

# Learning with commercial videogames

## A bridge between leisure and education

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# Executive Summary

This report includes the results of a systematic study on the teaching-learning process in the classroom and in the family, when commercial video games become educational tools. The project results were compiled during the 2006/2007 school year as a result of the collaboration between the team *Grupo de Investigación Imágenes, Palabras e Ideas from the University Alcalá* and *Electronic Arts de España*, within the framework of its *Corporate Social Responsibility Program*. This is an interdisciplinary work between those who produce and distribute the video games and those who approach them with the aim of exploring how they are used by the final consumers.

The project's *general objective* has been to determine which abilities, associated with thoughts and actions, are developed when boys and girls aged between 7 and 11 use certain video games in the classroom or in their leisure time, with the help of adults. The investigation has been developed according to an *ethnographic methodology*, since it aims to observe, analyze and explain the actions taken by the participants and the meaning of their activities, within a social and cultural context.

With the aim of observing and analyzing the user's practices, *we designed educational scenarios*, presented as workshops and organized around three pre-selected commercial video games. The participants, together with the research team, included children, teachers and their families. *The results* obtained show the

transformations achieved during the course of the workshops, both on the educational scenarios designed and on the thinking and action patterns of the participants. *The results* of the project are discussed around the different emerging issues that have been the subject of our investigation. These topics are organized around four core themes which we will touch upon below:

## Videogames and educational scenarios

- *The physical context of the classroom has been transformed with the arrival of commercial video games and the platforms that allow their use.* The results of this project have shown that, taking the three selected video games as a starting point, we witness the origination of activities which imply the need to reorganize the environment around the console in its different formats. This fact has a direct impact on the social relationships of the participants which, at the beginning, seem to be more symmetrical. For example, if we observe the images depicted in the different photographs included in the report and that show the said spaces, we can observe that the traditional classroom has been transformed; the desks are now less important since children and adults talk over the consoles.
- *The activities designed around the video games, geared towards turning children into people who reflect upon them in a critical way, become an important engine to introduce other changes into the physical environment.* Thus, in four out of the five workshops conducted in the schools, the computer occupied a prime spot together with the consoles. Later, other digital resources were used, especially photographic

cameras, to favour the development of people that are critical with the video game used.

- *The presence of these new technologies generated important changes throughout time among the relationships between the participants. As we were able to see through many of the conversations that took place in the classrooms, and which are transcribed in this report, the role played by adults proved essential.*
  - It is observed that *the relationship between children and adults is much more symmetric than in traditional teaching-learning contexts*. For example, we noticed that children sometimes take the role of teachers to reveal tricks or to contribute with strategies that allow moving forward on the levels of the videogame.
  - This symmetry does not mean, in any case, that the adult person— neither the teacher nor the researchers— loses his or her teaching role. Moreover, we can say that *all participants in the classroom learn and teach*.
  - The educational strategies of adults are not oriented towards the video game's educational procedural aspects, but intend to induce players to go beyond what is seen on the screens. For example, in all the workshops held with the videogame *The Sims 2 Pets*, adults were the ones who helped to think about the principles that could guide the design of a city or the choice of a home depending on the people, Sims's characters, who would live in them.
  - In summary, we saw the origination of *guided learning situations* in which the expert shows the novice, and where the roles are alternatively assumed by the

participants. From this perspective, everybody learns and teaches at some point in time.

- Considering also the social dimension of this new educational scenario, the results of this study have shown that commercial video games in the classrooms may contribute to the social integration of boys and girls with a physical disability or those who belong to a minority, including immigrant boys and girls who do not have a complete command of the Spanish language.
  - For example, some children with motor skill disabilities participated in the console games accompanied and supported by their classmates and teachers. With the game NBA Live 07, one of the children who regularly uses a wheel chair discovered: *“Now I’m playing Basketball”*, and he verbally expressed it in first person, as shown on the session recordings.
  - Other children, who did not know how to read and write in Spanish, were able to provide critical reviews on some videogame scenes and to discuss them with their peers; this situation contributed to the development of the thinking and reflecting ability in these children, although the starting point lies on the specific images shown on the screens.

## Participating in a new culture

- The results of this study have shown that the presence of video games in the classroom contributes to bringing the day to day routine of children closer, overcoming barriers in the learning environment and favouring motivation. For example, when the video console is used together with

notebooks for certain tasks that children do at home, like the usual daily homework, we observe a better quality of written outputs.

- On the other hand, the video game has allowed an easy identification with specific heroes that represent many of the values that children currently share.
  - For example, the data obtained show that children have, through *Harry Potter and the Goblet of Fire* or *with NBA Live 07*, learned values such as team work and solidarity; this has allowed the introduction into the classroom of innovative strategies and educational resources.
  - On the other hand, adults contributed to the fact that the identification with these heroes took place in a critical way, hence becoming a learning tool.
- The data obtained in the 16 workshops carried out at the *Seventh Science Fair in Madrid*, designed with the same video games as the ones used in the classroom, have allowed to confirm that video games have enabled both, children and adults, related as family or friends, to explicitly express their interests and world representations in front of the video games screens. The recordings obtained in this framework show that, under the adequate conditions, and taking into account the selection of the games and positioning of the consoles in the stand with the aim of favouring social interaction, the families approached the video game's screen together and spontaneously guided the children in a similar way to how researchers and teacher would have been able to work in their classrooms.

## New forms of literacy

- The results from the study show the contribution of the commercial video games to the design of educational scenarios oriented to turn children into active recipients and issuers in communicative situations. In our workshops, *many ways of doing and saying by combining multiple tasks and technologies* have been created.
- Due to its capacity to create innovative scenarios, it is worth pointing out the strategy of turning children into *videogame critics*, people who used the written language to express their opinions through their notebook or blog, while being aware of the existence of an audience.
  - The presence of Internet in the classroom and the development of blogs in the workshops, through which the children expressed their opinion, meant new ways of collaboration between present and absent participants.
  - The critical thoughts and ideas that the youngsters, teachers, parents and researchers wrote in their blogs with regards to the video games, brought us closer to a new concept of “*author*”, where the players’ recreation and personal claim of the videogame is linked to the social and collective concepts that may be shared within a scenario where digital tools are the main role.
- The analysis of the productions has allowed us to identify the different levels of complexity when it comes to becoming aware of the rules and content hidden behind the videogame.
  - We have seen, for example, how, when children make up a story or when they write on their blogs with

regards to the videogame, they are able to come closer to its discourse by focusing on the characteristics of the game as such. Their texts and drawings refer to what takes place in the videogame and the actions performed as players.

- On the contrary, at other times they have shown us a more complex way of approaching the meaning and discourse of the videogame, becoming aware of some of the rules that determine the relationship between the hero and his mission and, even, the possible intentions of the designer.
- At other times, the fact of going beyond the actual act of playing, as the written reflections have shown, indicates the awareness of the contrast between reality and fiction or the presence of moral judgments.

## Learning to think with Videogames

- The project results show that video games can become tools for developmental thinking in a double sense. On the one hand, they contribute to the *development of argumentative ways of thinking* when children need to verbalize the strategies that allow them to pass the different levels of the game. On the other hand, the players are situated in contexts that may foster *creative thinking* when it comes to discovering new solutions to the problems that arise in a virtual reality and with relation to the world models present in it.
- With regards to the possibility of debating about the video games used, in particular *The Sims 2 Pets* has allowed a deeper study about the aspects and the multiple possibilities implied

by the activities we, people, perform in certain social contexts.

- For example, they interacted in a virtual world where it was important not only to make things up, but also to *become aware that, when playing, they are actively participating in a video game by controlling and guiding the movements of a Sims character.*
- At all times, the help of an adult, through the questions raised to guide thoughts, proved essential for favouring *complex arguments in the dialogues.*
- The data obtained in the project have allowed us to analyze how children develop their creative ability, especially related to the way in which they build stories on the basis of the contents of the video games. From this point of view, *The Sims 2 Pets and Harry Potter and the Goblet of Fire* were especially useful.
  - It is well known that, in video games, the stories are only possible if the player's activity updates the hero's life, with some independence of who designed the videogame.
  - Analyzing the written productions from the children in the Harry Potter stories we can observe two types of approaches: a) with the predominance of spatial elements in the game; b) with the predominance of a temporary dimension, with the children's stories presenting a structure closer to the one in traditional stories which includes the three classical elements of a narrative: introduction, body and conclusion.

This report will show how commercial video games can open new paths to learn and teach. To those of us who are interested in education, experiences like this one encourage us to look at the future from a new perspective, which we all have to help define. We hope that from these pages we can contribute to easing this point of view.



# Introduction

## Why this report?

To talk about video games may suggest many imaginary worlds, challenges associated with the advance through the different levels of the game, sharing interests with other players and, at times, learning. *Through these pages we will show how some commercial video games can become learning tools in school and an ally when it comes to communicating and conveying values at home.* This is the main objective pursued from the beginning of this project developed by the Research Group *Imágenes, Palabras e Ideas* from the University of Alcalá in collaboration with the video games company Electronic Arts España within its *Corporate Social Responsibility Program*.<sup>1</sup>

## Context and Objectives

To bring the tools present in every day's life closer to the classrooms has been the starting point for the design of this project. If we take a look at the data provided by the Almanac of the Association of Distributors and Editors of Entertainment Software,

20% of the population in our country, about 8.8 million Spaniards, state they usually play video games in their different platforms. In any case, the fact that 36% of the population of players is between the ages of 7 and 16 justifies the need to analyze the educational side of the commercial video games. Within this framework the objectives of this project are as follows:

- To examine how commercial video games contribute to the creation of innovative educational scenarios through their presence in the classrooms.
- To analyze the patterns that organize the use of commercial video games when adults work with children with the aim of contributing to the education of critical citizens, who are able to actively reflect upon the contents of the media.
- To explore how commercial video games may contribute to the development of basic skills, related to the processes of oral, written and audiovisual communications, in contexts where populations from different cultural environments coexist.

# Approaching the project

## A case study from an ethnographic stance

By school and family, the specific scenarios where the project was developed, we understand the culture and communities where people carry out their activities<sup>2</sup>. Taking into account that theory and method are two dimensions that should be convergent in any research project, this work has been designed from an ethnographic point of view whose main goal is to understand the culture of the social groups, and is complemented with case studies that provide tools for the design of the project and for the data analysis<sup>3</sup>. *From this conceptual framework, we analyzed the practices that take place around certain video games with a specific reality, with the aim of understanding why and how they are used when they become learning tools and how they can contribute to acquiring abilities and the necessary knowledge to cope in a contemporary society.* We are interested in observing, analyzing and explaining these practices, learning their meaning; hence, our results may help to enable educational and innovative scenarios in school and families.

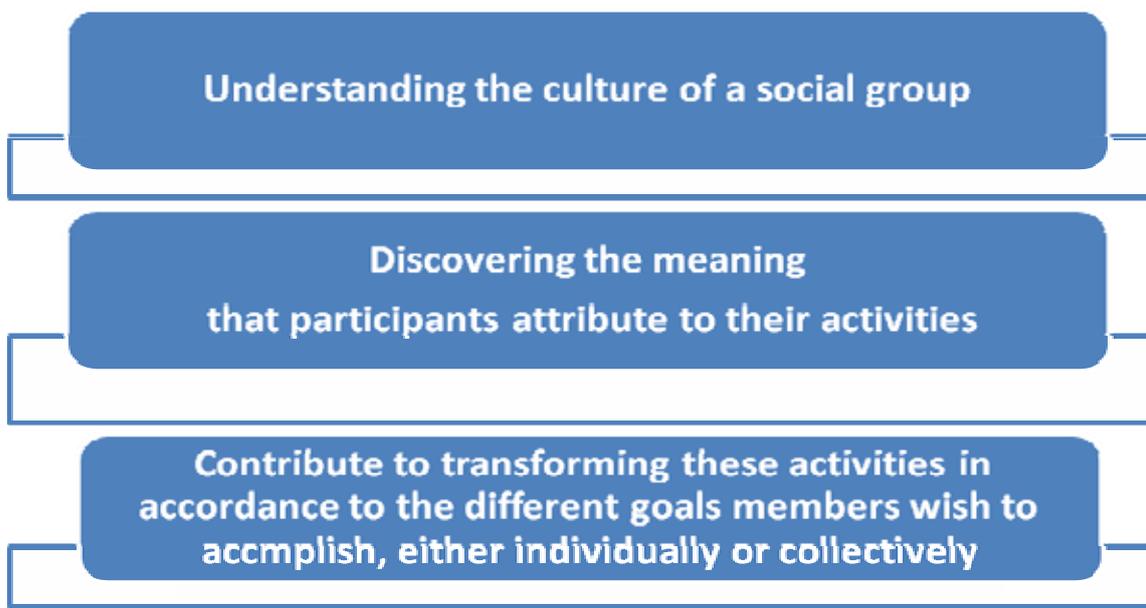


Figure 1.

#### Characteristics of an ethnographic investigation

This project has been carried out in two contexts. Firstly, the *school environment where five very differentiated experiences took place*; each one of them is defined by the following features: a) the *participants*, namely boys and girls, their teacher and the research team; b) *the school*, as the physical and social context where the activity takes place ; c) *the video game* around which the different activities are organized. The differences between those experiences, which will be specified throughout this report, shall be understood while keeping in mind that, as in any ethnographic study, they were redesigned along the project depending on the decisions taken jointly by teachers and the research team, and also taking into account the children's opinion.

All the experiences are described in the page designed during this project and which is summarized in Figure 2 as follows:  
([www.aprendeyjuegaconea.net/uah/htm/experiencias.htm](http://www.aprendeyjuegaconea.net/uah/htm/experiencias.htm))



**Figure 2.**  
**Videogames in the classrooms**

Secondly, our activities have been developed in a non-formal educational context provided by the *Seventh Science Fair in Madrid* ([http://www.madrimasd.org/Madridporlaciencia/Feria\\_Seventh/portal/default.aspx](http://www.madrimasd.org/Madridporlaciencia/Feria_Seventh/portal/default.aspx)) and which gave us the opportunity to compare the use of the same video games in different situations. In any case, the data obtained in this environment are considered complementary and have been taken into consideration with the aim of establishing comparisons and exploring the differences among several scenarios.

## The context and their participants

As indicated, the project *Learning with video games* was developed during the 2006-2007 school year in both, formal and non-formal learning contexts. As far as the *formal context* is concerned, two public schools from the community of Madrid participated. The selection was based on two criteria. On the one hand, the previous projects that the research team had developed in the two schools; we expected this to allow a deeper understanding of the school culture. On the other hand, both schools are situated in neighbourhoods far from the centre of Madrid, with numerous immigrant students. Also, both schools are engaged in integration processes in the classrooms with boys and girls with special educational needs. We will now refer to these two environments and also, briefly, to the one generated in the *Seventh Science Fair*. Figure 3 summarizes the three contexts where this project took place.



Figure 3.

The participants and their contexts

## School CEIP Henares

### The neighbourhood

The Public School CEIP Henares is situated in the Nueva Alcalá neighbourhood, to the South-East of the city and on the right margin of the Henares River. Originally, this neighbourhood was an agricultural area where, in the 70s, some 2,350 houses were built. The majority of the neighbours have always been immigrants. Although it emerged from a strong outbreak of national migration, nowadays there is an outstanding presence of families from Eastern Europe.

### The school

CEIP "Henares" is a public centre dependant on the Office of the Department of Education from the Community of Madrid. It was established in 1979 and, currently, relies on teaching staff specialized in Early Childhood Education, Primary Education, Foreign Language, Physical Education, Music, Audition and Language, Therapeutic Teaching and Religion. The teaching body is made up of 28 teachers.

The students live immersed in the neighbourhood. Most of them were born when their families already lived in the area, even if their different origins prevent them from having Alcalá's own deeply routed traditions and culture. It is a very diverse group of students where boys and girls from ten different nationalities coexist. The school represents an important reference point for the students as

far as friendship, games, sports, and extracurricular activities are concerned. School absenteeism is rare.



CEIP Henares

<http://www.educa.madrid.org/web/cp.henares.alcala/>

## Year 2 B's classroom and their teacher

In the project and during the whole school year, the same group of boys and girls from year 2 of Primary Education participated, together with their teacher. The work and tasks proposed to the children were discussed with her daily, and decisions were taken together with the research team.

It is important to take into account that the age of the children in this group, ranging between seven and eight, conditioned many of the activities. To understand the data that this study will be presenting, it is relevant to consider the following characteristics of the group, summarized in figure 4:

1. When this study began, *the boys and girls in this group* were consolidating their learning of reading-writing skills. The participation in this project was an important motivating element; especially relevant was the fact that they were turned into *video games critics*, people who used the written language to express their opinions through their notebook or blog, being aware of the existence of an audience.
2. At the beginning of this study only five children were using a *computer* at home. This situation changed progressively, as it will be shown later, and the usual notebook was replaced by a blog to carry out the work related to the video games within the project's framework.
3. *The teacher was an expert instructor and had a high sense of responsibility.* At all times, she was aware of the importance of maintaining a discipline, which gave the children security. This contributed, most probably, for children to consider the

introduction of the video games in the classroom as another educational tool, no different from any of the ones that were normally used.

4. *The families of the children in the group actively participated in this project.* We had two meetings with them throughout the course as a big group. On the first one, they were informed of the project and the activities to be carried out. On the second one, there was a debate about the experiences lived through during their participation. Also, at a personal level, a dialogue was established, through a notebook or through the blogs, on a weekly basis.

  - The use of video games in these workshops, as described later, was conditioned by two main facts: the age of the children and the stage of the academic year in which they were conducted.

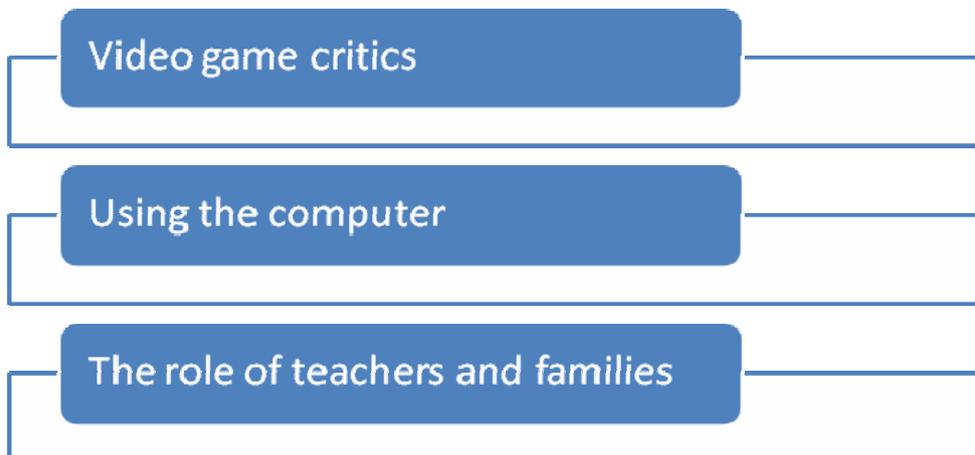


Figure 4.

Approximation to the classroom at the school in Henares

## School CEIP Ciudad de Jaén

### The neighbourhood

The school CEIP Ciudad de Jaén is an Early Childhood and Primary Education Centre situated in an outlying neighbourhood in the Southern part of Madrid. It expanded mostly in the years of industrial development, with the arrival of immigrants from villages from other parts of Spain who were searching for survival. In the beginning it was associated with shacks and poverty situations. The neighbourhood has gone through strong transformations throughout the last 20 to 30 years, most of them as a result of the neighbours' participation and efforts to improve their living conditions. Towards the eighties, the first homes with the current format were constructed, and in 1986 it was officially incorporated into the city. At the present time, the remodelling process is still ongoing. The neighbours' associations have carried out an important role in creating the feeling of a neighbourhood as such, one which now identifies itself with its own history (<http://www.orcasitas.net/>). Nowadays it concentrates an important population of immigrants from different origins (Latin-America, Eastern Europe and Asia).

### The school

The school CEIP Ciudad de Jaén is completely integrated in its neighbourhood and the teachers want to contribute to the improvement of the living conditions of the student's family. It was established in 1975 as a pilot centre annexed to the Complutense

University of Madrid and from that moment on, it has been characterized by its active participation in innovative educational projects, being considered as an Integrated and Comprehensive School where boys and girls with motor skill disabilities have been integrated, some of which have participated in our workshops. The school, on the other hand, is aware of the need to incorporate the use of the new technologies and the teaching of languages into its classrooms. It has taken part in different projects along this line, both at a National as well as at a European level. As shown on their web page, ([www.educa.madrid.org/web/cp.ciudaddejaen.madrid/coleini.html](http://www.educa.madrid.org/web/cp.ciudaddejaen.madrid/coleini.html)) the entire teaching body at Ciudad de Jaén is excited and feels privileged to “be able to offer the students and neighbourhood a teaching method that develops a maximum number of abilities and values in individuals through advanced and innovative environments and means”.



