

Identifying social learning through emotional patterns

María Inmaculada Pedrera Rodríguez

*Ciencias de la Educación
Extremadura University
Cáceres, España
inmapedrera@unex.es*

Jorge Guerra Antequera

*Ciencias de la Educación
Extremadura University
Cáceres, España
guerra@unex.es*

Francisco Ignacio Revuelta Domínguez

*Ciencias de la Educación
Extremadura University
Cáceres, España
fird@unex.es*

Abstract— *The main objective of this research is to identify social learning through the analysis of the emotional patterns present in them. Our method contemplates the analysis of three video games of social theme, of which they have been selected as sample: This War is not Mine, Papers, please! And Unmanned. As a technique for collecting information, we analyzed the gaming process of a gamer, which had to identify the emotions that each game moment elicited, using as an anchorage the images, the narrative, the events, the challenges, among others. As a conclusion we can point out that video games analyzed can influence the players to make perceptible the social problem of which is spoken in them and that is identifiable through the use of emotional patterns*

Keywords—*videogames, emotions, patterns.*

I. INTRODUCTION

The use of videogames today refers to a playful side. But we must be aware that new trends such as Digital Game Based Learning show the didactic utility of video games. In the case of this investigation three video games have been taken whose narrative is influenced by social conflicts, where the decisions that the player takes determine the becoming of the characters.

Social games are a clear example to try changing attitudes. Our main object have been to select a games with a clear emotional patterns. At the moment, we haven't found previous studies that they offer support to our work.

To do this, a player has been proposed to show what emotions he experiences while developing his game in order to establish emotional patterns that help determine if the player is able to learn to identify and manage emotional patterns.

II. DIGITAL GAME BASED LEARNING

Learning through play has been an anthropological constant in our society. Different species, among them, the human use the game to instruct their young [1]. According to [2] the game

has evolved in a parallel way to the human species and has become part of what are now video games. Currently, it is still playing but the paradigm has changed. The irruption of electronic games, digital games or video games, as they are popularly known, has changed the conception of play, producing a well defined bifurcation between games and video games. They are still games, they have simply incorporated new languages, new strategies and new technologies, but the essence is the same, fun.

For this reason, the author [3] develops Learning Based on Digital Games (DGBL), framed within the educational paradigm Edutainment, which advocates offering didactic content through entertainment formulas.

Current video games can be experienced in multiple formats whether on console, computer, smartphones, tablets, etc. Also the modes of play are varied (one player, several players, massive multiplayer, cooperative, competitive, etc.). There are also varied existing genres (action, platforms, sports, casual, role, etc.) or their graphic styles, sound, etc.[4] points out that in the game there are four defining features: a) Goal, b) Rules, c) Feedback System and d) Voluntary participation.

As these features show, this type of digital game-based learning allows the possibility of building networks of associated knowledge through a constructive and non-receptive knowledge acquisition process [5].

It also takes into account the contextualization of what is learned, we must place each learning in its context to get a link and positive motivation towards the study of it. The students must know in which context they will play their work and with the video games can be simulated to structure the tasks and to abide by them as the student believes convenient.

The authors [6] point out that a video game is not only composed of pixels, but also composed of emotions. Which are both those embodied by the author of the video game, and those perceived by gamers. They focus on the importance of

the feelings generated by the games, especially the positive ones. They focus on the ability of video games to provoke mental stimuli that adapt to changes in order to keep the brain active and, consequently, to enhance certain aspects as: learning, socialization, creativity and others.

This is the case of videogames that have been analyzed for this study, which are created to make the gamer reflect on various issues by combining the languages that make up the game, learning about the ways that provide the emotions that emerge.

III. METHOD

As we have not found studies that relate emotional patterns and video games in education, we decided to create an initial approximation method for this research.

In a first phase, we select three videogames with following criteria:

- (1) Videogames with a special social theme.
- (2) Videogames containing a clear emotional patterns.
- (3) Each emotional patterns can be a easily recognizable emotions.

In a second phase, the team play the game. Each member put on a observation chart which are the emotions can be feel during the game. In order to provide rigorous observations, each member change the videogame until each member have played to all games.

Finally, we have compare all observations charts and we have a scrutinizing and we have selected those items that are repeated in all charts.

IV. VIDEOGAMES ANALYZED

The videogames that we have been analyzed were:

- (a) This War is not Mine

This is a video game of the subgenre roguelike with 3D graphics and perspective 2.5D developed by the studio 11 bits. This videogame puts us in the shoes of an omniscient and omnipresent being who guides the life of a group of refugees from a war developed in the fictional Pogoren country (similar to the Balkan conflict). It is a video game in which it changes the perspective that assumes the gamer, since it does not intervene as a combatant, as in most war games, in this case assumes the roles of refugees with their own histories and abilities that struggle to survive, and This is the objective to survive the maximum possible time, since the video game has no end, this being the moral the same, the war never ends and civilians pay the price of the conflict.

- (b) Papers, please!

