



name Esther Guanche Dorta. Phd student.
alu0100308679@ull.edu.es
Ana Marqués Ibáñez. Teacher.
Anamarquez@ull.es

institution Department of Didactics of Plastic Expression.
Faculty of Education. University of La Laguna.
Tenerife.

title Art Games applied to disability.

theme THEME 4 – Technology – S3 DT

keywords Art Games, Disabilities, Design,
Videogames, Inclusive education.



Figure 1. Thatgamecompany. PlayStation 3. (2009), Flower.

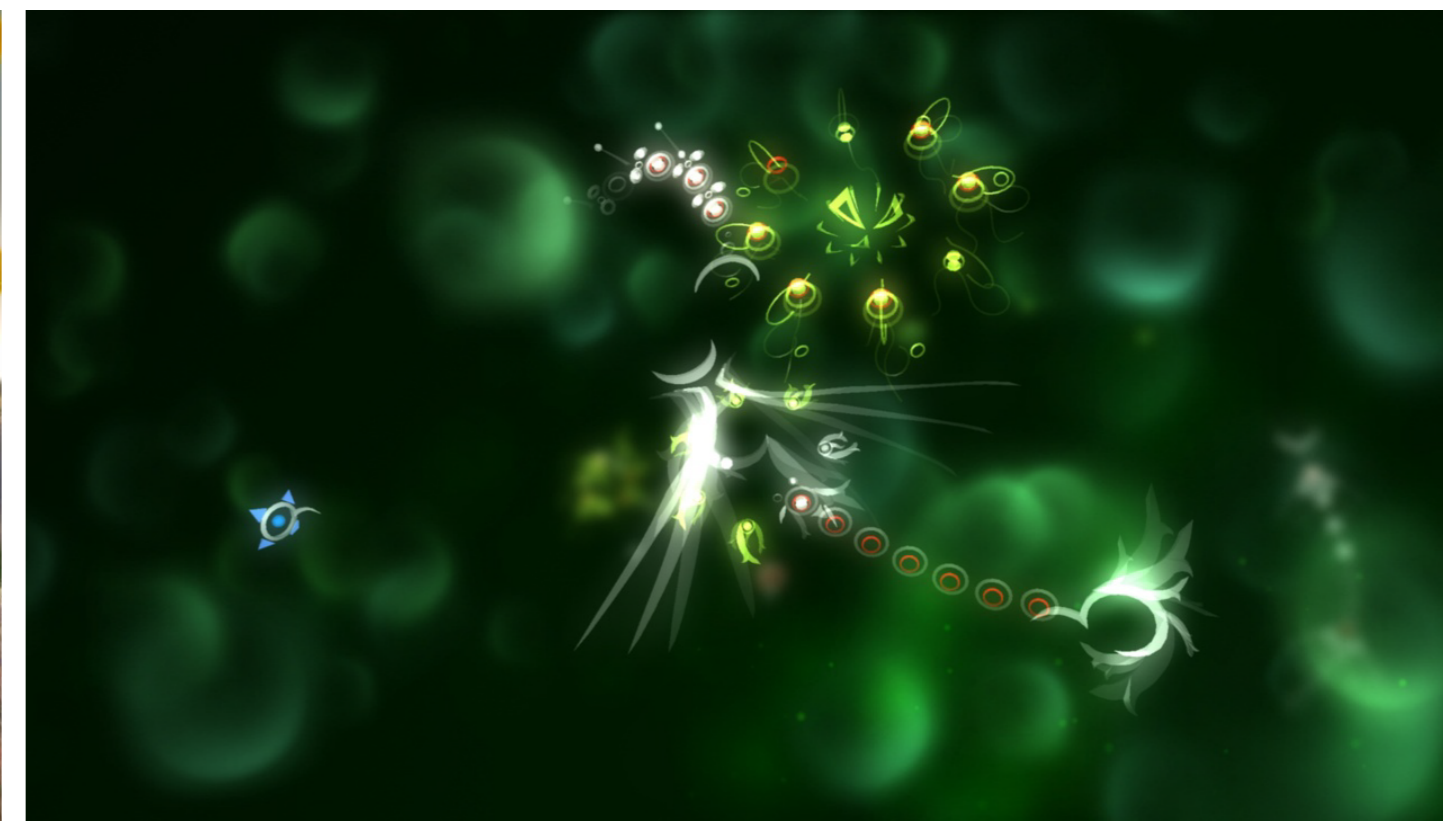


Figure 2. Thatgamecompany. PlayStation 4. (2013), Flow.



Figure 3. Thatgamecompany. PlayStation 3. (2012), Journey.

Art Games applied to disability.

Videogames are an emerging medium which represent a new form of artistic design, creating another means of expression for artists as well as different educational context adapted to people with disabilities.

Abstract

This is a study of several examples of artistic videogames which can be used to improve the quality of life of persons with impairment, for those with specific or general motoric disabilities and mental disabilities in order to bring them closer to art and design studies. As well as to develop new approaches in order to include this medium in artistic productions, study the impact of these images in Visual Culture and its construction by designing.

In its concept, the Art Game, or its Indie Game videogame variant is a singular and specific creation, due to its means of production and reproduction which is made by designers and programmers. The interest and impact of the game is not only based on recreational considerations, but also on its interactivity, its aesthetics and its association with art, thus broadening the way we conceive such games in different platforms: visual and audio.

There is an introduction to the concept of the Art Game and the Indie Game, as well as to the different educational contexts, adapted to people with disabilities, where they can be used.