CEIP Ciudad de Jaén

<http://www.educa.madrid.org/web/cp.ciudaddejaen.madrid/>

## The classrooms and their teacher

In this centre we worked successively with *two groups of students in the Fifth year of Primary Education*. Their teachers also participated. The teachers were responsible for the choice of the actual classes on the basis of their teaching interests. To understand the results obtained it is convenient to consider the following characteristics summarized in figure 5:

1. The fact the work was done in two different classes allowed the *participation of a higher number of boys and girls in these innovative experiences.*
2. The groups participated in the project consecutively during the first and second part of the school year. With the aim of studying the selected games in more depth, *The Sims 2 Pets and NBA Live 07* were chosen for the experiences implemented in this school.
3. Keeping in mind an *important presence of immigration in the neighbourhood* and the fact that new children joined the class frequently, a joint effort was necessary to involve these “new” participants during the development of the experiences.
4. *We worked with two different teachers* who, in the two consecutive phases of the workshop, decided the activities together with the research team.
5. The difficulties of the *families* to participate in meetings with the research team and the teachers, within the framework of the project, due to their work schedules, forced our interactions to rely on the children's direct contributions, their notebooks and their blogs.



Our suggestions were organized around the same games as the ones used in the school.

We will briefly describe the physical space where this experience took place and some of the material elements that allowed us to convey the intended message.

- To begin with, in the stand we set *4 working stations, each one of them equipped with a console and a computer*. We thought the fact of "writing" on the Internet to advertise the experience lived through with the video games, by using the "blog", would encourage reflection and critical thinking.
- Secondly, a *plasma screen*, at all times and in an audiovisual format, displayed other experiences conducted by the research group using video games as an educational tool.
- Thirdly, during the Fair, we set out *large and small triptychs where the experiences from the schools were described* as well as the core ideas that we wanted to convey.



**The Science Fair. A non-formal education scenario**

[http://www.madridmas.org/Madridporlaciencia/fesia\\_VII/portal/default.aspx](http://www.madridmas.org/Madridporlaciencia/fesia_VII/portal/default.aspx)

## The Workshops

We have already indicated that our activities in the classrooms were organized around the different workshops. We define them as innovative scenarios where new technologies coexist with other already consolidated ones; in these scenarios, opportunities are created for boys and girls to gain new abilities related to digital literacy. In the workshops, video games coexist with the Internet

and the blogs, as well as with other tools (for example photo or video cameras), which contribute to educating in the use of multiple communication codes. The interaction among them boosts the specific issues.



### Video games in the classroom

- Multiple video games
- Different platforms



### Multimedia workshops

- Communication media
- Channels of expression



### Collaboration between children and adults

- Work in a large group
- Interactions in small groups

Figure 6.

Videogame Workshops and their characteristics

## The participants and the goals

As indicated before, students, their teachers and the research teams participated in the workshops. The teaching objective, shared from the beginning by the adults, was to introduce video games in the classroom in relation to other means of communication, so that children would become the issuers of contents through these means, and not be just passive recipients. Also, we were looking for the children's productions to be far from the scholastic world or that, at least, for them to make sense outside of it. For example, on the basis of the use of video games, and complementing these technologies with the use of others, we want to generate an awareness in boys and girls in order for them to realize that they are writing for somebody that is outside the classroom, people whom they probably do not even know, but who will become their future readers. This is why they become “video games critics” and write in a BLOG, not only in a notebook. It is essential that other people can read their opinions.

## When and where did it take place

The workshops took place in weekly sessions of two hour periods, depending on the programmed tasks. Although they always took place within school hours, the children seemed to understand them as a complementary or extra – school activity, probably because the teaching methodology and the tools used were not the usual ones in other school work.

## How these activities were carried out

The design of the activities was inspired by authors and researchers<sup>4</sup> who think language and thinking are intertwined. It was meant to develop a certain awareness in boys and girls of the tools that they are able to use as human beings, especially the oral, written and audiovisual language. The presence of multiple technologies and the support from adults were pillars in which the activities were based on. As we will be showing in more detail in this report later on, the activities were developed through the different levels that usually maintain the same sequence: a) to talk about the game and introduce the subject as a group, b) to play in small groups, c) to discuss and think with the other classmates or with the adults, d) to publish in blogs and/or express opinions through multiple media, e) to read or comment classmate's remarks. Many of the activities can be found on the project's web page ([www.aprendeyjuegaconea.net/uah/php/act\\_listado\\_nucleos.php](http://www.aprendeyjuegaconea.net/uah/php/act_listado_nucleos.php)).

## The games selected

The video games were selected based on their release date, popularity and accessibility among young people. In addition, it was a matter of bringing us closer to different contents, formats and structures. We will briefly justify why each of them was chosen.

## To collaborate while playing NBA Live 07.

This is a *sports videogame*, which can contribute to the introduction into one's daily life of many values and abilities learned through basketball. This is an example of what can be done with other sports video games, for example "FIFA 07" or "Tiger Woods PGA Tour".

## The Virtual Reality of The Sims 2 Pets.

We are before a *simulation videogame* that allows us to explore reality from multiple perspectives. Adults and children can learn to play together and to be creators of a virtual reality where their characters and spaces are transformed.

## Learning with Harry Potter.

This is an *adventure videogame*. A popular culture has been created around the main character, one that is present in the childhood stage through the different material objects to which specific values are associated. Its introduction into the workshop allowed exploring the construction and development of abilities in narratives inside and outside of the classroom.

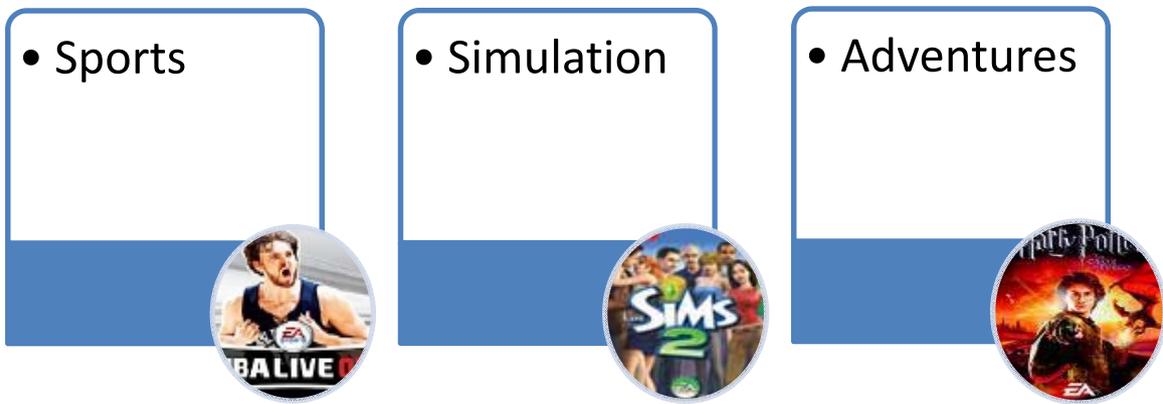


Figure 7.

Our video games

## The platforms used

### PlayStation.

It is a sixth generation tabletop video console. As indicated in its category, it allows sharing the viewing of the game among the various players and spectators. Through a controller, the player guides his or her character and interacts with the environment. Another feature is that, apart from being a videogame player, it is also a multimedia system that can reproduce films in DVD and music CDs.

### Nintendo DS.

It is a portable latest generation video console. It is characterized by its two screens that allow the player to have two points of view of

the same place, a quick and easy access to maps and menus and interaction through its touch screen with the environment of the game. In addition, the player can use a voice-recognition microphone to send commands such as to blow a balloon, or interact with the characters, to practice mouth to mouth resuscitation to an injured character. Another feature is the possibility to chat with someone on the other side of the world through a cordless Nintendo Wi-Fi Connection, which allows the interaction between two different consoles or through the Internet, provided there is access through a Wi-Fi connection, preferably broadband, which allows to play certain games online.

As shown, the console has more of an individual nature as far as the interaction with the character goes, but through its features it becomes a permanent instrument for socialization.



Figure 8

Game platforms used in the workshops

# The analyses

Our analyses combine the researcher's perspective, organizing and searching to establish comparisons among contexts, and the participant's interpretation of these contexts. Qualitative analyses have been performed which, together with the use of graphic resources, will allow the establishment of certain conclusions from the analysis that will provide a description and explanation of the said data<sup>5</sup>.

## Analysis objectives

For each of the groups, researchers and teachers jointly determined a set of educational objectives closely linked to the presence of video games in the classroom and which are included in figure 9.

Observing, describing and explaining educational practices around video games			
Formal and non-formal educational contexts	Collaboration between children and adults	Communication and expression media	The presence of analytical and narrative thinking

Figure 9.

Analysis objectives

## Data collection and reconstruction

We will begin with the ecological observation supported by audio and video recordings, as well as the analysis of the different documents created by the students. Figure 10 allows to graphically approach the resources used for obtaining the data. The information obtained is filed in written and audiovisual texts which will be subject to analysis. As seen in the figure, there are two approaches to the context in which the activities were conducted: on the one hand, the one that allows to obtain data that represents the researcher's direct outlook, and, on the other hand, the one that implies the first re-elaboration of the observations and that has usually been carried out outside of the workshop. Appendix 1 includes a detailed description of all data that has been subject to analysis under the scope of this present project.

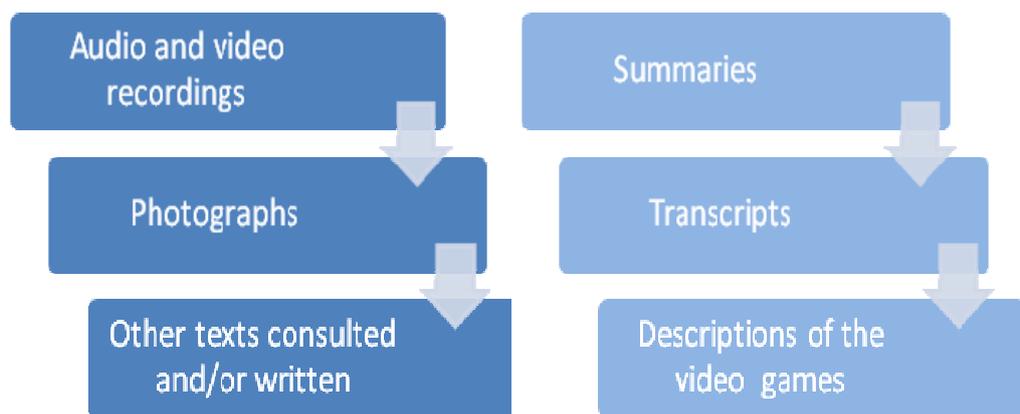


Figure 10.  
Resources used in the analysis of data

## The process of interpretation

The analysis process *has been achieved in different phases* and leans on the use of the different sources in order to obtain the evidence, organized and examined with the help of ATLAS Ti 5.2 software. It must be understood as a circular process in which interpretations begin even during the fieldwork.

Figure 11 includes the different data interpretation processes, which are drawn together around two dimensions, the narrative one, which aims to discover the meaning that the participants give to their activities, and the analysis that builds organized concept systems supported in certain theoretical frames from which the process<sup>6</sup> is reconstructed.

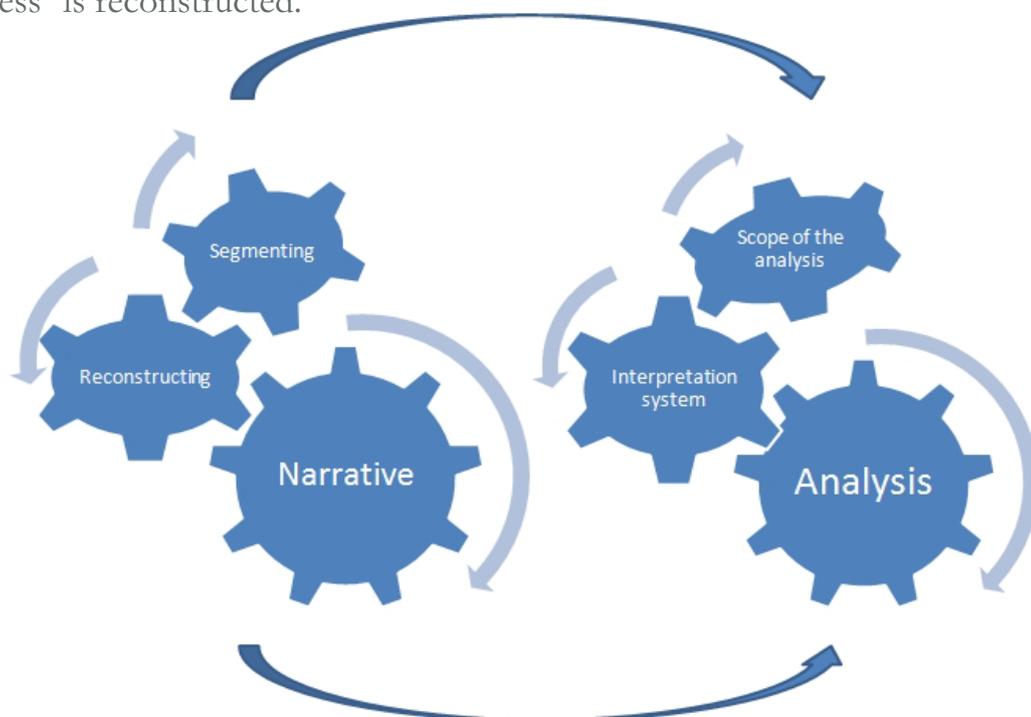


Figure 11

Combining the interpretation processes



# Emerging issues

## Videogames and educational scenarios

## Videogames and community work

We will now review the main results of the project, grouped around different emerging issues that have arisen from the data analysis. Our first result shows that the participant's activities in the workshops acquire meaning in the context in which they were performed. In addition, this context evolved throughout the development of the project. We will now show the features that define it in each of the workshops carried out.

As we have mentioned previously, in our workshops we worked with three different video games : “*NBA Live 07*”, “*The Sims 2 Pets*” and “*Harry Potter and the Goblet of Fire*”, with which we conducted different experiences whose development can be followed on the web page created during the project<sup>7</sup>. In this page, one can see in detail the main decisions taken in relation to the tasks to be performed, the procedures to undertake them, the technological media used or the work accomplished by the children. Each experience described therein corresponds to a workshop and the chronology of all the workshops conducted is reflected in Figure 12.

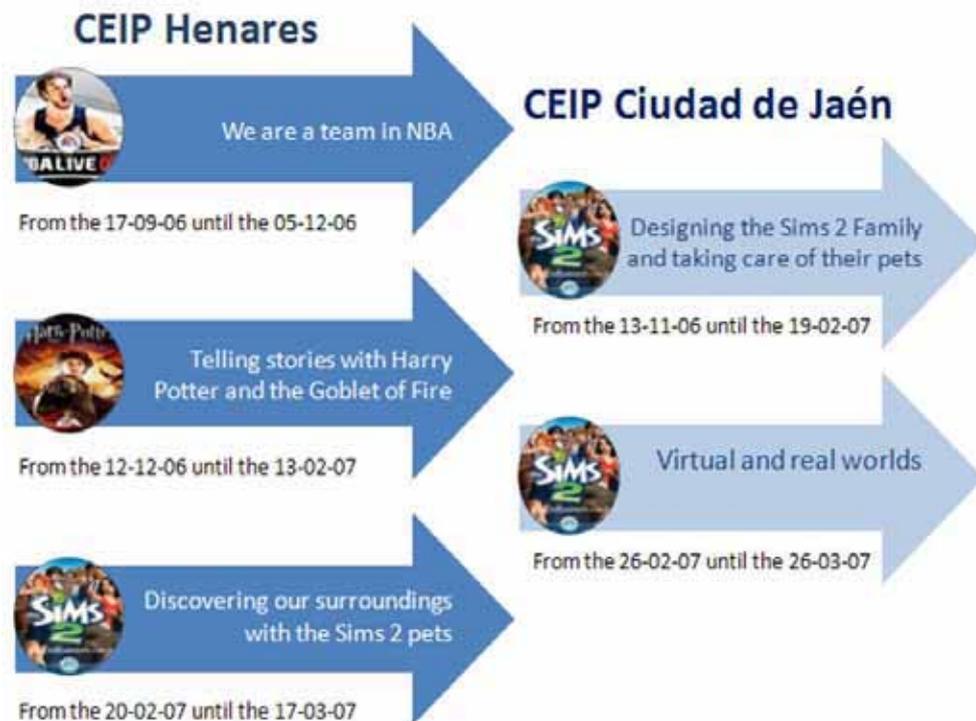


Figure 12

### Videogames workshops: Our experiences

Following we will show how each of the workshops may be considered a practice community<sup>8</sup> where the activities of the participants acquire meaning. These data provide, on the other hand, a general frame from where the emerging issues presented in this report make sense. A detailed description of each of the workshops, including the analyzed data and the activities carried out, is included in Appendix 1.

We will now comment on the more relevant aspects, which will be explained in detail throughout this report. We will organize the pages related to this emerging topic around the different video

games used, being aware, however, of the fact that whatever happened in each one of them must be understood in relation with the time within the school year in which we worked and the specific characteristics of the groups. This is why we describe each one of the workshops carried out in the schools.

## Working with NBA Live 07

Sports and childhood games are very present in children's lives. This is why this experiment was carried out with a sports videogame that allowed us to explore with the children a set of specific values, related to team work.

We used this videogame in the two centres that participated in the project, although with slightly different tinges due to the specific characteristics that surrounded each one of them; for example, the specific moment within the school year at the time in which the workshops took place, the age and characteristics of the students, or the work methodology defined jointly with the teachers.

## We are a team with NBA Live 07

This was the first workshop carried out. It was carried out during seven sessions, from the 17<sup>th</sup> of October to the 5<sup>th</sup> of December of 2006 at the school *Colegio Henares*, with boys and girls in *Year 2 of Primary Education* and their teacher. An analysis of the recordings shows that it is possible to differentiate three successive phases.



Figure 13.

#### Usual phases of a workshop

There was a first motivation phase in which the children would give some thought, in oral conversations or in their notebooks, to how it was possible to learn with video games . This is the question asked: What can we learn with video games ?

We also talked to the families about the same issue and everything was written down into the class notebooks.

During the second phase the children played with the video games in the classroom, using different PlayStation 2 consoles, and, in addition, at the end of the day they could each take the console home together with the corresponding game to practice with their families. Slowly they started becoming aware of the possibilities offered by the video games and the knowledge that could be acquired from them: team work, sports techniques, the relationship between reality and fiction and the importance of knowing how to face the problem posed by the videogame.

Finally, in the third phase, all the conclusions and work results were depicted in a collage with newspaper cut outs and drawings displayed in the school's corridor, making the rest of the school community participant.

### *Real and Virtual Worlds*

In this workshop we also used the videogame *NBA Live 2007*. However, this experience was clearly different from the previous one. The educational design followed in its implementation was determined by both the age of the children and the time within the school year when it was conducted. The workshop took place in the school *Colegio Ciudad de Jaén* and it saw the participation of boys and girls in fifth grade of Primary Education and their teacher. It was the last one done in the school, between February 26<sup>th</sup> and March 30<sup>th</sup>. In the workshop, two video games were used at the same time, *NBA Live 2007* and *The Sims 2 Pets*. This was due to the fact that both provided different possibilities to work on the contrast between real and virtual worlds.

One of the most relevant characteristics of these workshops was the fact that we worked with boys and girls with motor skills disabilities. They were integrated in the class group and participated in all the activities with no difficulties. The fact of working the contrasts between the realities lived in our daily life and the virtual world offered these boys and girls the possibility of becoming basketball players. We believe that this issue should be widely explored in future studies, designing specific activities that favour these experiences which would be impossible for disabled boys and girls in other contexts.

In any case, we should highlight that in these workshops we followed two activities where the children analyzed the importance of playing, on the one hand with the support of a group, and on the other with their families. In this case, all the ideas were collected in a new medium, through the blogs <http://ceipjaen.blogspot.com/>.