This video game belongs to the genre of simulators focusing their action on bureaucracy. It was created by Lucas Pope, an independent developer. In this title we assume the role of a frontier employee who must examine the documents of people who want to cross the border between the fictional country of Arstotzka and its neighboring countries.

- (c) Unmanned

This is an independent title written by Jim Munroe and belonging to the category of Serious Games, so this game was developed with a sobering or formative intention.

In Unmanned we assume the role of a pilot of an unmanned aerial vehicle (UAV). The objective of the game is to live next to the protagonist and make the player question the decisions that he takes, since everything has an immediate consequence and no turning back.

V. EMOTIONAL PATTERNS

Emotional patterns may be conceived as individual differences in emotional reactivity, processing and regulation; more specifically, they involve detection and appraisal of emotionally salient stimuli, and regulatory processes that can be automatic or controlled, conscious or unconscious, occurring at one or more points in the emotion generative process and final expression. [7]

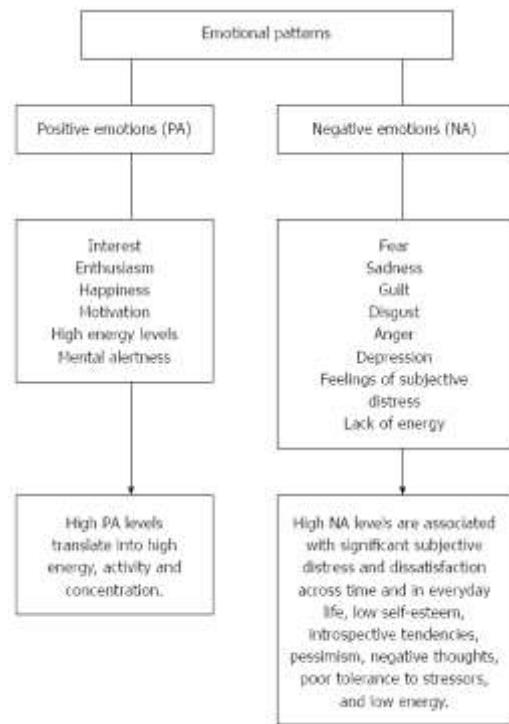


Fig. 1. An structural emotional patterns: positive emotions and negative emotions (with permission by the authors [7])

After playing the three selected games, a series of emotional patterns have been established according to the relationships between the different emotions [8]. To do this, they expose those emotions most frequent in the development of each game.

(a) This War is not Mine

In this video game predominate the negative feelings, mainly the sadness and linked to this the pessimism, the vulnerability, the pain, the suffering, the failure and the mourning.

(b) Papers, please!

In the case of this video game the emotions collected during the game experience are also negative. The sadness associated with the feeling of humiliation, pessimism and resignation prevails.

(c) Unmanned

For the video game Unmanned the predominant emotions are sadness and joy. In the case of sadness the related emotions are: apathy, abandonment and disappointment.

VI. CONCLUSIONS

To get the studies of the emotional patterns present in videogames to begin, we have decided to take the initiative with this research that is in its initial state. It is necessary to create a body of knowledge that will build the advance in the studies of this area.

We can observe that most of the emotions that arise from the use of these video games are emotions linked with negative aspects. We have to keep in mind that these video games are designed to make us feel this type of emotions, since they try to

situate us through the narrative to political, social and / or ethical-moral conflicts.

Regarding the results found in this study we can point out that the use of videogames of this type can make the player aware of different problems, thus evidencing a learning of the identification and management of emotional patterns.

At the moment, we can't say what the influence is on social learning when we encounter games that spatially impact on the repeated use of emotional patterns with high presence of negative emotions. Although the same thing happens when a game contains a high load of positive emotions. Its incidence and impact or effect will be a goal for further studies.

REFERENCES

- [1] J. Huizinga, *Homo ludens*. Madrid: Alianza Editorial : Emecé, 2000.
- [2] F. I. Revuelta y J. Guerra, «¿Qué aprendo con videojuegos? Una perspectiva de meta-aprendizaje del videojugador», *Revista de Educación a Distancia (RED)*, vol. 33, 2012.
- [3] M. Prensky, *Digital game-based learning*. New York: McGraw-Hill, 2001.
- [4] J. McGonigal, *Reality is broken: why games make us better and how they can change the world*. New York: Penguin Press, 2011.
- [5] D. W. Shaffer, K. R. Squire, R. Halverson, y J. P. Gee, «Video Games and the Future of Learning», *Phi Delta Kappan*, vol. 87, n.º 2, pp. 105-111, 2005.
- [6] G. Tost y O. Boira, *Vida extra*. 2015.
- [7] Muscatello MRA, Bruno A, Mento C, Pandolfo G, Zoccali RA. Personality traits and emotional patterns in irritable bowel syndrome. *World Journal of Gastroenterology*. 2016;22(28):6402-6415. doi:10.3748/wjg.v22.i28.6402.
- [8] R. Bisquerra y E. Punset, *Universo de emociones*. Valencia: PalauGea Comunicació, 2015.