1. Art Games and Indie Games Concept

Art Game is an art object associated to the new interactive communications media and a subgenre of the so-called serious videogames. The term was first used in academic circles in 2002, and referred to a videogame designed to boost artistic and creative qualities. They are interactive and they are the result of an artistic concept with more open and random rules and objectives than commercial videogames. Independent videogames (known as Indie Games) are created individually or in small groups, without corporate financial backing. These games have had broad development and diffusion in recent years due to the new on-line distribution methods and development of design tools.

2. Artistic Art Game Proposals

Videogames are an emerging medium which represent a new form of artistic design, creating another means of expression for artists, as occurred with the appearance of photography, video-art, performances, artistic action, etc. Therefore, it is incorporated in the world of art with the capacity to generate new designs for contemporary games.

The development of video games is the activity through which a game is designed and is created. It is a multidisciplinary project that involves professionals of the computer science, design and illustration.

Some of the artistic proposals of Art Games are: Flower and Tearway.

Flower

This is a videogame for PlayStation 3 and 4. It was developed by ThatGameCompany, designed by Jenova Chen and Nicholas Clerk. It was released on the market in 2009. It is considered the successor of Flow, an earlier game by the same company. The player has to control the wind, blowing a petal in the air using the controls. When the petal flies close to other flowers, these open, making new petals follow the first.

Tearaway

This is a platform videogame developed by LittleBigPlanet Media Molecule for PlayStation and released in November, 2013. The game is inspired by paper craft and by Rex Crowle drawings.

Tearaway is a messenger who has to deliver a message to the player. At the start, the players can choose to play as the male character, Lota, or the female character, Atoi, and navigate to deliver the message. It is a game which uses PlayStation Vita features; photographs can be taken with the camera to make the paper figures.

Among the Indie videogames, we can point out: Flow and Journey.

Flow

The game was created by Jenova Chen and Nicholas Clark. It was designed as a flash game in 2006 to support Chen's thesis, and an adaptation was developed for PlayStation 3. The player moves along a series of two-dimensional planes with an aquatic microorganism which evolves by eating other microorganisms which have to be consumed by the player and which increase the number of segments of the creature. The design is based on Chen's research on dynamic difficulty adjustment in the Interactive Media Division of the University of Southern California.

Journey

This is an indie videogame developed by Thatgamecompany for PlayStation 3. The player controls a robed character in the desert, which moves in the direction of a mountain situated in the distance. The only form of communication between the characters is through music.

One museum which has promoted the diffusion of new forms of artistic expression is the Smithsonian American Art Museum¹, which has organized exhibitions such as "The art of video games".

The MOMA² arranged an exhibition on the 50 years of videogame history, made a review about the design and has added the most significant games to its permanent exhibition, such as those of the Johnson Gallery with 14 videogames, which have been increased to around fifty.

3. Videogames as educational tool

The Massachusetts Institute of Technology has created a section for educational videogames, Arcade MIT, in order to boost the creation of this type of game, having detected the enormous potential that it presents in teaching. The MIT has published research articles in order to make known the educational use of videogames in the different areas of the academic curriculum.

In regard to the beneficial effects on health and therapeutic applications, we can point out:

- With an adapted control, it allows play and competition under equal conditions with other persons.

- The latest generation of consoles and PC games has Internet connection, which allows simultaneous play with various people. A text or voice chat can be used with the game, for example, with the Ventrilo 2.3.0 programme, a voice chat integrated in on-line PC games.

- Videogames have been integrated in machines used for physical rehabilitation. Due to its validity as rehabilitation tool, the Wii videogame console is used in the Glemrose Clinic in Canada for rehabilitation of stroke patients, in the U.S. army and in the Gutman Clinic of Barcelona.

Video games as an interactive system should be designed with players in mind therefore the latter should be incorporated into the design and development teams so that they can provide their expertise both in the preparation and the testing phase.

4. Conclusions

The Art and Indie Games are an ideal platform to be used in the field of applied art education for people with disabilities. In this setting, video games are designed as an art object that helps user to playfully get closer and have a better understanding of contemporary visual culture. Both games also constitute learning spaces in informal settings which encourage concentration in certain activities and promote the general and specific motor development.

Footnotes

1. Exhibition: The art of video games. Smithsonian American Art Museum. 16th March, 2012 to 30th September, 2012.

2. Acquisition of videogames by MoMA. March 2013.

References

- Huizinga, J., (1943). Homo ludens. The play element of culture. Lisbon, Azar.
- Melissinos, C., and O'Rourke, P., (2012). The Art of Video Games. From Pac-Man to Mass Effect. New York, Welcome Books.
- Klopfer, E., Osterweil, S., Salen, K., (2009). Moving learning games forward, The Education Arcade. Massachusetts, Massachusetts Institute of Technology. P. 1, 9.
- Jacobo, M., (2012). Videojuegos y arte. Primeras manifestaciones de Game Art en Argentina. Cuaderno 41, Cuadernos del Centro de Estudios en Diseño y Comunicación. Number 41. June 2012. P. 99 – 101.
- García, J., González, D., and Hernandez, J.A., (2005). Programación e Intervención en Educación Especial. Madrid, Eos. Materiales y Recursos Educativos.
- Echeita, G., (2006). Educación para la inclusión o educación sin exclusiones. Madrid, Narcea, S.A.

Web References

- MIT: The Education Arcade: <http://education.mit.edu>
The Museum of Modern Art: <http://www.moma.org/>
Game-Accessibility: <http://www.game-accessibility.com/>