## Telling stories with Harry Potter and the Goblet of Fire

The specific goal of this workshop was to foster the development of narrative thinking in children. It was meant to teach and learn to tell stories on the basis of a character from the children's popular culture, Harry Potter.

This experience was done in CEIP Henares throughout eight sessions (from 12-12-06 to 13-02-07). Again, it was possible to differentiate three successive phases; in all them the videogame was present in the classroom using PlayStation 2 in small and big group situations. The projector made it easy to conduct a group game, since the videogame's images were projected on a big screen.

The first phase, considered the motivating one, was developed in three sessions in which the children came closer to the character of Harry Potter and investigated the existing information on the Internet. They moved from their usual classroom to the IT one, coming closer to computer use for the first time and, subsequently, to the creation of their blogs. This fact became especially relevant in this group since they initiated their participation, together with their families, in a multimedia experience analyzed later.

In a second phase, when they were already familiar with the characters around Harry Potter, the children justified, orally and in writing, who their favourite videogame characters were. Their reflections began to pop up on the Internet through their blogs, which allowed a bigger interaction with their families. In addition, in this phase, we showed different fragments of the film by the same title as the videogame, and the children participated in a multimedia experience where stories about the same hero are presented in different formats and using different communication codes.

Finally, the recapitulation phase that took place in the last two sessions allowed the children to, once again, reflect upon their character within the context of a young popular culture. They understood that Harry Potter was a hero, and the meaning of this concept. The children brought to class numerous objects related to Harry Potter which generated a learning scenario defined by a full universe of symbols present in the children's culture. This scenario created a bridge between the school and the student's daily life, close to the children's interests.



Watching the film *Harry Potter and the Goblet of Fire*. CEIP Henares



Organizing the classroom. CEIP Henares



Reflecting in front of the notebook. CEIP Henares

## The Sims 2 Pets in the classrooms

Working in the classroom with simulation video games like *The Sims 2 Pets* becomes a collective creation experience. During this project we combined the use of two platforms, PlayStation 2 and Nintendo DS, which provided different playing experiences. We began to explore the possibilities of the NDS in the classroom, and it is convenient to highlight that, in this case, the videogame is oriented to the care of pets and channels the attention to very specific actions. However, the PlayStation 2, without forgetting the world of pets, includes more game options that increase the design possibilities of both, characters and environments. We will now see the two workshops where one or the other console was present,

keeping in mind that it was not the only aspect that conditioned the planning of the workshop.

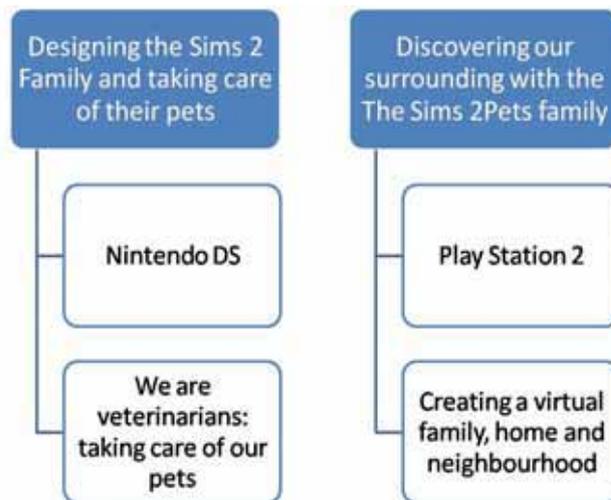


Figure 14

The Sims 2 Pets in different platforms

The videogame Sims 2 Pets was used in the *two groups of Fifth grade of Primary Education with whom we worked in CEIP Ciudad de Jaén*. The fact that we worked with the two groups consecutively directly influenced the educational planning. Due to the ample possibilities that this social simulation videogame has to offer, as well as the interest that it evoked in the participants, the workshop was extended into 12 sessions (from 13-11-06 to 19- 02-07).

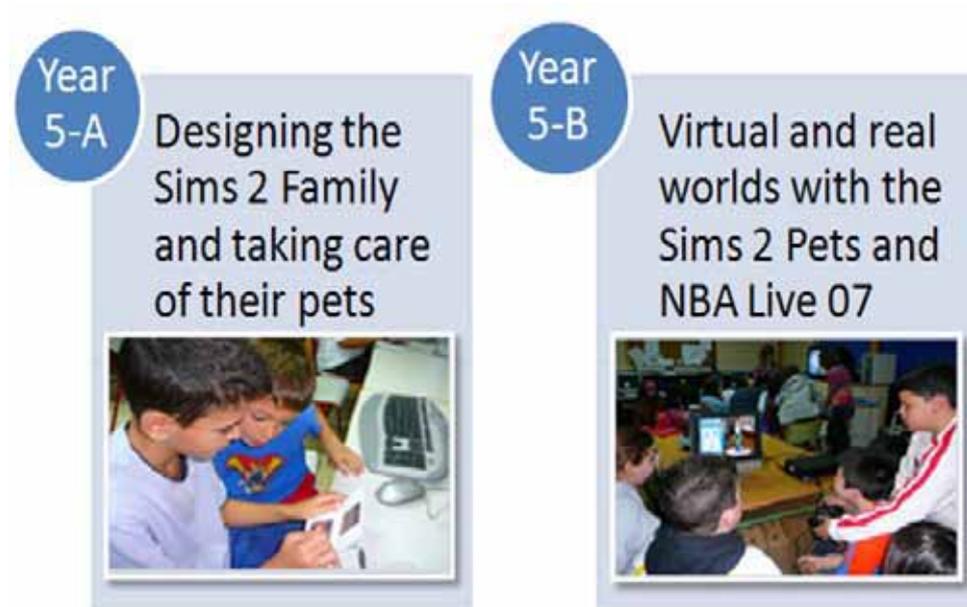


Figure 15.

Combining different video games and platforms in the classroom

## The Sims 2 - Designing a family and caring for their Pets

We will first focus on Year 5 A. Following our usual work routine, we began with a motivation phase whereby the consoles and the key principles of the game were introduced. From the beginning, the NDSs were present in the classrooms and the children took turns to take them home to work on them and reflect upon the videogame's challenges.

Slowly, the children were becoming videogame critic experts who conveyed their opinions, tricks and experiences of the game to other people. The presentation of these opinions in successive formats was especially relevant in this workshop. The children

expressed their thoughts in writing while keeping in mind their close and distant audiences. The texts were written in a traditional format during the first sessions, so that they could be read and discussed with their own classmates. Slowly the workshop became a multimedia classroom where they learned to design a web page, and later, to express themselves on the Internet through their own blogs while keeping in mind distant audiences.

In the last sessions of the workshops, some specific design experiments were accomplished which will be reviewed in detail in the following sections within this report. The work topics allowed the children to understand how the characters are inseparable from the spaces in which they live.

## Discovering our environment with *The Sims 2 Pets*

The last workshop carried out at CEIP Henares was organized around the videogame that we have been talking about. The fact that in this location the participants were always the same group of boys and girls together with their teacher allowed a well-balanced distribution as far as duration of each of the workshops goes. That is to say, we worked with three video games consecutively, dedicating a similar number of sessions to each of them.

We have to emphasize, on the other hand, that the experience that the research team had acquired with the videogame *The Sims 2 Pets* in previous workshops allowed the introduction of the following innovations into this experience: 1) Different supports and situations were combined, the children played with the same videogame in two different platforms; 2) Following the multimedia experience begun in the classroom with Harry Potter, in this case

the children combined the use of the consoles with photo cameras to work on the design of both characters and the space they live in; 3) participation from the families was more extensive and the children compared the virtual world of the The Sims family to their own everyday reality. In this context, they reflected upon the characters and their spaces and they discovered how the actions that people undertake in their everyday life are inseparable from our closest environment.

## What can we conclude?

The workshops developed during this project have shown the possibilities opened by the presence of commercial video games in the classrooms. The most relevant aspects are summarized in figure 16 and are organized around three core themes. In the first place, a review of the way in which the workshops were developed shows that video games can be used to introduce into the classroom contents that are close to our daily life, and the fact of combining, even in the same workshop, videogame and platforms, contributes to promoting this effect. Secondly, video games may be combined with other audiovisual media so that children may become aware of the differences and resemblances present among them, and most of all, of how each of them uses different expressive and communicative codes; becoming familiar with all this contributes to the development of abilities related to the literacy in media languages. Finally, in order for children to learn with video games, the presence of adults is of extreme importance, since, in a similar way to in other daily situations, they support and guide the acquisition of new knowledge, practices and values; we cannot forget, in any case, that children also learn by interacting

with their peers. These topics will be developed in depth in the coming chapters dedicated to the analysis of the emergent issues that are considered as the most relevant when it comes to explaining the educational value of commercial video games .

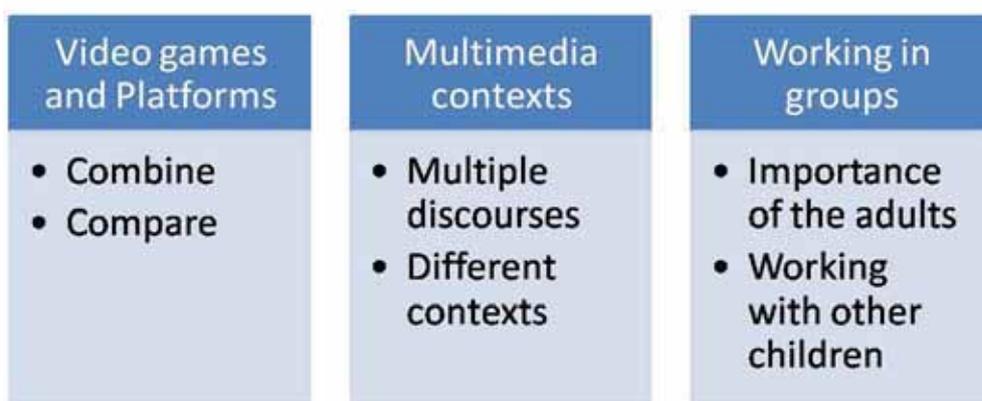


Figure 16.

The video games as educational instruments



Guillermo

ANA

## The classroom: The video games before the challenge of the curriculum

How should we educate in a digital universe when the citizens become not just recipients of the messages that are received through the media but also their issuers? What role can video games play in this task? Henry Jenkins (2006) refers to this issue when he tackles education in the media. In his opinion, an important goal in the education in the media implies encouraging people to reflect in more depth about the options they face when they must choose, being participants and communicators, and keeping in mind the impact of their opinion on others<sup>9</sup>.

The results of this project show that it is possible to use video games so that boys and girls acquire a sense of respect for the values of the community and develop a thinking process that allows them to build the knowledge by critically reflecting upon the information received. We will now analyze the process followed in the project to design a set of activities that may be carried out inside or outside of the classroom. We want to show, on the one hand, the core themes that organize them and, on the other, the way in which they were carried out in the classroom. All of it may be accessed on the project's web page. The steps taken in the teaching and learning process in the classroom are summarized in figure 17. We will show the way in which the activity was carried out.

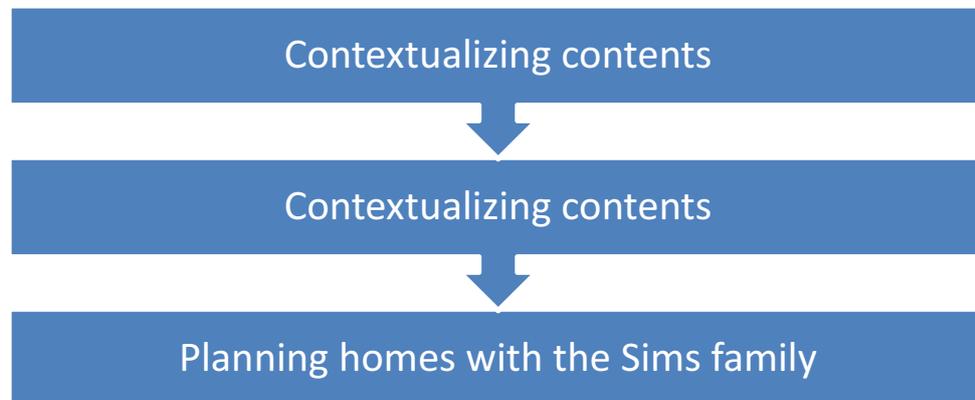


Figure 17.

Learning with video games in the classroom

## Contextualising the contents

A summary of the core themes can be seen in figure 18. As observed, eight core themes related to the educational contents that contribute to developing the necessary abilities in society were defined. They have been organized around two concepts, to learn and to explore. Different activities were defined in relation to each one of them, activities that could be accessed on the basis of diverse criteria, included in an index to make it easier for the teachers and families to make their choice.

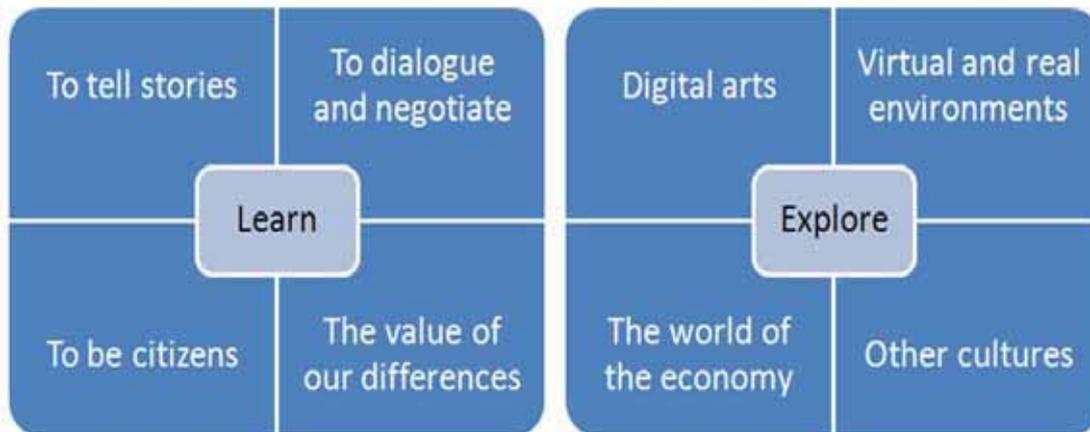


Figure 18

Thematic contents <http://www.aprendeyjuega.com>

## Playing and dialoguing from the videogame

We will now show an example of how activities in the classroom were developed and how we can interpret the processes that took place therein. We will see how children and adults explore together the real and virtual environments with help from the videogame *The Sims 2 Pets*.

The analyses show how it is possible to help children to build a concept of space associated to the characters that live in it, by critically reflecting upon the resources provided by the videogame. The support from adults was made available through two specific participations: preparing the material and the dialogue held with the children after they had played with the videogame in the classroom.

The planning process of the design of a home for our characters took place in the classroom once the children had played and designed their favourite characters in previous sessions. The aim now was to offer a reflecting game. To help them, we prepared some support material in Power Point that the children could use. We will compare how the children dealt with the same task, either alone or together with an adult. The way in which they selected the information through the Internet, as well as the texts they created, reflects the importance of the support from teachers and families. Let's see both situations.

The activity we present now was carried out in Session 11 of the workshop and it is included under core theme 5 within those included on the web page, *Discovering our environment*. Our goals as teachers were as follows:

- To reflect on the basis of the messages within the videogame, and to design specific spaces for the Sims's characters, which had been chosen in a previous session.
- To establish relationships between real and virtual spaces through their design.
- To design spaces intended for the people that are going to live in them.

As indicated previously, to achieve these goals, we provided the children with support material on Power Point with which they could work in the classroom and which is included in figure 19.



Figure 19.

Designing environments for our characters

As observed, the aim was for children to talk in small groups prompted by the questions suggested in the working material. The criteria with which the support material was designed were closely related to the objectives that we wanted to achieve. To understand this relationship we should take into account the following issues: a) the goal was for children to consider the possible relationships between the real world, where their daily life develops, and the virtual world of the Sims family; b) also, we were looking for the establishment of relationships between the homes' interior and the exterior, since both of them reflect the features that define the people who live in them.

## Planning homes with the Sims family

During a class session, boys and girls worked on the computer in the design of their Sims's family home; they could play or look for designs on the Internet. The task was carried out in two very well differentiated phases: a) commenting and planning, b) capturing in writing, including images they could obtain from the Internet. To show the importance of the adult's role when the children work on the basis of a videogame, we will review the work done by two of the 10 groups that worked in the classroom; in one of the situations, the girls carried out the two phases of the task without the presence of an adult, while in the other one, the boys planned and discussed with the help of an adult. We now include a figure that allows us to compare the differences generated between the two groups, especially the ones related to the images included and the texts written.



Figure 20

Working in small groups: Alone or with a teacher

Let's begin with the situation where the girls worked alone. A first approach allows to understand that both, image and text, refer to an ideal environment, with no relation to their everyday life, this reflects a lower level of depth in their reflections. They include images taken from the Internet that represent spaces in the real world, but very far from their daily life, they are homes to which, most probably, they will never have access to. Let's take a look at the written text.

### Fragment 1. Justifying the selection

CEIP Ciudad de Jaén, year 5 A

My home will have 4 bathrooms, 5 bedrooms, 1 kitchen, a large corridor, a huge terrace, a living room and two lounges.

If we connect the images with the corresponding written text we can see that, although the text is written in the first person, they do not refer to their daily environment at any time; when indicating “*my home will have (...)*”, it looks clear that it refers to the house that they will build for the Sims family, in this case “*my*” represents the product that they will construct in the game. On the other hand, it is a purely descriptive text focused on their wishes associated to the images taken from the Internet, American homes really far from their daily life.

When an adult talked with the boys while planning their texts, the work done was very different from the one produced by the classmates who had worked on their own. If we look at the images included by this group, we can see that they represent possible homes for the Sims. These differences can be explained considering the role of the adult. The teacher was a guide who helped them to understand the goal of this task and the interest of planning in a virtual world to obtain the house that is best adapted to the Sims family. Let's take a look at the written texts describing the homes selected. Fragment 2. Fernando, Shengyuan and Sergio justify their choice

**CEIP Ciudad de Jaén, Year 5 A**

Fernando has chosen it because it is big, luxurious, has two swimming pools and a huge garden. In it the whole family would

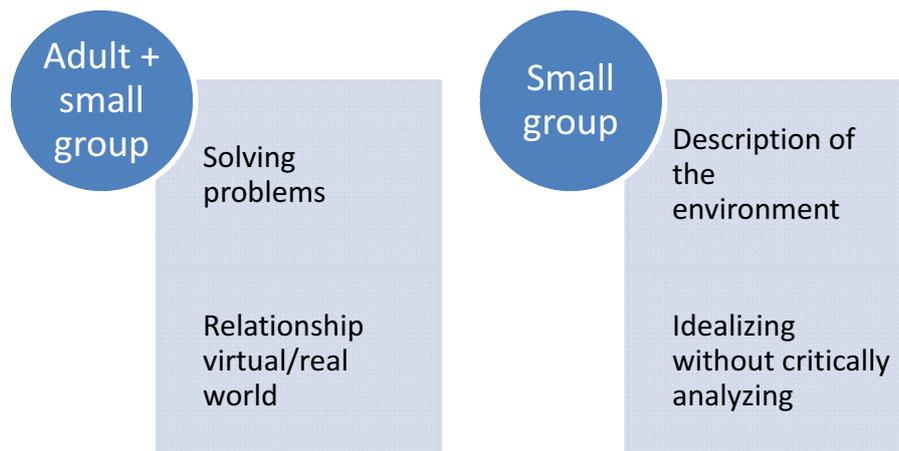
live (father, mother, brother, grandmother, grandfather, uncles, aunts; now he does not live with all of them because each one of them has their own home).

Shengyuan has chosen it because although it does not have a swimming pool, she does not mind since she'd rather go to the beach. She would live here with her family, her mother, father, brother, grandfather and grandmother; she lives in Spain with all of them.

Sergio has chosen it because it is big; it is pretty, it has a swimming pool, a very big garden and it is two storeys high. Sergio would live in it with his brother, mother, uncle, aunt, father and cousins. Now they each live in their own home.

We observe, in the first place, that each child refers to his or her own family and projects their wishes over the house selected, but they now justify their choices. For example, Fernando and Sergio seem to choose a big house because they could then live better with their numerous families; Sergio, in fact, explicitly expresses his wish to live with all of them. As far as Shengyuan goes, she chooses it without a swimming pool because she'd rather go to the beach. Secondly, the boys talk in the third person, which seems to show more clearly that they are comparing the differences between what each of them has chosen.

