
- Players should not be aware of the fact that this game is meant to convey some serious message; before playing the game. Otherwise they don’t take game seriously.

X. FUTURE SCOPE

Today in year 2013, when technology has improved tremendously and common men has easy access to multimedia devices video games can communicate serious messages to this techno savvy, umber connected, entertainment loving generation in an interactive way. This study suggests that entertaining and engaging game play is the most important consideration than graphics or genre of the game especially for a game which has been designed to convey social message.

REFERENCES

- [1] Code.Google.com/p/Foodforce, (2009), accessed from <https://code.google.com/p/foodforce/downloads/list> on April 21, 2012
- [2] Food Force 2, (Dec. 2009) accessed from http://en.wikipedia.org/wiki/Food_Force_2 on April 20, 2012

- [3] Food Force 2/Team School Visit, accessed from http://wiki.laptop.org/go/Food_ForceII on April 19, 2013
- [4] Games For Change.org, 2011, accessed from <http://www.gamesforchange.org/play/food-force-2/> on April 20, 2012
- [5] http://wiki.laptop.org/go/Food_Force_2/Team_School_Visit on April 19, 2013
- [6] FICCI-KPMG Indian Media and Entertainment Industry Report 2012
- [7] Prensky Marc, (2006), Don't bother me, Mom, I'm learning! How computer and video games are preparing your kids for 21st century success and how you can help, Publication: St. Paul: Paragon House, ISBN: 1-55778-858-8
- [8] Marsden Rhodri (2013), THE INDEPENDENT, *Are children naturally better at computers*, The Times of India, Delhi Edition, 26th May 2013, Page 21
- [9] Royle Karl, (2008), Game-Based Learning: A Different Perspective, Innovate - Journal of Online Education Fischler School of Education and Human Services online publication, Volume 4, Issue 4