## What can we conclude?



**Figure 21.**

### The role of the adult

What this work done in the classroom shows is that the presence of adults has become an essential element to be able to learn on the basis of the videogame. It is precisely the presence of the adult that will contribute towards the children being able to:

- Resolve problems in the virtual World and search for a relationship with the solutions that would be used in the real world.
- Reflect, through the experiences obtained in the virtual world of the videogame, upon one's daily reality, its possibilities and limitations.

- Compare that which is ideal with that which is real, identifying the representative elements of both categories in the virtual world of the videogame and in their daily life.
- Appreciate the processes undertaken by each videogame player, such as planning actions, an important skill also in real life.



## Participating in a new culture

### New heroes

Children's entertainment is often tied to the presence of characters with whom the children identify and who they consider their "heroes". The processes that make that identification possible are complex and have their origin in phenomena that are as old as humanity. In each culture there are heroes whose deeds represent the values it considers good and noble. The concept of a hero has changed from ancient times until the current days. The Greek heroes were mythological beings, who came close to the status of Gods. Nowadays, the video games or movies often show other heroes that are present in the children's popular culture<sup>10</sup>. This is the context in which we should place the figure of Harry Potter, a character of contemporary literature for the youth around which a series of fantastic stories regarding the education of a young wizard have been built and who has captivate large audiences.



The CEIP Henares' childrens admiring Harry Potter

In our workshops we find a sign of the importance that these heroes acquire in the children's life. The children live surrounded by objects closely related to their heroes. The photograph shows the children of Henares School in the last day of the workshop dedicated to the videogame Harry Potter and the Goblet of Fire, sharing the hero's treasures with all the participants. The activity of this day consisted on bringing to class something related with that world. It was surprising to see the amount of objects that children

collected, which showed their interest in the world surrounding Harry Potter and the importance of this character in the children's culture. A universe has emerged around this hero, not only of material objects but also of shared values that make up what has been called the popular culture related to the media world and which sees the participation of children and youngsters.

In the workshops developed during the project we can see how the children can identify themselves with these heroes and the role played by video games in this process. We will take a look at the conversations and the work done by the children in Year 2 of Primary Education at CEIP Henares, where, as we've already mentioned, we proposed working with the videogame Harry Potter and the Goblet of Fire. The data obtained show how the children are able to identify themselves with the heroes of the game and what they learn from them.

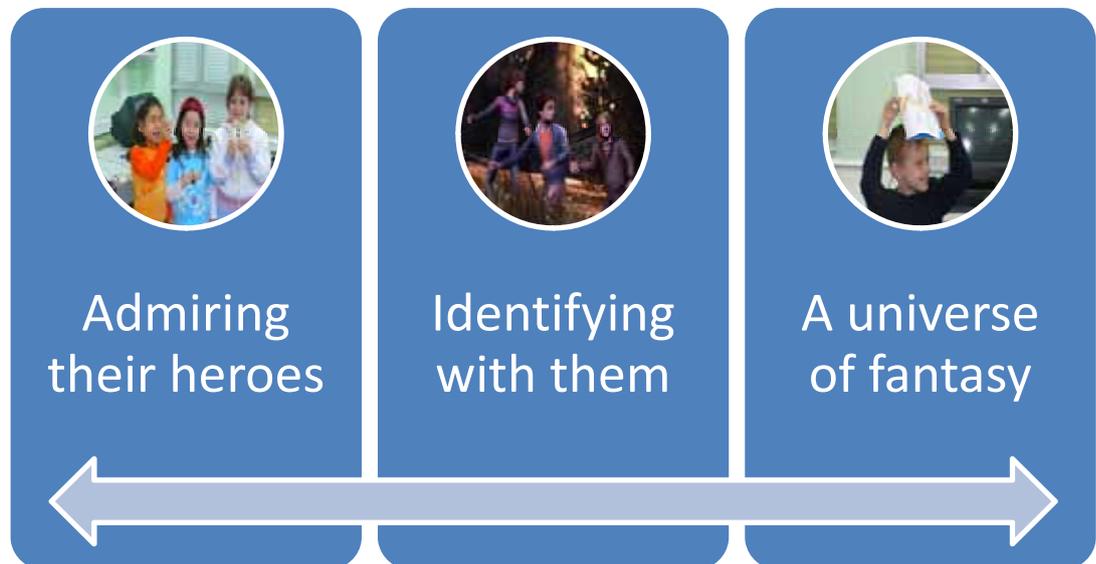


Figure 22.

The heroes in the popular culture

## I want to be like Harry Potter

In the videogame *Harry Potter and the Goblet of Fire* there are three characters with magical powers with whom the children were able to identify, depending on their virtues and deeds as wizards. We are talking about Harry and his inseparable friends, Ron and Hermione. We begin by looking at the reasons given by the children in one of the workshop activities for choosing their character. The children wrote the texts we include below in their notebooks during one of the workshop sessions. The first three sessions, as indicated, were spent playing the videogame, introducing the Harry Potter character, getting to know it better and helping the children in becoming acquainted with the Internet. We should not forget that,

up until that moment, we had worked in the classroom with the video consoles and with the help of traditional tools, such as notebooks and murals.

### Fragment 3. Choosing a character

CEIP Henares, Year 2, session 4, 17-01-07.

Investigator: Which of these characters do you like the most and why?

Boy: The one I like the most is Harry Potter because he is a good wizard and he is not scared of anything.

Girl: I like Hermione because she is a girl and knows a lot.

In this example, we can see how the children talk about their favourite character. Sergio likes Harry Potter, disserting his virtues as a wizard and his courage, qualities that are important for him. However, other classmates value other characters more. For example, Victoria, of the same class, identifies herself with Hermione, making it a priority to be a girl, a requirement that takes prevalence over her wisdom, clearly suggesting that the gender differences are important when it comes to choosing a character.

Through the workshops, we can see how the children are progressively becoming identified with the video game characters. For example, in session 2 it happens immediately. The session has just begun and the children are playing on the console together with the researchers. Surely the fact of being immerse in the game is what makes this rapid identification so clear, which did not happen in the previous example. Now they seem to leave aside their identity to take the hero's, shown by the fact that they talk in the first person.

#### Fragment 4. Identifying with the character

CEIP Henares, Year 2, session 2, 19-12-06

Researcher: Lets go to the first lesson for wizards; we will learn about defence techniques against the hidden arts, which is the first lesson.

Miguel: I want to be Harry Potter.

Researcher: Who will be Hermione?

Eloy: Me

Miguel: I am Harry Potter

Researcher: Ok. Let's play then

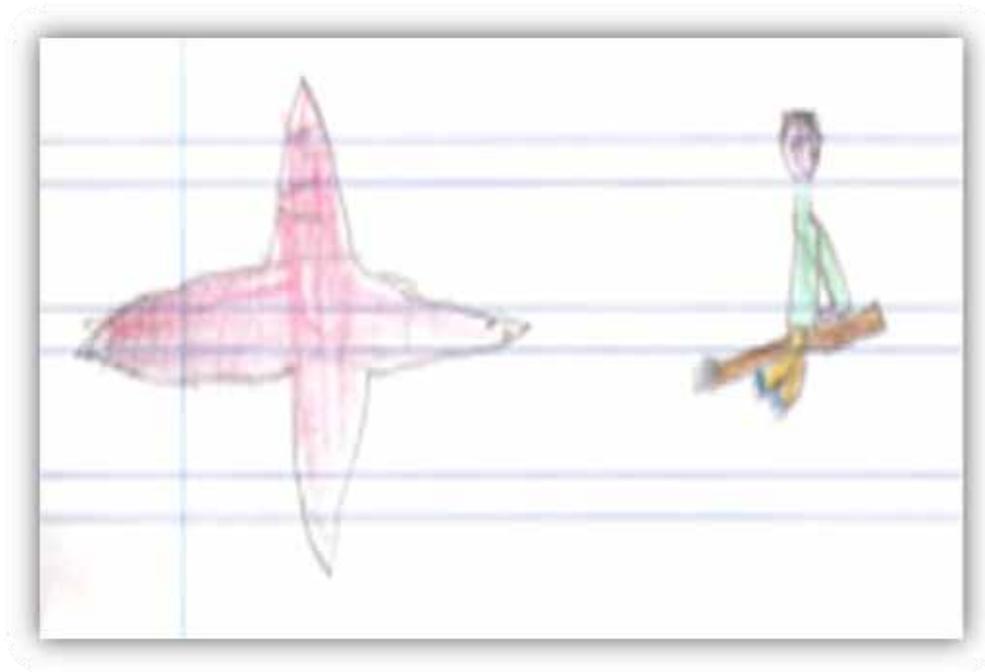
For example, Miguel uses the expression *I am Harry Potter*. In this same situation, the adult immerses herself in this virtual world, and although she is facing both children, she asks: *Which one of the two is Hermione?*, when they could have said: *Miguel, which one are you?*

But we can go even further. This identification shows up again when we take a look at the children's written texts from session 8, after having compared the film and the videogame. Following, we include a text written by Sergio.

#### Fragment 5. Sergio's identity through his text

CEIP Henares, year 2, session 8, 13-02-07

The scene of the videogame that I liked the best was when Harry confronts the dragon because I can control Harry in the game.



**Drawing of his favourite video game screen**

Sergio, writing in the first person, indicates that it is him who is responsible for the actions of his character. In all, the fact of talking with an adult and expressing in writing his opinion has helped children express their identification with the hero, from whom, in this case, they have adopted their features and behaviour.

## Harry Potter, an example to follow

As we indicated at the beginning, the quality of being a hero comes from both the actions and the value granted upon him by others, in other words, for a hero to be considered as such, he must take some actions which, even with magical powers, include values

accepted by a certain culture. Harry Potter's magic is full of values considered as "desirable" by our society, such as companionship, friendship, the ability to learn or make an effort, courage etc. We will now see how these values pop up in the narratives that the children wrote in their blogs and published on the Internet.

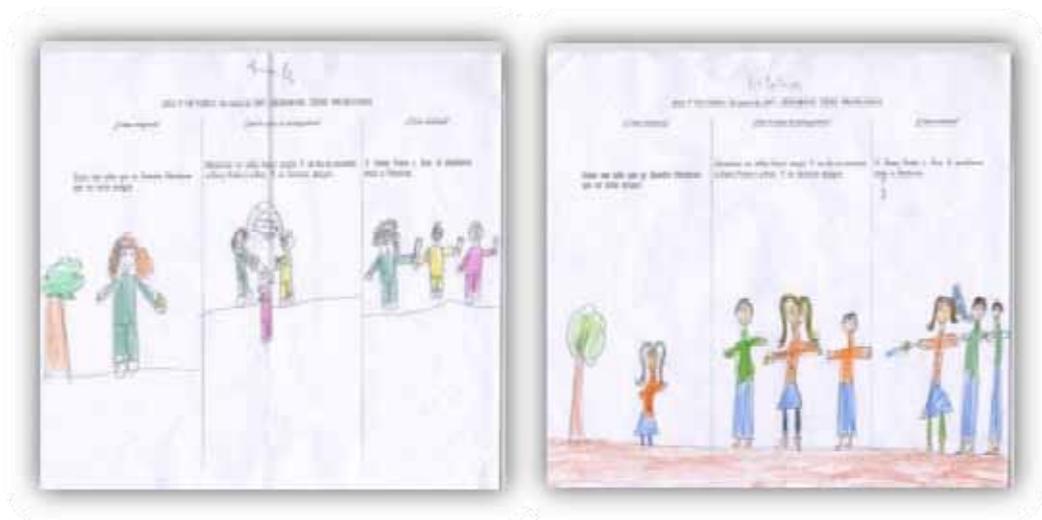
#### Fragment 6. Ana and Vivi's blog

CEIP Henares, year 2, session 7, 29-01-07

Once upon a time there was a girl called Hermione who did not have any friends.

Hermione did not know how to do magic. And one day she met Harry Potter and Ron. And they became friends.

And Harry Potter and Ron taught Hermione how to do magic.



The stories from Ana y Vivi's Blog <http://anayvivi.blogspot.com>



**Heroes collaborate in the video game**

<http://www.es.ea.com/games/6700/Screenshots>

It's worth stopping for a moment at this example, let's see how Ana and Vivi share the ideas conveyed by their heroes and they put them in writing in the narratives written in their blogs. The fact that, in this videogame, heroism is shared among the three main characters makes children play in a collaborative way, helping one another. This breaks away from the idea that they play on their own, and proves that they play together. In the video game, transmitting values, such as comradeship or teamwork, to children works better when they identify themselves with the heroes. In this case, and in order to overcome each of the adventures, this means they have to act together and use their magic powers in

collaboration with each other. Even though heroes always know what they have to do, they have friends that help them achieve their deeds.

Another important value is the eagerness to learn shown by the three characters and which is also seen in the children's texts in another blog. Children learn with Harry the importance of reading. Their heroes' magic powers are increasingly stronger, something they achieve through all the books they read in the library at Hogwarts. Harry and his friends get vital information reading some book or, in most of the cases, from their own initiative: the characters read to be able to act.

#### Fragment 7. The value of reading

CEIP Henares, 2º year, session 1, 12-12-06

I liked it when he looked at the book of spells.  
Of course, that is where he learns it from; if he hadn't looked at the book we would not have seen it.

In this case we see how the girl likes the fact that Harry looks it up in the book of spells and the adult helps her realize that if he hadn't read it, he would not have been able to learn it. The adult takes advantage of the possibilities offered by the hero in the video game to work on good habits with the kids.

### The hero, between reality and fantasy

A further tinge we could add to the concept of a hero is related to performing acts that are not usual for most people. Within this context, when the children accompany their hero to re-live the video game's adventures by his side, they immerse in a fantasy

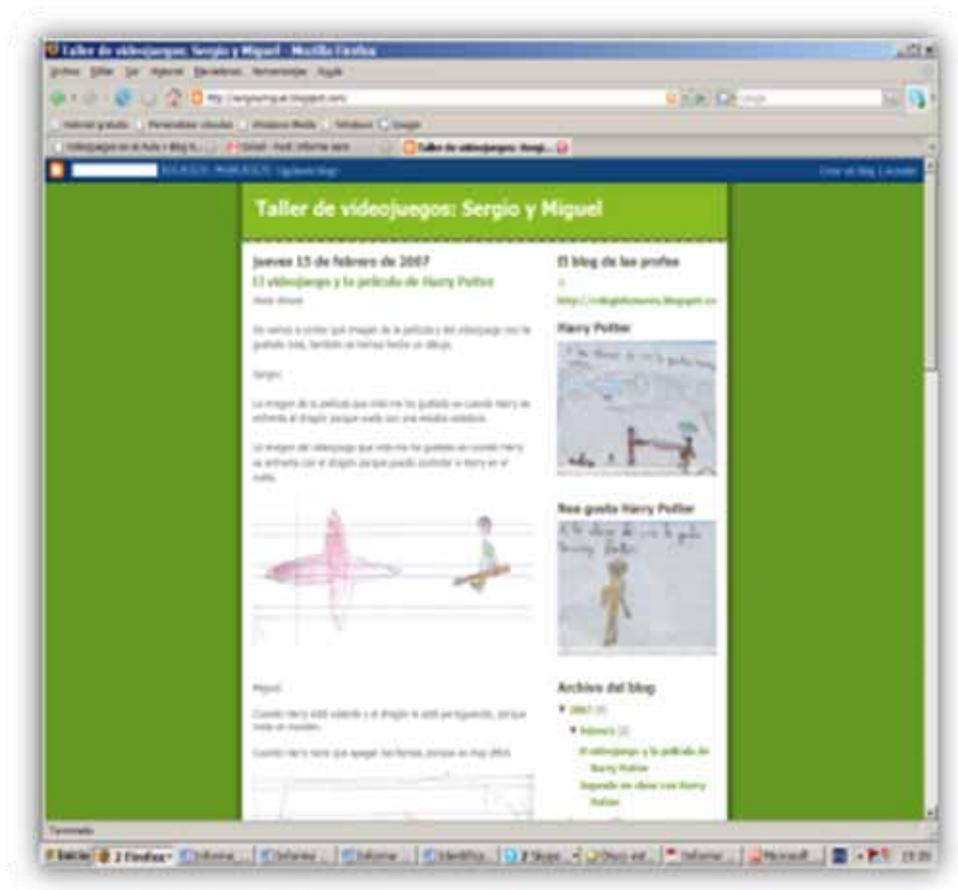
world. In the case of Harry Potter, he has magical powers that allow him to accomplish goals that are very difficult for any one of us. However, it is not necessary to have magic powers to become a hero. The video game Harry Potter and the Goblet of Fire allows children to become virtual heroes for a moment. In one of the blogs, Sergio and Miguel are aware of the differences between the film and the video game, and of how the latter support offers the possibility of acting as if they were heroes.

**Fragment 8. Sergio and Miguel's blog: the power of fantasy**

**CEIP Henares, 2º year, session 8, 12-12-06**

Hi, we are Sergio and Miguel,

In today's class we learned how to play the video game Harry Potter and the Goblet of Fire, and we saw a little bit of the film Harry Potter and the Goblet of Fire. Today we learned about the differences and similarities between the video game and the film. They are similar in that the characters are the same, in the spells and in the adventure. And they are different in that in the video game you are the one who moves the characters and in the film they move on their own. The film is more fun, says Miguel. Sergio likes the video game better because you can play.



**Sergio and Miguel Blog**  
<http://sergioymiguel.blogspot.com/>

The fact that the boy plays with the video game and becomes an active audience makes him identify in a more direct way with the hero than if he were watching the film or reading the book. We shouldn't forget the examples discussed previously in which the kids directly start speaking in the first person, it would be very difficult for this to happen after reading the book or watching the film; in this case, one tends to talk from the spectator's perspective, i.e., in the third person.

## What can we conclude?

A synthesis of the main results obtained when we consider the way in which children build their heroes through video games is summarized in figure 23.

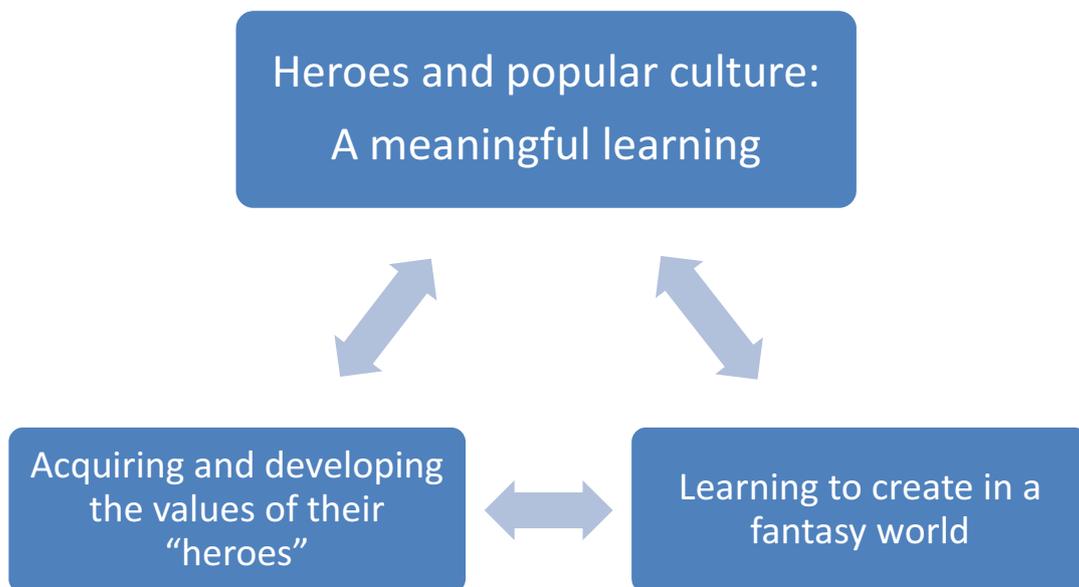


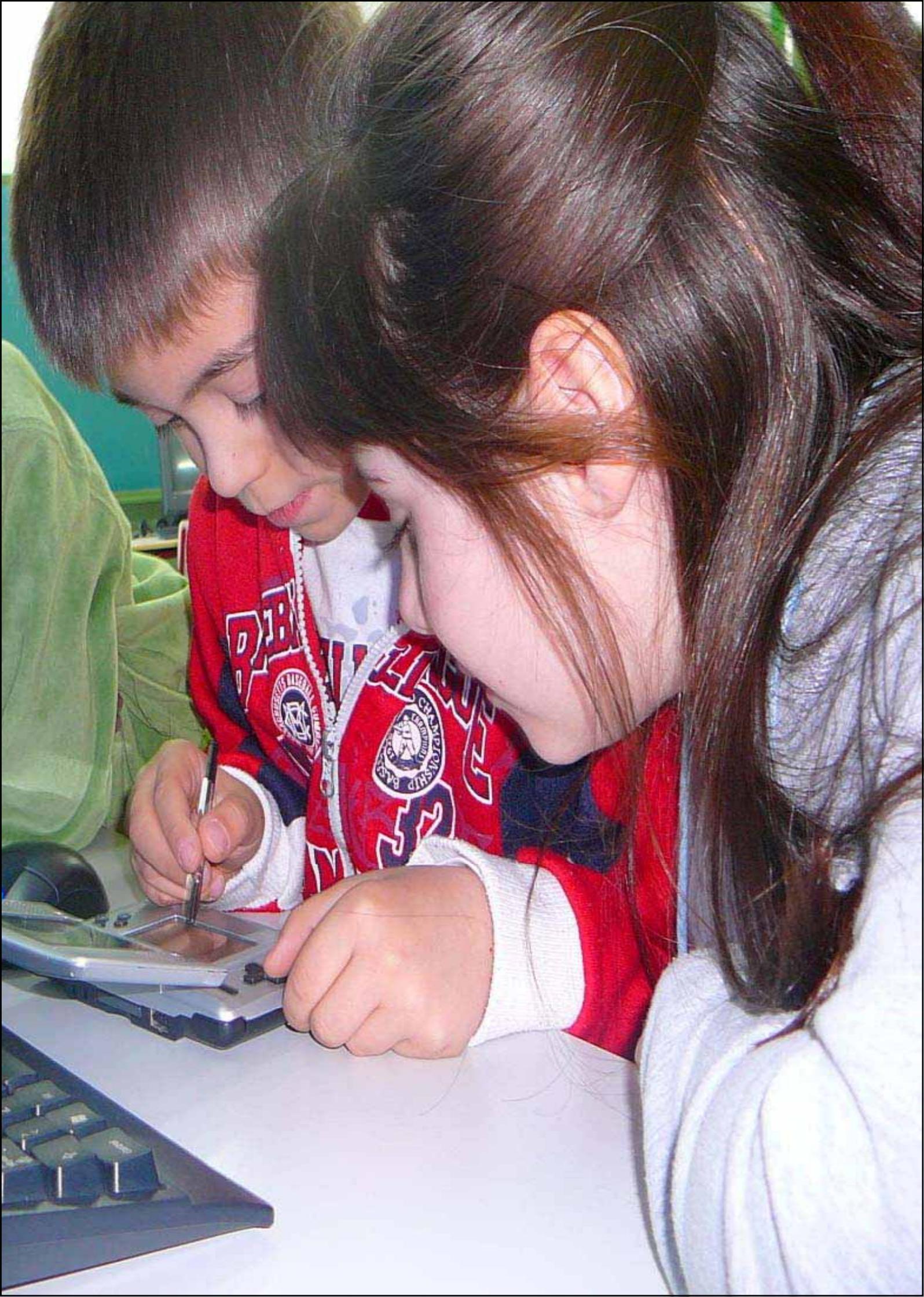
Figure 23

### Learning with Harry Potter: A hero of our time

- Firstly, the video game allowed an easy identification with the character and this is where the importance of the adult lies, since he or she may contribute to the said identification becoming a learning tool.
- Secondly, enabled by this identification, and since the hero possesses commonly accepted and appreciated values,

children may share them and acquire them more easily than if they approach them from situations that they don't find as significant.

- Finally, the video game has enabled children to position themselves in a world of creation and fantasy in which one can also learn.



## Video game critics outside of the classroom

It is widely accepted that video games are, above all, leisure instruments. Results from this research study show that leisure and education often intertwine. Different authors<sup>11</sup> have shown that people's activities make sense within the context in which they take place. In this project we wanted to explore how video games can be used in situations other than in the classroom. The Seventh Science Fair in Madrid offered an environment, perhaps a bit unusual, but that became an excellent watchtower from which to observe how it is possible to learn with video games in contexts where relationships among people of the same family group or between friends prevail<sup>12</sup>.

We will now present how the fact of participating in the Science Fair, by designing a space where people that visited our stand became video game critics, allowed us to discover new means of cultural participation and, especially, different approaches to the video game messages.



Figure 24

Youngsters and adults become issuers of messages

## Learning beyond the classroom

The activity proposed at the Harry Potter workshop was aimed at teenagers and adults. It consisted of asking the players to, through a web blog directly published on the Internet, express their opinion on the messages they discovered throughout the video game. To ease this task, some questions were provided with the aim of players becoming aware of a particularly relevant aspect of the

game, *the relationship between fiction and reality*. For example, let's look at some of the answers given to two of the questions asked: *How can you use magic? And, what do you need to be a good wizard?* Figure 25 includes the main elements of the proposed task.



**Figure 25**

**The task proposed in a workshop during the Science Fair.**

By analyzing the productions present in the web blogs we see how players progressively discovered the video game's grammar and the meaning of its messages. In this way, the fact of becoming issuers of messages helped them to approach the game critically, and to understand the underlying meanings and the codes it uses to convey them.

Observing the texts written by participants in their blogs we discover two types of approaches that could be differentiated, in

principle, by complexity level. They reflect different levels of reflection in a non-formal educational environment, where collaboration between kids and adults plays a key role.

- In the first one, the reference to actions performed by the hero or his colleagues and the scenarios where they are carried out takes precedence.
- The second one, more complex, includes meta-cognitive reflections, i.e. those that imply the player's awareness of mental activity during the game or immediately after it.

We will now analyze each one of them.

## Approaches focused on the characters and their actions.

The texts suggested from this perspective are focused on the game as such, concentrating on its characters or the environment in which they show up.

### Fragment 9 Reflecting with Harry Potter

Seventh Science Fair, 14-04-07

For us, magic means making things disappear, casting spells, flying. We can also defend ourselves.

To be a good wizard you need a wand.

Álex, Rodrigo and Rubén (year 5 Primary Education, CEIP Santa Cristina.)

This example reflects a first approach to some of the meanings present in the video game. For example, when they write about

what a good wizard needs, they do so by referring to specific objects, such as the wand, that are linked to what they have used in the video game. They don't mention the intentions or consequences of these actions. In summary, this level of reflection in players has gone no further than the perceptive discourse of the actual video game, neither have they become explicitly aware of the rules that organize it.

## “Players” and “critics” of video games

The authors of the texts included below not only interpret the video game's messages and meaning, they are also capable of assessing them in a critical way. Their double role as recipients and issuers allows them to implement a more complex interpretation (Gee, 2005). These writers, in addition to exploring some of the elements in the video game's narrative, are capable of critically assessing the characters and their actions. For example, let's see how they relate “magical actions” with the physical laws from the real world, laws that would hinder the character's actions if they existed in the video game. In this case, two friends are thinking about it together.

### Fragment 10 What is magic?

**Seventh Science Fair, 14-04-07 (18:37 hours)**

Hi, our names are Adri and Carlos, and we are 17 and 16 years old respectively. For us, magic is something that allows you to do impossible things, since it overrides known physical laws (and, hence, you can levitate).

In contrast to what happened in prior texts, the imaginary world recreated in the video game is not limited to describing the characters' actions, but in this case a comparison between fiction and reality is established. The authors are aware that the principles of the real world can disappear in a fictional world.

In this same line, the text we quote below shows how the real and fantasy worlds are related through the meanings conferred by the authors to each of these worlds. These teenagers have transcended the perspective of the video game and have discovered other "hidden perspectives" associated to their experiences beyond the video game.

#### Fragment 11 More on magic

Seventh Science Fair, 13-04-07 (18:50:00 hours)

For us, magic means hope and excitement, because it is a way of making our dreams come true.

To be a good wizard what we need, first and foremost, is to believe in magic and have a little imagination.

The statements above must be interpreted taking into account other concepts, read, heard or even produced by the players at other times of their life. Thus, the idea of relating magic with the accomplished dreams and with hope and excitement has to do with the other messages, present in other media, such as advertising. "*A magical trip or a magical night*". We can state, perhaps, that these teenagers have come closer, through the creation and issuance of messages, to a literacy process associated with the ability to recognize and relate one unique content presented through different media.

Another interesting idea is the relationship established between beliefs and magic. For them, if someone wants to be a wizard, he or she has to believe in magic. If we recall, when we asked the same question to younger children, they always referred, when identifying themselves with the heroes, to the objects and tricks used by the characters of the video games. On the contrary, in this message, the blog's authors have reflected upon the video game and have placed themselves at a meta-cognitive level, which brings them closer to the most elaborated and complex literacy processes.

Lastly, we will analyze two examples that introduce new angles in the thoughts which show how their authors are capable of going beyond the video game itself by making allusions to the real world or even to the moral dimensions of the activity. Let's see, for example, how the authors of this blog are aware that the character's actions are immersed in a social context that conditions them.

#### Fragment 12 Reflecting with Harry Potter

Seventh Science Fair, 13th April (18:50:00 hours)

Jorge Gutiérrez Tostón 16 years old and Bernabé Naranjo 15 years old. Magic is a door that opens itself to everyone's imagination and a good wand is needed as well as the use of common sense to not cause any damage to people.

We see, therefore, that when asked about what a good wizard needs, they refer not just to the necessary abilities and skills needed by someone that calls himself a wizard, but also the need to use them reasonably because, otherwise, magic may become dangerous for other people. Finally, let us consider another similar example.

### Fragment 13. And magic?

Seventh Science Fair, 14th April (04:04:00 hours)

For me magic means power, and you can use it to do good or bad deeds. In this same line, the author of this text suggests a moral conflict posed by magic as a power that can be used in different ways depending on the intention or way of using it.

In this case, as in the last one, we see how transforming our young visitors into issuers of messages may contribute not just to developing abilities related to the control of the discourse present in the video game, but also in their education towards a responsible citizenship, all of it accomplished by reflecting upon certain social practices, the values conveyed or the moral conflicts that can derive from them.

In summary, once again, by analyzing these productions we see how this type of activity encourages players to be not just recipients of messages but also for them, on the basis of these messages, to be able to re-interpret and re-create them in a critical way. We think all this contributes to creating educational contexts aimed at favouring not just ways of acting and thinking, but also ways of being and feeling.

### What can we conclude?

As we have seen, during the Science Fair participants shared their interests and representations with regards to the video games. The main participants (some children with ample experience as players, researchers with a wise “scientific” interest for video games, teachers and families) did not have the same representation of what

they did in our stand, nor did video games occupy the same place in their cultural universe.

By playing together and carrying out the activities we proposed, children showed adults the use and meaning they grant upon this digital support and they guided them through the relationships that, within the children's cultural universe, are established with video games and other media such as films, stories, comics or digital texts present on the Net.

On their side, adults shared with children their experience as users and recipients of digital media and, although in most cases their competence as players was lower than the children's, they assumed the role of expert companions by helping them to reflect upon the video game and its characteristics.

The features that defined this new means of cultural participation using digital technologies are reflected in figure 26.

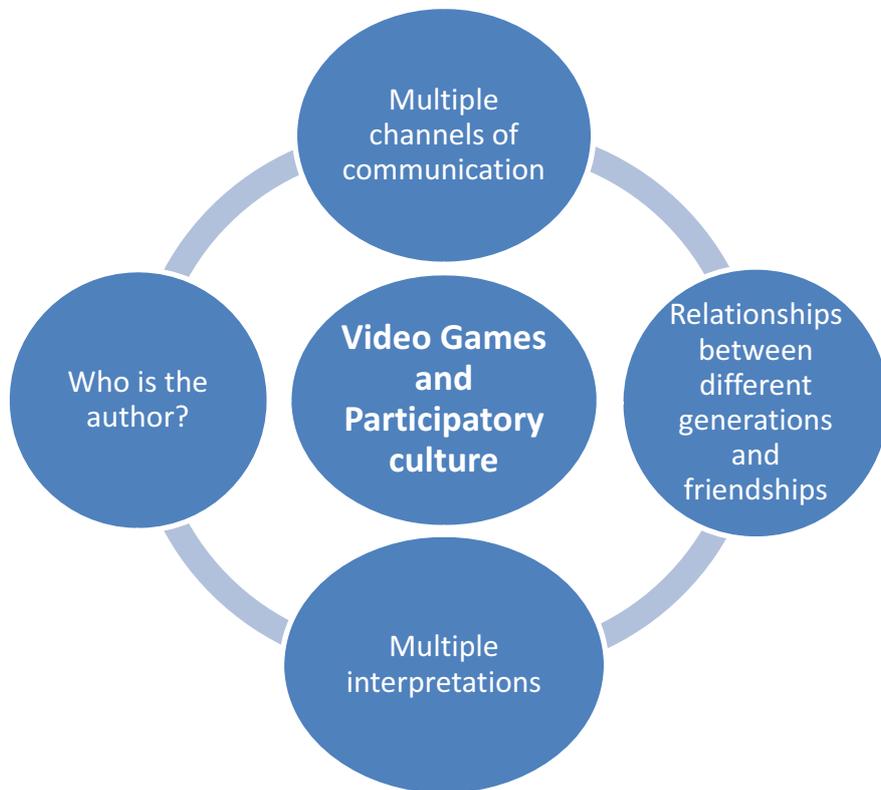


Figure 26

### Video games in non-formal educational environments

Speaking of a *participatory culture* means going further than the barriers sometimes established by certain types of knowledge that only specific groups possess. The features that describe these new knowledge-sharing communities are the following:

*The elimination of barriers between different means of expression.* During the Fair, people who visited our stand expressed themselves in different ways and with different means, thus breaking the walls that exist in formal educational environments.

The presence of the Internet or the blogs during the workshop meant new ways of collaboration among the participants that were present and those that were absent. Reflections and critical ideas that kids, teachers, parents and researchers wrote on the blogs with regards to the video games, once again brought us closer to the concept of “*author*”. In this case, the recreation and appropriation that the players make of the video game, by analyzing it critically, is not focused on the individual; it is joined to social and collective conceptions that can be shared, especially if we are provided with a scenario where digital tools play a key role.

Lastly, within this scenario it is also important to highlight *the relationships established among the participants within the virtual environments*. In contrast with what happens in other environments, the experience at the Fair encouraged inter-generational relations, since children and teenagers of a wide range of ages, between five and seventeen, visited us often accompanied by their parents and teachers.



## New literacies

### Deciphering video game messages: design, contents and rules

Up until now we have approached commercial video games by considering them as educational tools, and we have focused in the different scenarios in which they can be used. The data shown until now should have allowed us to understand that people attribute different meanings to the tools they use depending on the contexts in which their activities take place. For example, we have seen how the presence of the adult and the fact of dialoguing with the children over the video game will slowly make children understand that one can also learn from video games and that, as a consequence, they are present in the classroom. These dialogues that have contributed to transforming the representations of the video game that people build have taken place in two different types of scenarios that we can consider as educational. We are talking, on the one hand, about formal educational situations, and we refer to what happens in the school, the dialogues transcribed until now mostly correspond to this type of situation. There are other contexts that are closer to leisure, in our case we have analyzed the value of video games in these contexts, for example, what happened at the Science Fair or in the scenario that arose around Harry Potter in one of the schools, and which became a bridge between the scholastic culture and the popular culture, a set of ideas, practices and values transmitted through the media and

which are shared by large groups of people, mostly children and teenagers.

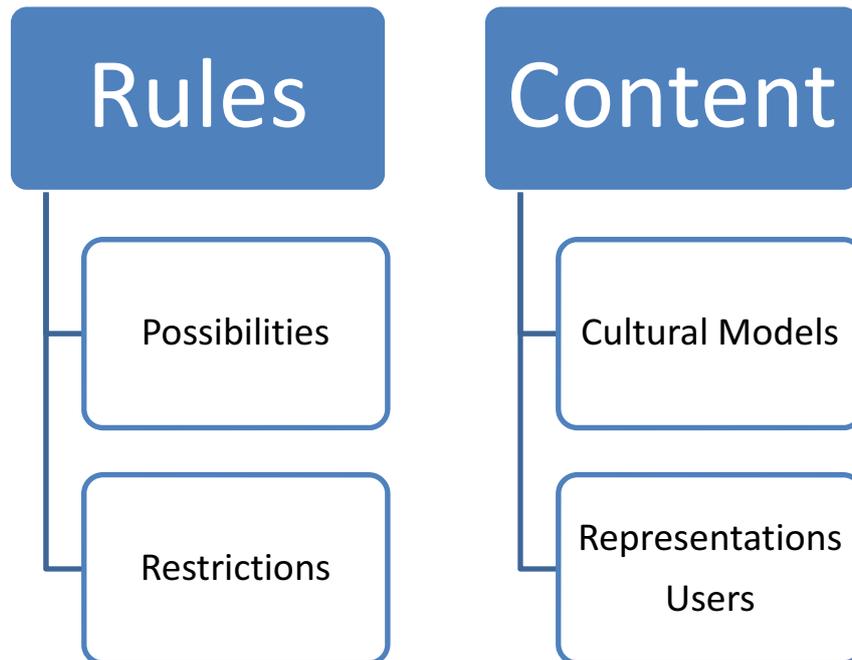


Figure 27

**Understanding video game messages:**

We now approach video games from a different stance. We are not going to look so much at the scenario in which they are used but rather at the messages they convey and that must be interpreted and re-built by players. Thus, we approach the video game as a mean of conveying information, by comprising different types of expression and communication, and which can generate knowledge and gear people's actions in a certain direction. The fact that people manage to understand its discourses, organized through rules, images, sounds and written texts, allows us to talk about the human abilities

related to the concept of “new literacies”. In this study, following James Gee, and educator and video game critic, we understand by literacy the ability to know and consciously control the rules and elements of a specific language<sup>13</sup>.

We will now show some of the data obtained within the framework of this project that will allow us to understand how children have ended up becoming literate people capable of interpreting the messages from the video games. We will look at two of their features, as indicated in figure 27. Firstly we will consider the rules of the game, from the experience as players of the participants in the workshop. For this, we will look at the possibilities and limitations offered by video games and the way in which players become aware of them. Secondly, we will analyze the set of messages conveyed by the video game, by looking at the theme contents of the information and the way in which players re-elaborate them as they become aware of them.

## The game: its possibilities and limitations

In the workshops carried out at the CEIP Ciudad de Jaén with a group of year 5 of Primary Education students, boys and girls played with the video game *Sims 2 Pets*. Throughout the sessions they reflected upon the possibilities and limitations that define this video game and determine the player’s actions and the development of the game.

We will now show how the relationship with the adult, who guided the work, contributed to a process of becoming aware of the

player's activity being directly associated to the possibilities and limitations offered by the game<sup>14</sup>.

## Tell me what you've done

This was the question children were asked once they had played. Through our dialogue or through written texts we were looking for children to become aware of the actions they could perform when playing, the ones allowed by the video game and the ones that were limited. The following transcript is an example of an oral text where the child tells us about the actions he could take as a player.

### Fragment 14. The purpose of the game

CEIP Ciudad de Jaén, year 5 A, session 3, 27-11-06

Researcher: Let's see, who played?

Boy 1: I played with Sims 2 Pets and it's about choosing a pet and taking care of it.

Boy 2: And also creating a characte

We observe how the child has clearly expressed the final purpose of the video game; what he says could be stated in any of the guides used by players when they face the task. Immediately after another boy adds that you can also *buy and look for work*. Between them, they complete a description of the different actions they can take as players. This activity represents a first approximation to the rules of the game and its oral re-construction. If we look at the oral texts from the prior fragment we can observe the following:

- The sentences are focused on recounting possible actions.

- They are aimed at a potential player.

## How do we do it?

With the help of questions, adults guide children in their reflection process to become aware of facts. This allows them to move forward in exploring the rules of the video game and going deeper into a more complex level of the game, adding to the description of actions the way in which they are performed. As we will see, the procedural aspects of the game also condition this level. Analyses have shown two types of descriptions of the actual activities within the game: a) related to technical aspects of the game and b) those that introduce justifications related to the player's actions.

Fragment 15 is an example of how children refer to the technical rules of the game. When faced with the question from the researcher regarding what one had to do to train the pets, a girl recounts in detail the actions the player must undertake to accomplish the desired goal, to train the pet.

### Fragment 15 Rules related to the techniques of the game

CEIP Ciudad de Jaén, year 5 A, session 3, 27-11-06

Researcher: Has anyone tried to train his or her pet?

Girl: Yes, me.

Researcher: Ok, tell us how.

Girl: You have to hit look and when the dog is there, you hit select a pet.

Girl: When 4 arrows show up you hit one of them and there you get play or train, you hit it there and you get a book with hints on how to train them

In this description we see how the girl recounts the actions in the order in which they have to be performed, which proves that the game's limitations determine and guide the player's actions. It is necessary to perform a sequence of actions to achieve the expected result, in this case train the pet.

Fragment 16 is an example of how children introduce justifications for their own actions. In the dialogue, we observe how the researcher tried to make the children think about one of the most significant and necessary actions to take care of their pets and owners, their food.

#### Fragment 16 Justifying the action

CEIP Ciudad de Jaén, year 5 A, session 3, 27-11-06

Researcher: Have you tried to cook?

Boy. I made eggs

Researcher: Why only eggs?

Boy: Because if you don't buy you only have eggs.

In contrast with what happened in the previous case, the question from the adult makes it easier for children to answer, implying a greater level of reflection and complexity. In this way, they provide justification for their actions, for example, "*to feed someone, first I have to cook*", which reflects the internal logic of the video game and determines the player's sequence of actions.

In this example we observe how the researcher brings the children closer to the limitations that the rules of the video game impose on the player. They could only cook eggs because that is the only thing they have available when the game starts, if they want to give any other type of food they will have to go through the action of

buying. Hence, we observe how the children, together with the researcher, come closer to a more complex level in the reconstruction of the game, now they not only enumerate the player's actions but also the player's timeline and the corresponding logical sequence.

## The contents of the video game

Another element players must become familiar with in order to understand the messages conveyed by video games is its contents. During the workshop sessions, we approached two possible perspectives from which the contents of a video game could be analyzed.

- Firstly, an external perspective in relation to them as players, and which was approached by searching for information on each of the video games.
- Secondly, an internal perspective reached by talking about certain dimensions of reality present in the video game and its possible perspectives.

## The video game as a commercial product

The information provided by the video games' official pages through the Internet was the first resource used by the children to approach the video game. In this way, they started to understand that they could be classified according to different criteria, for example, the platform used, the type/genre of the game and even the age of the person for whom it is recommended. Analyzing this information they became aware of the characteristics that define and differentiate one video game from the other.

Fragment 17 is an example of how the dialogue between a researcher and the children fosters this process.

**Fragment 17 Searching for information on the video game.**

**CEIP Ciudad de Jaén, year 5 A, session 2, 20-11-06**

Researcher: Ok, let's look at the page from *The Sims 2*

What does it say?

Boy: Information, abilities it develops,

Researcher: If you go to the bottom of the page, what does it say?

Boy: What type of game it is.

Researcher: And it also indicates from what age, if it's available for console...

In the following example we see how a boy discussed a piece of data published on the official page of the video game which refers to the recommended age for a sports game.

**Fragment 18 Discussing the information**

**CEIP Ciudad de Jaén, year 5 A, session 1, 13-11-06**

Researcher: Look, here it says from 3 years old onwards, do you think it's for children that are three years old?

Boy: No, because I've been playing for two years and I've only won once.

Based on his own experience as a player, he does not think the recommended age in the information sheet is appropriate. His reflections make him see the video game in a critical way and its contents conveyed through advertising.

Reading the information published on the web pages encouraged increasingly more complex discussions that helped children to discover the complexity of the video game as such. For example, as

observed in fragment 19, children, after reading information related to the video game *The Sims 2 Pets*, realize that it is defined as a “social simulation” video game. Adults, with the aim of making children reflect upon this idea, ask them about their possible everyday experiences that come close to the simulation.

#### Fragment 19 What is a simulator?

CEIP Ciudad de Jaén, year 5 A, session 2, 20-11-06

Researcher: Who knows what a simulator is?

Boy 1: They are located in theme parks

Researcher: And what are they like?

Boy 1: It's a film where you see how they cut some trees and you feel as if they are going to cut you up.

Boy 2: I've seen another film where the seats move and it seems like you are inside...

Researcher: Those machines are called simulators

Once the simulation idea has been introduced, the researcher tries to make the children understand that the video game *The Sims 2 Pets* is defined within this category. With help from adults and on the basis of their experience, children come closer to the video game from the feature that defines it and determines the world it portrays and in which each player can enter to actively control or change it.

#### Fragment 20 The Sims, a simulation game

CEIP Ciudad de Jaén, year 5 A, session 2, 20-11-06

Researcher: Has anyone played the game *The Sims*?

Boy: You buy a house, make up a family, look for a job...

Researcher: In the *Sims* game we pretend we have a family, and friends, as if we lived in a city, and that is why it is called social simulation.

This dialogue shows how the world outside the school and close to the children's interests is introduced into the classroom through video games. Situations like the ones revealed in conversations as the ones above show the children's interest in knowing certain information about the video game, which is beyond the mere act of playing.

Slowly they become aware of the message conveyed by the media, in this case by the video games and, why not, by other players that tell us their experiences through the Net.

## Representations of the world through the video game

Video game messages are related to the universe they recreate and which must be interpreted by the player. Let's think, for example, about a sports video game where one can not only play the sport selected, but also come close to the social and financial world associated to the said sport.

We have also seen in previous pages within this report how children build representations of the world around Harry Potter.

We can now look at how these representations are built through the game *The Sims 2 Pets*, when the kids design their family. As we will see in several examples, based on the video game they reflected upon the different family models, comparing their own aspirations

with the cultural models available in the environment in which the live.

### Fragment 21 An atypical family

CEIP Ciudad de Jaén, year 5 A, session 11, 12-02-06

We like this family because they are two teenage girls living on their own. We also want to be like that.



**My Sims Family**

In this example two girls have chosen an atypical family model, two girls on their own. The text demonstrates the features that characterize the semantic category of “family” for these girls, in this case the co-habitation of two teenagers in the same house. The

characteristics of this video game allow the user to identify with a type of non-traditional family and even with a model that transcends the social rules, as in this case the co-habitation of two minors without the presence of an adult. Being able to simulate this situation without any risk means the child can become aware and critically reflect upon the social model that defines, in this particular case, the family.

#### Fragment 22. A traditional family

CEIP Ciudad de Jaén, year 5 A, session 11, 12-02-06

This is the father in a family, he has separated from the mother and he is living with his daughter and his son. The girl is 16, and the boy 18. The father is a truck driver, and they are neither poor nor rich. They are a very cheerful family and they like football a lot. The daughter has a boyfriend, the son is single. The daughter works in El Corte Ingles [a department store] and the son works for a courier.



This other example of the video game brings us closer to a more usual family model, present in our cultural environment. The Sims family is made up of an adult with the fatherly role and two young people that play the role of children. This composition is very common and reflects the daily situation of many families in which the parents have separated. On the other hand, the description of the daughter means an awareness of the traits that define the specific characteristics that make this family unique. It grants a “life” to the characters, it situates them at a vital point in time and it gives them a job and hobbies according to their social-cultural level “*neither rich nor poor*”. From this perspective, the video game lets us become aware of the cultural model that defines the family in our most immediate environment.

## What can we conclude?

The data analyzed show, as in other emerging issues reviewed throughout the project, the importance of the presence of adults when it comes to helping children discover the messages conveyed by a video game. Figure 28 includes a summary of the main conclusions from this section.



Figure 28

### Deciphering video game messages

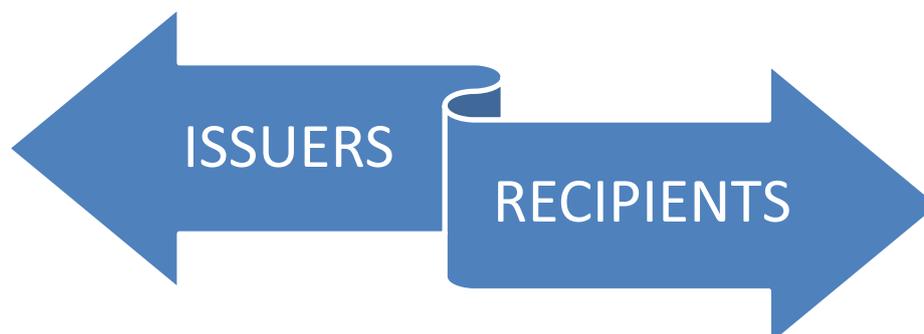
We observe how the classroom witnessed a double process.

- Firstly, the gradual awareness by the player over the actions he or she performs when playing. Children seem to slowly understand that the game has an implicit final purpose that conditions their actions and gives them meaning.
- Secondly, the interpretation of the messages present in the video game, which implies a contextualization of its contents in the midst of other information while also providing their personal interpretations. In addition, we saw how they were capable of interpreting their activities as players within the context of their culture and on the basis of the cultural models present in the video game messages.



## Relationships among the media

Throughout our experience in this project, we have designed scenarios where the children come into contact with multiple channels of communication, a fact that allows them to appreciate the inter-relationships among the different semiotic codes, for example images or sound, present in the different media. In this section we will analyze some data that show how children can be not just active recipients of the messages from the media but also able to express themselves using different communicative codes.



We will analyze two situations present in our workshops related to the issuance and reception of messages carried out by children when they approached the multitude of media on the basis of their video game experience <sup>15</sup>.

We will firstly show how children used the different media to reflect upon the video games. For example, in the workshops children not only played, they also wrote down their experience in

their notebooks or published their notes on the Internet, and in this way they were forced to use different communicative codes.

Children also established relationships among the different media and, on this basis, built representations of the world.

## From the “grammar of the video game” to the “grammar of a text”: The child as the issuer

People use different resources to communicate in their everyday life. Each one of them has a specific “grammar” (Kress, 2003), certain regularities that characterize it and define its use and cultural meaning. From this perspective, we now analyze how the multimedia scenarios designed around video games have contributed to children using different codes and recognizing what turns them into powerful communicative resources. What can be derived from this analysis is that this multimedia experience teaches kids to communicate through the use of images, oral or written words and sounds.

## The travelling notebook and the written text

In all workshops we started using written texts gathered in a traditional support such as a notebook. Each child had a notebook that he or she brought to class and took home at the end of the day. In it, he or she collected everything that was worked on in the classroom and it was a way of continuing the activity at home, being required to bring it back for the following workshop session. This notebook had a double role: on the one hand it represented a

bridge between the school and the daily environments that the children experienced outside the school. On the other, it meant a tool that offered continuity among the traditional ways and the new means of literacy. We used a traditional tool such as the notebook to “*talk and tell*” what happened when we used new media such as video games.

When we reviewed the children’s notebooks we saw three types of texts that represent how different semiotic codes, in this case writing and drawing, are combined in accordance with the message the children want to convey about the game. Analyzing these texts reveals how children slowly incorporated some elements that characterize the video game’s grammar.



Fragment 23. Choosing a character

CEIP Ciudad de Jaén, year 5 A, session 3, 27-11-06

The Sims 2 pets

The first thing is to choose boy or girl

Then you choose dog or cat

When you've chosen the animal you decide whether you want it skinny or fat, and when you've chosen that you hit on the house. If she's hungry it tells you, is she wants to sleep it tells you.

You have to buy food so that neither the pet nor the character goes hungry. Then look for a job for the character to earn more money. You can also move, buy furniture, and you can walk the animal.

Patricia Medina Leo Year 5 A

In this example, Patricia, a student in year 5 year at CEIP Ciudad de Jaén, tells about the things that can be done when playing with the video game *The Sims 2 Pets*. The purpose of the text is to show a potential player the rules of the game, what is allowed and what isn't "*you can dress her but afterwards you can't change her*". This text responds to the three requirements any communicative action should have.

The first one represents and conveys the situations that take place in the world, in this case in the world of the video game (ideational function).

The second contemplates the social relations between participants within the communicative act. In this case, the girl addresses a potential player in the second person (inter-personal function).

Finally, the third one refers to the structure of the text (textual function) and responds to the coherence of the message that one is trying to convey. The succession of verbal sentences representing the actions that the player may perform has an implicit coherence principle within the reality of the video game as a set of rules and specific semiotic code.

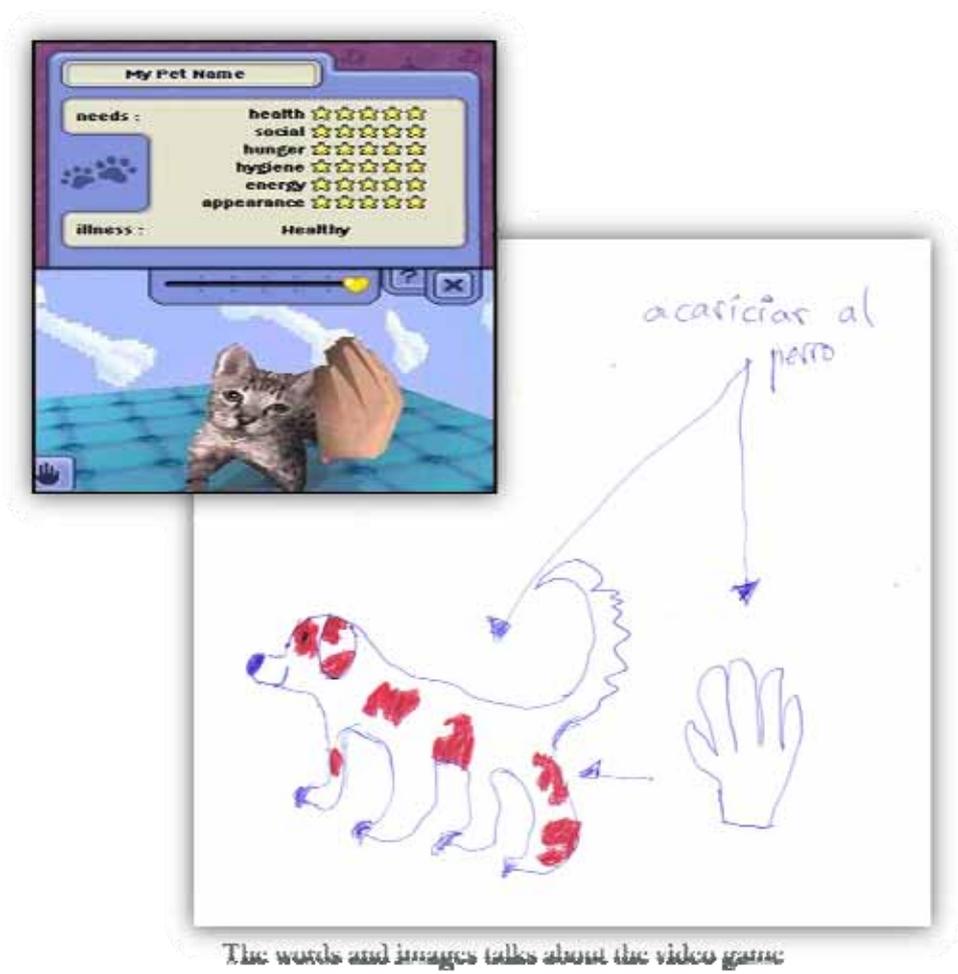
## Combining words and images

We now go back to observing the notebook from a child in year 2 of Primary Education at the CEIP Henares, where he combines images and text with the aim of showing how to play the video game *NBA Live 07*. In the analysis of this production we observe the relevant aspect related to the role played by each of these codes in achieving the issuer's communicative goal. With the written text, the child describes what one has to do in the video game in an "abstract" sense, while the drawing "recounts" more specific aspects of reality, absent in the text, especially the space and movement represented by the rectangular shape of the pitch and the player's position. In this case, the drawing includes features present in the grammar of the video games and makes movement and space "visible", two of the elements that define this medium.<sup>16</sup>



### Learning to reflect with the help of words and images

In the next image we see the creation that Sandra, a girl in year 5, has made in her notebook to recount what can be done when one plays *The Sims 2 Pets*. If we look at the illustrations included below we see that the video game's grammar, essentially visual, "invades" the girl's creation.



In this case, the child's creation is depicted as a visual entity composed by two images. Similarly to what happens on the screen with the video game, the proximity of both images indicates a functional relationship among the two. The image of the hand, both in Sandra's creation and in the video game, becomes a sign representing the action the player must perform, in this case stroke the pet. On the other hand, and in contrast with what happened in the prior illustration, the written text "*stroking the pet*" and the arrows

that relate it to both images are tags that take on a subsidiary function to the images as in the video game. The way chosen by this girl to communicate her message includes elements present in the grammar of video games in a much firmer way than her classmate's production.

These examples show an approach by children to the new ways of representation that also brings them come closer, with the help from adults, to a multimodal communication scenario.

## Creation of a web page

Another medium that was present in the classroom was Internet as a resource to obtain, produce and issue information related to video games. One of the purposes of the workshops was for children to design, together with adults, a web page to convey their opinions and experiences with the video games. Contact with this medium meant that children came into contact with multimodal texts, where different semiotic codes, writing, photos, drawings, sound, played a communicative role.

We started by introducing them to different web pages that talk about video games, some built by other children and some that are originally commercial web pages. These two types of pages made children confront two different realities, in the first case the multimodal text was used as a tool to convey opinions and experiences that video game users wanted to share with other players. In the case of companies, the pages became the communication and "dialogue" platform between the distributor and the player.



**Sims 2. A web to explore.**  
<http://www.es.ca/games/777>



**School Paper "La Hojita"**  
[http://es.geocities.com/web\\_lahojita/](http://es.geocities.com/web_lahojita/)

When the children were asked about the contents of these pages they responded with a traditional reading, looking just at the written text and its declarative and descriptive function related to the video games. Their interventions make no reference to the different messages conveyed by other codes present in the page and which turns it into a multimodal text; for example, it includes photographs.

The role for adults was to guide the children toward a meaningful and multimodal reading. In the next example, one of the researchers proposes a “reading path” (Kress, 2003); she shows them the page’s most relevant elements with the aim of them being able to subsequently make a similar one.

**Fragment 24 We design a web page.**

**CEIP Ciudad de Jaén, year 5 A, session 2, 20-11-06**

Researcher: What was there in the page “looking at video games through a magnifying glass”?

Boy: There is a presentation, the photograph of the children that played and video game cards describing the characters...

Researcher: What would you like to write on the page?

Boy: What we have played at

Girl: Yes we liked it.

Now the researcher tries to make them think about other communicative ways or resources to convey the messages on the webpage.

Researcher: Would you do it just with writing?

Boy 1: No, also with photos and drawings from the Sims

Boy 2: I would also include photos of them playing in the workshop...

The illustration that follows is a good example of how children, in this case a girl in year 5, design a web page to talk about video games by incorporating different communicative resources. Its design incorporates the elements that define a multimodal text, such as the presence of different codes, or symbols, like the borders in the space that represent the video game’s screens, the font size and the underlining to highlight the message, the placing of the different defining elements within the space, such as the menu which is usually placed to the left, etc.



Designing a web page

Based on the page designs, such as the one done Noemí, and with help from the researchers, children created a webpage to tell others about their experience at the workshops, offer help to new players, or explain the features of the video games, etc.



Website created by CEIP Ciudad de Jaén 5<sup>o</sup> year

In this page we see how different codes are incorporated, written texts, photos or symbols, in addition to regular items that characterize the “grammar” of multimodal texts, such as the existence of the menu located on the left or the borders that highlight information and gear the reading in a specific direction

## Children as recipients of messages: video games and films

In the sections above we have shown the process through which children have become the issuers of increasingly more expert messages, being able to incorporate different communication codes

and combine them to build a multimodal discourse. We will now see a process that is closely related to this one and which will enable us to see things from the recipient's perspective. We will show how children were capable of interpreting the messages conveyed by the different media, identifying some of the features that define their different systems of representation and meaning.

We will focus on an experience lived by the children from CEIP Henares with the video game *Harry Potter and the Goblet of Fire* and the film by the same name. The data we are going to show analyze how children, through the activities designed by the researchers, confronted one of the abilities that defines new literacies (Kress, 2003) and which consists on the capacity to identify the same message transmitted through different media and interpret the connections and transformations that the message may suffer when it is adapted to the typical characteristics of each of them.

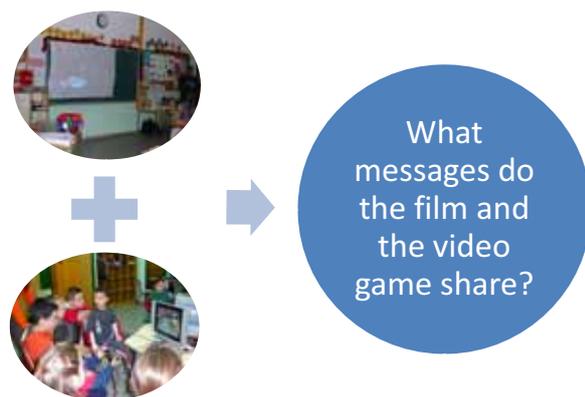
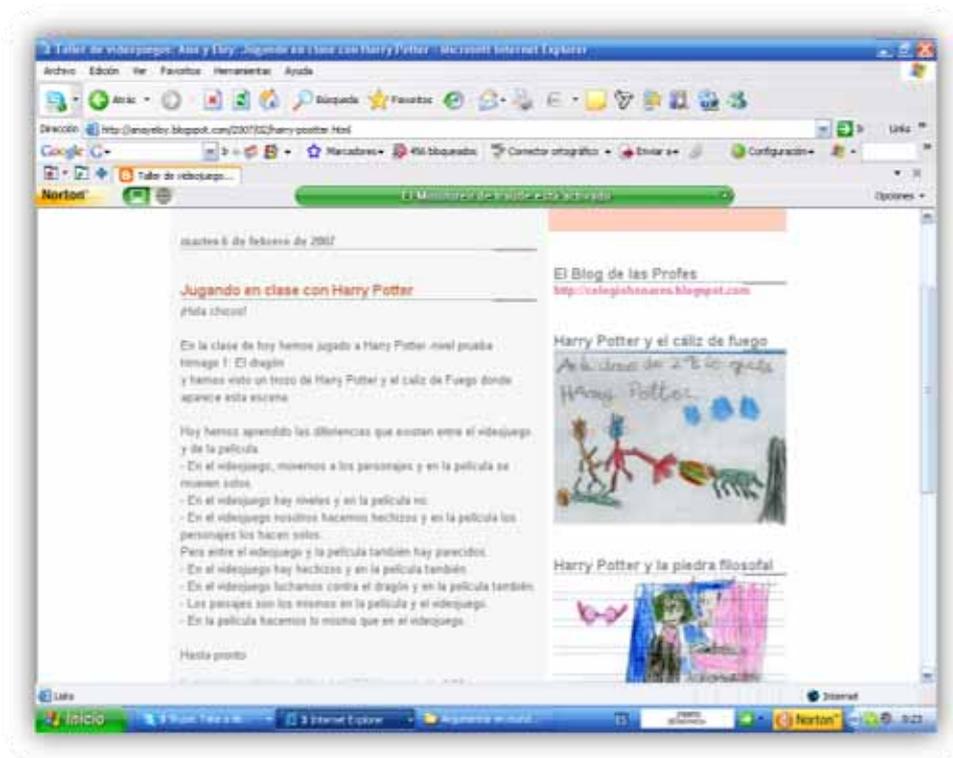


Figure 29

How we worked

## Differences and similarities between the video game and the film

One of the activities carried out at the workshop in CEIP Henares was to observe scenes from the film *Harry Potter and the Goblet of Fire* that could subsequently be found in the video game. The adult, aware of the relationship between both media, selected those scenes in the film that were also reproduced in the video game so that children would be able to connect the contents conveyed in both media and identify their similarities and differences. This process was reflected in the blogs written by the children in the workshop. The blog written by Ana and Eloy is a good example.



**Ana y Elroy's Blog CEIP Henares**  
**[www.anayclroy.blogspot.com](http://www.anayclroy.blogspot.com)**

Fragment 25 Ana and Elroy's blog. Playing "Harry Potter" in class  
CEIP Henares, year 2, session 2, 06-02-07

Hi guys!

In today's class we played "Harry Potter –triwizard challenge level 1: The dragon" and we saw a part of Harry Potter and the Goblet of Fire with this scene.

Today we have learned the differences between the video game and the film.

- In the video game, we move the characters and in the film they move on their own.
- In the video game there are levels and in the film there aren't.

- In the video game we cast spells and in the film the characters do so on their own.
- But there are also similarities between the video game and the film.
- In the video game there are spells and in the film as well.
- In the video game we fight against the dragon and in the film as well.
- The sceneries are the same in the film and in the video game.
- In the film we do the same as in the video game.

See you soon

The text written by these children shows how they have interpreted the contents present in both media by highlighting those that are conveyed in the same way and those that are treated differently in the video game and in the film. If we look at the text more closely, we see that contents pointed out by the children refer to three categories of messages and the way in which each medium conveys them. We find messages that refer to the player's actions, for example: *"In the video game we fight against the dragon and in the film as well"*, *"In the video game we cast spells and in the film the characters do so on their own."* They also refer to how an action is performed, *"In the video game there are levels and in the film there aren't"*. The children interpret each of these messages by taking into consideration the medium that conveys it. Thus, for example, when they talk about who carried out the actions we see a characteristic that defines the video game as an interactive medium. Children are capable of identifying the player's active participation in the video game. *"In the video game we cast the spells"* while they notice their absence in the film *"In the film the characters do it on their own"*.

With this activity, the children came closer to Harry Potter's story based on the video game and film, they learned how to recognize a shared meaning among the two media, such as, for example, the actions performed by the hero. But what is even more interesting, they became aware of the meaning of these actions being different depending on the role that the medium allowed the recipient to adopt. In the video game, the player, from his or her active role, is at the same time recipient and "builder" of content.

## The film helps us to decipher the messages in the video game

In the last workshop sessions and as the children acquired more abilities to interpret the messages conveyed by both media, we intended for children to value the connections between the film and the video game as a tool to get to know this medium better and overcome the different levels of difficulty.

### Fragment 26 The film and the video game

CEIP Henares, year 2, session 8, 13-02-07

Researcher: Has anyone played with the video game quite a lot?

Eloy: Me, me.

Researcher: Let see, Eloy for example, who has gone quite far in the game. Is there anything that is the same in the video game and the film that you can remember? For example? (...) In addition to what we did the other day with the dragon. Anything else you can remember that is the same in the video game and the film? Eloy told me before than he has seen the whole film and that it helped him in passing the video game. (...)

Researcher: Ok, Eloy says, because Pilar has said that we are going to see a part of the film that can help us with passing the video game, in the video game when you choose what we did the other day, which is to go with the broom and escape the dragon.

Boy: I passed it.

Researcher: You get the egg. And Eloy was telling me that a part of the film that has helped him to pass the video game is when the screen following the dragon shows up in the video game, the one with the precept bathroom.

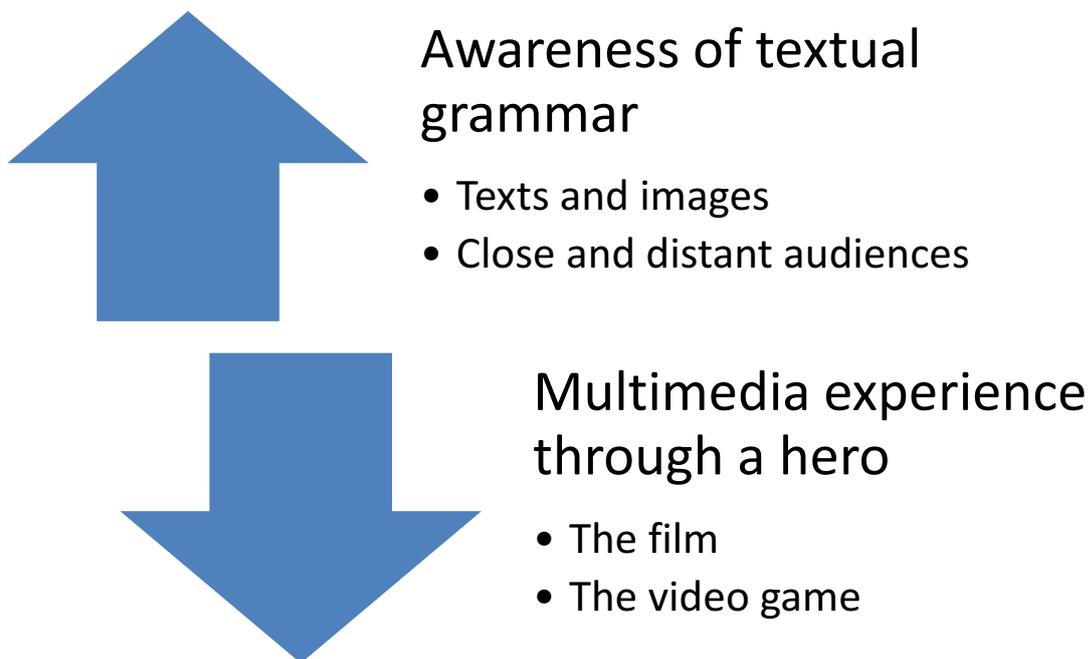
In this dialogue a boy comments that the viewing of the film during the workshop enabled him to pass one of the video game's screens. On a first approach to an analysis we could think that the story told by the film and its succession of events has enabled Eloy to know what he had to do to advance in the video game. From this point of view, the story in the film has allowed the player, who assumes the role of the hero, to build his own story through the actions shown in different levels and screens.

## What can we conclude?

Analyses of the data presented herein have shown it is possible to build innovative educational scenarios and expose children to multi-media experiences.

Figure 30

Learning to create multi-media scenarios



With regards to the children's experience as issuers we could state that, at the workshops conducted, the act of learning to use multimodal codes took place progressively. They started by making written texts, and they slowly learned to combine them with images. The presence of the video game was essential for them to be able to establish these relationships.

Considering children as the recipients of the media, we have analyzed the way in which they interpreted the messages conveyed from the different communication channels. It is especially interesting to note the way in which they were able to connect the

contents of films and of video games, when both media presented contents related to their favourite heroes. Children managed to become aware of the differences between these two channels of communication.



## Learning to think with video games

### Debating in virtual and real worlds

Up until now we have shown how children end up discovering the messages embedded in commercial video games when they work in the classroom, backed by adults. We will now focus on some examples from our analyses in which we will see that, through playing, we create different situations that foster the development of the ability to debate. As it is widely known, this is a human ability that allows us to transcend specific circumstances, their mere description, to find explanations for the facts or justify the human actions, according to certain principles.

Simulation video games offer the opportunity to teach and learn how to debate since players move within a virtual world in which it is possible to design multiple characters and environments whose construction calls for the resolution of specific problems.

In the workshops carried out during the past 2006-2007 academic year, we used three video games with different contents and

formats, but that allowed children to visit different virtual universes. Playing at becoming powerful wizards (*Harry Potter and the Goblet of Fire*), active sports-people (*NBA Live 07*) or simply a citizen (*The Sims 2 Pets*), we were able to analyze how one justifies the actions that the characters generate in the said virtual world. We will now concentrate on one of the workshops conducted at CEIP Ciudad de Jaén, where we worked with the video game *The Sims 2 Pets*, to reflect upon the features and multiple possibilities offered by this simulation game in the classroom when our aim is to develop the capability of debating issues related to the activities people perform in specific social contexts.

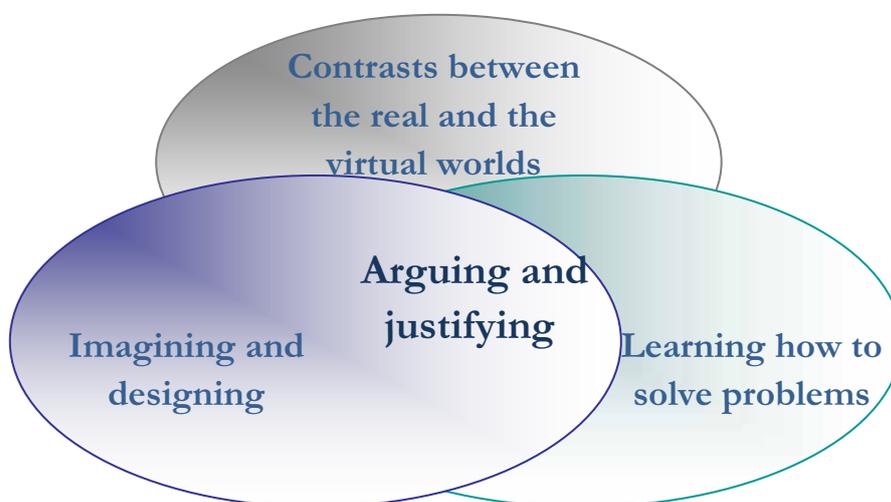


Figure 31

Learning to think in a virtual world

## Real and virtual worlds

During the different workshops, children had the opportunity of playing with *The Sims 2 Pets* individually on the NDS, or in a group in class with the Playstation, the TV screens or the projector. In this way, all of them had the opportunity to interact in a different world built by themselves, where it is not just important to invent but also to become aware that when playing, we are actively participating in the video game by controlling and directing the movements of the Sims character.

To help children in becoming aware of their activity in a virtual world, each time they played with the consoles in the classroom or at home, we posed multiple questions – orally or in writing – to help them reflect upon their actions and decisions when creating the characters, the homes or the neighbourhood of the Sims's characters.

What's a neighbourhood? What things define a neighbourhood?  
What are the homes like? Who can live in them? Are all families the same? What's your Sims family like?

On the basis of two examples, obtained from the analysis of the materials and conversations that took place in the classroom, we observe what children think about when creating their characters and how they learn to debate and justify their decisions.

### My SIM family



*My Sim family is made up of a boyfriend, the girl who is his girlfriend, the girlfriend's sister and the sister's boyfriend and the dog. They all live in the same house, because they have two master bedrooms. I have chosen this family because I liked it and because I had this interesting idea. This family does not resemble my real family*

#### Fragment 27. A virtual family, a real family

CEIP Ciudad de Jaén, year 5 A, session 11, 12-02-07

For example, let's see what happened when, during class, they were entrusted with the task of proposing and commenting on several family models created from certain materials (a Power Point presentation) provided by the researchers. By observing the work done by Estefanía, through her words we discover how the

possibilities offered by the video game *The Sims 2 Pets* allowed her to create a family that does not resemble her own family and how she learned to justify it. “*This family does not resemble my real family*” she says to continue justifying her choice: “*I chose this one because I liked it and because I had this interesting idea*”.

At another moment during the game, guided by the adults, we can see how a group of students does not get lost in this imaginary world they could create, but rather they wish to build something close to their real world. Let’s observe the dialogue that takes place during the session, when they have to tell someone else what they have done in the video game.



Fragment 28 Justifying why “that” Sims family

CEIP Ciudad de Jaén, year 5 A, session 10, 05-02-07

Researcher: Ok guys, I want you to tell me what you've done. (...)

Boy: We have made up a family that is a boy and a girl, whose father, who...they are orphans, because their parents died and they live with their dog and....that's it.

Researchers encourage them, maybe surprised by how the children are aware of the two worlds, the real one and the virtual one.

#### Fragment 29 The support from the researcher

CEIP Ciudad de Jaén, year 5 A, session 10, 05-02-07

Researcher: I love this

Researcher 2: Two siblings that live on their own, Pilar.

Researcher 2: He says he knows some neighbours like that, Pilar.

Boy: The one who lives across from us

Researcher 1: And he is like that?

Boy: Yes

Researcher 2: Yes. His parents died in a car crash.

If we compare the two examples proposed we observe that in the first situation the girl invents a new reality, built as an idealized version of a possible future as an adult. Meanwhile, the transcript of the second example, a situation that arose when they were debating before the researcher, we see how the children think about the different families found within their own context and decide to reproduce one of them within the fiction of the video game. In summary, during the game it is possible to interact in a different world created by the player but, at the same time, to reflect upon reality itself. In this context, the role of the adult becomes an essential element.

It we take another step towards the social context and we place ourselves before the neighbourhood instead of the family, we can

once again see the importance of the presence and support from the adult. Through her questions during the dialogue with the children and the activities proposed, she encouraged them to become aware of the virtual reality around the video game and its relationship with the real world, and of how these relationships impact the decisions taken during the game, realizing that they cannot be taken arbitrarily. We will once again use the transcript of



the dialogue that took place within the same group, when we were all deciding how the Sims neighbourhood and home should be.

### Designing our Sims family within a group

### Fragment 30. The role of the adult

CEIP Ciudad de Jaén, year 5 A, session 4, 19-03-07

(...) Researcher: Ok, but now we're thinking about what we are going to call the neighbourhood, where our family is going to carry out all those activities we want them to, ok?

Girl: Orcasitas

Teacher: Let's see, the name Orcasitas, who likes that name?

(All the children raise their hands)

Researcher: And, why?

Boy 1: because that's our neighbourhood

Boy 2: That's where we all live (...)

In this case, the analysis of the data showed how the adult slowly uncovered the steps taken in the video game and intervened when it came to deciding the name of the neighbourhood. With her help and supported by the video game, they actively reflected upon their own neighbourhoods as well as over the important factors when it comes to choosing a home, all of it happening within a double stance, the real and the virtual one.

## Imagining and designing a character

Let's now see what happened when the task focused around the design of specific characters, without forgetting at any point in time the family environment that had been designed previously. In this case, characters are designed on the basis of their physical traits

(hair, body, eyes, clothes, complements, etc) as well as their psychological ones (aspirations, zodiac sign, personal qualities, etc).

Let's examine the dialogue that took place in one of the groups during the process of creating their Sims character. If we read it carefully we can infer two types of observations. Firstly, children wanted to try the multiple options provided by the video game with regards to the designing of the physical aspect of the characters (glasses, tattoos, mini-skirts, multi-coloured hair, etc.) We will soon realize that in many of the interventions we observe how the children place themselves in a possible world, the one where their aspirations can come true, in this case those related to the physical appearance or the clothing style. Secondly, the dialogue also shows how the children ended up discovering that the way in which we dress, one's appearance and actions, shows others how a character is—whether real or virtual—and also what their life is like, i.e. all of it contributes to being defined by others in a certain way.

As we have indicated, children start to explore the possibilities of the video game, and immediately justify their decisions on the basis of a purpose attributed to the character: they are going to design it with a certain appearance so the he may find it easier to "flirt" or make friends.

### Fragment 31. Moments in the creation of a character

CEIP Ciudad de Jaén, year 5 B, session 9, 22-01-07

Researcher: There are more options if you hit it

Boy 1: No, no, no

Boy 2: There, there it is, for him to flirt

Researcher: That one is really nice

Boy 1: He doesn't flirt

Boy 3: To flirt, to flirt

Once again, in the conversation we observe the important role of the researcher, whereas before she guided them to focus on the possibilities offered by the video game, now she poses difficulties and guides them towards reflecting upon the purposes of their character and its physical appearance.



Planning the Sims family with the researcher

Researcher: But you're only going to create the Sims to flirt?

Boy: Well, that way they can make a couple, you know, and they work, you know...

Researcher: Then you'll also have to think what you're going to create the Sims for (...)

The children continue to play while they establish the following dialogue between them.

(...) Girl 1: Let's see the ponytail

Girl 2: No, no, without a ponytail, no ponytail.

Boy 1: She's really ugly

Girl 2: Without a ponytail, without a ponytail

Boy 1: She looks awful in a ponytail

Boy 2: Blonde, blonde

Boy 3: That's it, that's it, no, the yellow, that's it, in pink, in purple, that's it

The previous conversation went on for quite a while. Finally, they took a group decision, they created their character and they identified it with a name.

Researcher: A name, you have to give her a name

Boys: Rut, name her Rut, write Rut

The decision was to assign their teacher's name to the character. We can again see how reality is introduced into the fictional world. The analysis of the previous conversation has shown how children justify their decisions even while playing. In any case, we have to consider the important role played by the adult to guide the debate and the thinking processes in two ways: encouraging the presence of arguments and helping to establish relationships between fiction and reality.

## Learning to solve problems

As we have seen with the Sims, children can be very active and generate different fictional worlds. In addition, we will now see how this video game also allows them to face a series of problems they

will be able to resolve by controlling the characters' activities. Because we were working with a simulation video game, we were able to live in a virtual reality in a "conscious" way, where, just as in our daily life, the Sims needed care and attention, we had to treat our character on the basis of our own values and choices. Each of these actions and decisions imply a problem-solving process of which the player is not necessarily fully aware.

Let's now see how two girls from the workshop tackled this problem-solving process. Irene and Gema, in one of the blogs created for the video games workshop, describe in detail a day in the life of the Sims.



## Gema and Irene's blog

### Fragment 32. Gema and Irene's blog A day with the Sims family

CEIP Ciudad de Jaén, year 5 A, session 10, 4-02-07

Hi. We are going to tell you how one of our Sims spends his day.

Irene: The Sims wakes up in his new home and has to cure the patients who are cats and dogs. He has to go to the park to socialize. He also has to play and take care of his dogs. You have to take the Sims to cook, to clean, to shower and to go to the bathroom. Also to sleep and bathe the dog, feed it and take care of it.

Gema: Throughout a day you can work and also be with your boyfriend/girlfriend and also you have to rest, and do a poop or a wee, etc.

The previous texts show the process through which children become aware of their activity in the game. Whoever has played *The Sims 2 Pets* will quickly understand that each of the actions described by the girls has implied the solving of a problem. It is no simple task curing animals or achieving customer satisfaction, all of it intertwined with the tasks associated with the actual survival of the Sims, for example, feed or bathe oneself.

As we can see, the girls describe the character's actions during a normal day. "*You have to take the Sims to cook, to clean, to shower and to go to the bathroom*", all of them are actions that they can observe daily in their own homes and that they personally carry out on a daily basis, or they will do when they grow into adults "*Throughout a day you can work and also be with your boyfriend/ girlfriend*". By performing all

these actions in a virtual world they realized the importance of following a series of rules and what were the values that set the goals for their characters; only by achieving them would the Sims be happy and live in a proper way.

## What can we conclude?

All the dialogues and written texts, produced during the workshops, have allowed us to observe how we can use social simulation video games in the classroom. We summarize it in the following figure.

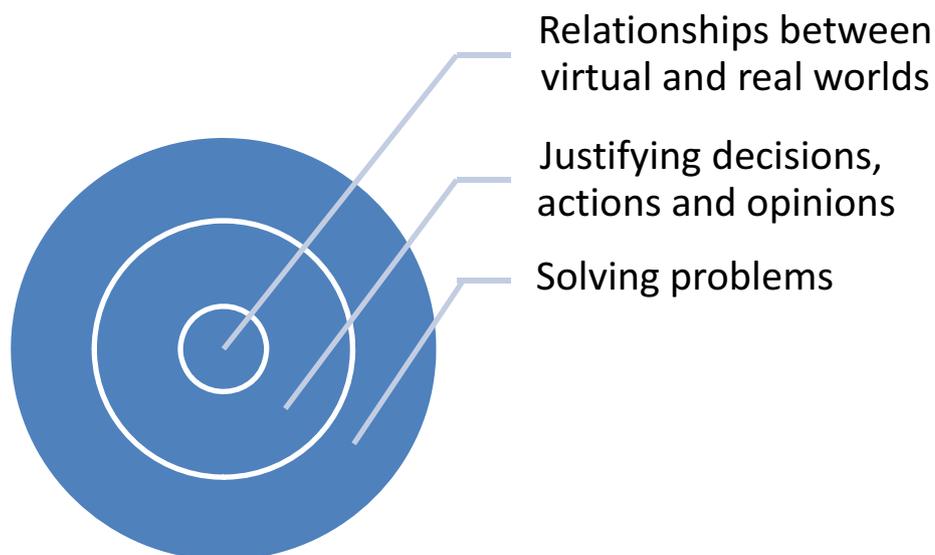


Figure 32

### Learning to think and debate with video games

- Firstly, we have approached the world of fiction, lived within a virtual reality as opposed to the reality of our daily life.
- Secondly, we have seen that with the help of an adult, children are capable of reflecting over and discovering that

their own worlds can be as interesting as those they can generate and invent.

- Thirdly, when the presence of the adult guided the dialogue, the children explicitly established their decisions and also saw the need to justify them.



## Telling and creating

The creating activity joins reality and imagination, so that the fantasy is the result of a combination of elements taken from reality. Therefore, it is not rare to be able to state that the ability to imagine has a direct relationship with the richness and variety of the accumulated experience. All this acquires a special relevance when it comes to creating stories and, in addition, we use video games as support. Figure 33 introduces us to the fundamental concepts that we will discuss in this section.

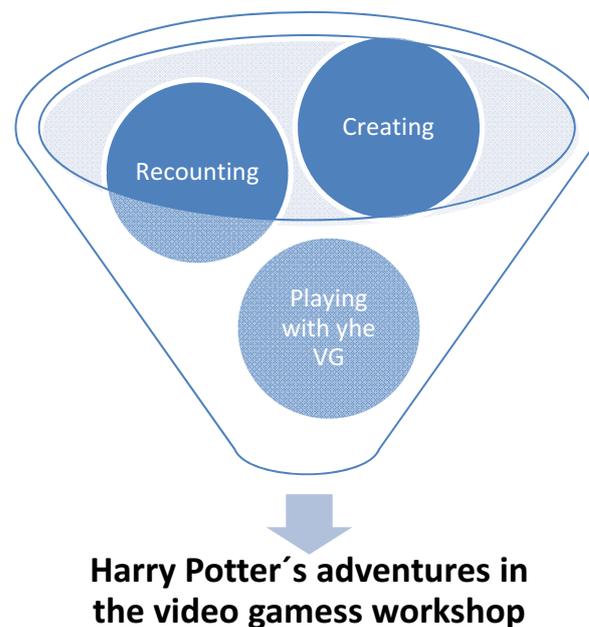


Figure 33

Learning to create and recount with video games

- In video games, the stories are only possible if the player's activity updates the hero's life, with certain independence to the person that designed the video game<sup>17</sup>. Henry Jenkins (2006) proposes the concept of "space" as a, perhaps, predominant element over the idea of time traditionally associated to a narrative. *Spatial stories*, says this author, *prime spatial exploration over plot development, and this is where their peculiarity lies*. It is worth noting how these spatial resources in which the story leans are also being used in other audiovisual discourses, for example in films.
- Why is it possible to learn to create with video games? Different authors<sup>18</sup>, when talking about imagination and its relationship to reality, point that the former does not suddenly appear but, instead, it is a slow and gradual process depending on each stage of evolution. Imagination becomes a means to expand the human experience. People are capable of imagining a "possible world" leaning on other people's stories and descriptions, on something that they have not experienced personally or directly. Video games can be an important tool to foster the ability to create.

## Active players: Playing and writing with *Harry Potter and the Goblet of Fire*

We will now stop at a work conducted in one of the workshops organized around the adventure video game *Harry Potter and the Goblet of Fire* to show, through an analysis of the products achieved by participants, how boys and girls learned to create and build stories. The web page in which we present the experiences carried out during the projects allows contextualizing our data as well as our interpretations of the same. Figure 34 offers a summary of the three moments that succeeded one another in the workshop and the most relevant activities in each one of them.

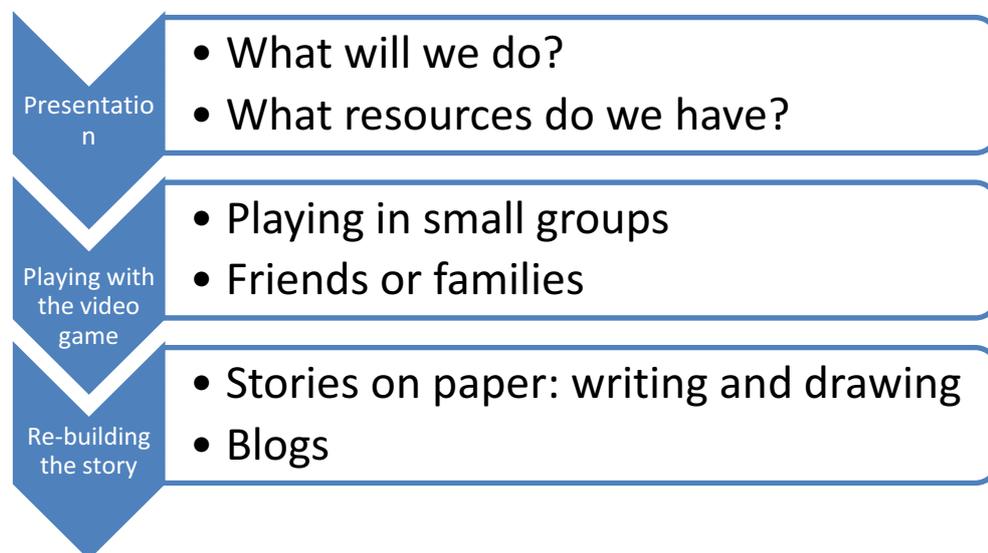


Figure 34

The Harry Potter's workshop

We will now review the children's productions to analyze the different approaches from which the story was built, supported by the video game. An analysis of the children's productions will allow us to appreciate two different approaches to the re-building of the story present in the video game. We will see how the first one of them seems to include, at least to a certain extent, a reconstruction in which spatial elements are predominant. Within this context, the recent contributions by Henry Jenkins seem particularly relevant, when, transcending the controversy regarding the presence or lack of narrative in video games, he refers to the importance of these spatial dimensions (Jenkins 2006). A second approximation to the reconstruction of the video game is found among the children that lean on the time dimension, presenting a closer structure to the traditional stories, and which incorporates three classical elements of a narration: introduction, body and conclusion.

## The presence of spatial elements

The reconstructions of Harry Potter's story made by Iván and Elena are depicted in the following figure.



**Figure 35**

**CEIP Henares, year 2. Telling a story through a drawing**

If we carefully observe Ivan's reconstruction, we realize that it represents Harry Potter casting a spell that will allow him to open the doors that are blocking his way so that he can advance in the game. Elena's reconstruction also represents a scene in which the character has to overcome difficulties to be able to advance in the game; in this case Hermione, Harry's friend, confronts one of the monsters in the video game.



Screens from the *Harry Potter and the Goblet of Fire* video game

Comparing the children's productions with the video game's screens that seem to have inspired them, we see several relevant aspects that indicate how these children have become aware of certain elements that characterized the messages and, perhaps, the game's grammar. We will now focus on them by trying to show what the dominant presence of the game's spatial dimension consists of.

- Firstly, the two drawings faithfully reflect spatial elements that characterize the video game's fantasy world. In both, the "scenography" incorporates elements that reproduce the hero's world. In addition, in both productions he is portrayed as performing actions necessary for him to carry out his mission, such as shooting or casting a spell. The fact that they place the hero before his mission makes us think they

have become aware of some rules that have organized their activity as players. They were aware that in a video game such as this one, the mission is the most important element and that which guides the game.

- On the other hand, similarly to what happened during the game, each of the children approaches the fantasy world and the video game's discourse hand in hand with a character. Iván chooses a scene where Harry is the main character, while Elena chooses Hermione as the character of their representation. Perhaps this is proof that the children have become aware, through gender identification, of the relationship between themselves, as players, and the video game's heroes.
- Finally, in third place, we see that the drawings represent isolated actions, where the spatial situation of the character and the objects take precedence over the video game's "script"; this datum may be interpreted as a very significant awareness of the rules of the game and its characteristics which, in this case, because it is an adventure game, prime spatial exploitation over the story (Jenkins 2006).

## The time reconstruction of the story

We will now analyze a different approach to the reconstruction of the video game, one that leans on the time dimension and in which the classical structure of a story becomes evident, with an introduction, body and conclusion.



**Adrián's story**

Adrián, a seven-year old, following instructions from adults, has divided the page into three parts, respecting the classical structure that we just mentioned. In each one of the parts, he has represented three scenes from the video game and we see a series of elements that define the way in which the author, through this activity, discovers essential elements in the game; for example, controlling the communicative tools, narrative tools and also becoming aware of the rules of the game that determine the relationships between the hero and the characters or his mission. Let's see how it can all be observed in the child's production.

- Let's first notice some relevant aspects regarding the shape and content. Firstly, the author has used two expression codes, image and written text. This strategy can be associated with the ability to have a good command of multiple communication codes.
- Furthermore, if we look at the content of the text, we see that it relates to events that take place in the video game in a sequential order. In the initial scene they shoot at Harry, the event with which the game starts; in the following frame certain strange beings make an appearance, and Harry casts a spell over them and they go up in the air.
- Finally, to reach the shuttle and overcome the obstacles that will allow the player to continue the game (go over to the next screen), the hero and other characters have to move rocks, as depicted in the last frame. Observing the video game we realize that the sequence of events is the same one. This fact shows us how the child has become aware of certain narrative elements present in the video game: the time sequence of events, the characters and the actions they undertake.

Another aspect revealed when analyzing this story is the way in which Adrián approaches the relationship between the game's characters, the hero and his mission. The boy, through his texts and drawings, "introduces" other characters that accompany the hero in his mission. In the first two frames he does so through the text, using the plural in his expressions. On the contrary, in the third frame, in addition to the text "*they have to move the rock*", he uses the drawing to show another character with the hero. The fact that it is

in this specific frame where more than one character is represented is not mere chance since, in the video game, two or more characters were needed to move the rock. This suggests how Adrián, in this activity, discovers and interprets the rules that organize the game in a more sophisticated way than other children.



**Harry Potter's screen where together with his friends  
move the rocks**

## What can we conclude?

As we have seen throughout this section, the data analyzed have allowed us to show that video games can help children to develop their creative abilities, mostly the one related to the creation of stories on the basis of the contents of video games. From this point of view, *Harry Potter and the Goblet of Fire* has been particularly useful.

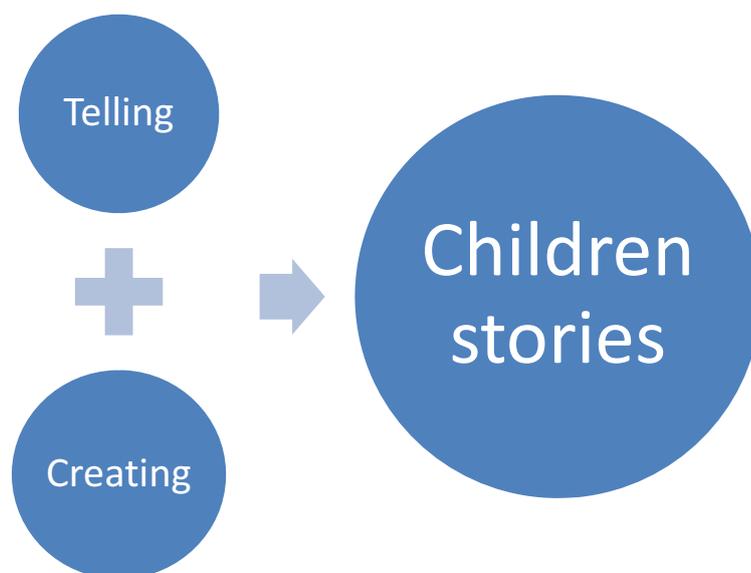


Figure 36

### Learning to recount and create

The analysis of the stories told by children in the workshops has revealed two particularly significant aspects.

- The construction of stories contributes to the player, on the basis of the activity carried out during the game, updating the hero's life.
- The children's narratives reflect two types of approaches to the video game: a) one focused on its spatial elements; b) another one focused on the time dimension, with their tales including a closer structure to traditional stories that, as in classical narratives, incorporate an introduction, body and conclusion.

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# Appendix 1

Session	Date	Activity	Materials	Photos	Video	Audio
Session 1	17-Oct-06	Do you learn with the video games?	Presentation of the workshop	61	0:59:49 0:31:42 0:38:32	
Session 2	24-Oct-06	Readyour classmate's notebook and re-tell it to the rest of the class	Notebooks. Parents opinions	109	1:02:28 0:42:23	M1 M2
Session 3	31-Oct-06	Work as a team	Notebooks, Instructions on how to use it	57	1:02:26	M3
Session 4	7-Nov-06	Drawing "one on one"	Playing with the console Notebook	98	0:54:54 1:02:27 0:36:32	M4 M5
Session 5	14-Nov-06	Recording the game	Interviews with parents	119	1:02:21	M6
Session 6	28-Nov-06	Individuality / collectiveness	Do you like the video games? Can one only play basketball?	76	0:52:45 1:02:26	M7
Session 7	5-Dec-06	Making a mural with newspaper cut outs and drawings	Notebook Mural-poster describing what you do	3	0:37:17 1:02:34 0:11:49	M8
<b>TOTAL</b>				523	12:20:25	

Table 1.  
CEIP Henares. We are a Team with NBA Live 07.

Session	Date	Activity	Materials	Photos	Video	Audio
Session 1	12-Dec-06	What do you know about Harry Potter?	Book, film,	71	1:02:22	M1
		What things do we have at home with Harry Potter?	and video game. Drawing		0:35:19	
Session 2	19-Dec-06	Search for information regarding Harry Potter	Notebook		1:02:23	
		Who is he? What are his friends called?			0:39:42	
Session 3	9-Jan-07	IT classroom: how do we search?	Web blogs	47	1:02:37	
		The Internet			0:19:30	
Session 4	16-Jan-07	What are Ron and Hermione like?	Notebooks	72	1:01:54	
		Who do you like better and why?			0:19:18	
Session 5	23-Jan-07	Read the blogs and answer	Blogs	46	1:02:37	
					0:34:33	
Session 6	30-Jan-07	Read the blogs and answer	Blogs		1:02:17	
Session 7	6-Feb-07	Differences between the same sequence in the video game and the film	Notebook		1:01:18	
					0:45:37	
Session 8	13-Feb-07	Bring references from Harry Potter	Books, cards, magic wands, etc.	111	1:02:21	M2
					0:01:26	
Total				347	0:01:26	

Table 2.

CEIP Henares. Telling stories with Harry Potter and the Goblet of Fire.

Session	Date	Activity	Materials	Photos	Video
Session 1	20-Feb-07	Draw our family	What did you learn with Harry?	42	1:00:14
			Presentation Sims workshop		
			Notebook		
Session 2	27-Feb-07	Draw a Sims family	How must your Sims family be?	83	1:02:05
			Notebook		0:08:59
Session 3	6-Feb-07	Write in the blog	Different preferences regarding our home	40	1:01:38
			Notebook		0:18:26
Session 4	13-Feb-07	Similarities with reality	Photos of the children in their environment	111	1:01:30
			(Fathers, mothers, pets, kitchen, bedroom...)		
Session 5	20-Mar-07	The children that did not bring the photo:	Photos of the children in their environment	72	1:02:21
		Think about what you're going to do and title it			0:12:41
		Who do you want portrayed and why?			
Session 6	27-Mar-07	What did you like the most?	Drawing: Notebook		1:02:25 0:04:11
			Photos of the class and classmates	348	6:53:30

Table 3

CEIP Henares. Discovering our environment with Sims family.

Session	Date	Activity	Materials	Photos	Video	Audio
Session 1	13-Nov-06	Presentation course-video game workshop	Why do you like video games?		0:50:01	MD C1
			What do we learn?			y C2 (entrevista)
Session 2	20-Nov-06	What do we want our web to be like?	Notebook		0:55:12	MD C3
Session 3	27-Nov-06	Work carried out in class:	Interviews with parents. Notebook		0:56:16	MD C4
		Description: what does the video game consist on?	Do you like video games?			
Session 4	4-Dec-06	Playing with the NDS and debating over the new web	Suggestions web page. Drawing	73	1:02:43	MD C5
					0:24:32	
Session 5	11-Dec-06	How did you play?	Notebook	26	0:48:30	MD C6
		And, how did you learn how to play?				
Session 6	18-Dec-06	Ask the parents, what do you think of the video games?	Parent interview. Notebook	30	0:57:09	MD C7
			Advantages and disadvantages of video games			
Session 7	8-Jan-07	They are given the notebooks. Writing in the blogs.	Note for parents	23	0:52:08	MD C8
			Blogs			
Session 8	15-Jan-07	Activities: What does a Sims do during the day?	Write in the notebook.	11	0:40:01	MD C9
		What is our Sims and our pet like				
Session 9	22-Jan-07	Activities: Group presentation for the blog.	Writing in blog	79	1:00:29	MD C10

			How is a family created and why is it created like that					
<b>Session 10</b>	05-Feb-07		Playing with the console		Notebooks and blog		1:01:49	MD C11
							0:08:27	
<b>Session 11</b>	12-Feb-07		Family workshop		Write blogs	24	1:01:24	MD C12
							0:15:06	y C13
<b>Session 12</b>	19-Feb-07		Workshop the home		Write blogs		0:58:23	MD C14
<b>Total</b>						283	11:52:10	

Table 4

CEIP Ciudad de Jaén. Designing The Sims 2 family and take care of their pets.

Session	Date	Activity	Materials	Photos	Video	Audio
Session 1	26-Feb-07	Presentation for students about the blogs	Writing on the blogs	30	0:52:25	
Session 2	05-Mar-07	Activity work as a group	Scanned work		1:02:22	M C3
					0:04:07	
Session 3	12-Mar-07	Activity play with the video games and your family	Scanned work	135	1:01:17	
				234		
				69	3:00:11	
Session 4	19-Mar-07	Activity "The environment"	Scanned work	108	1:02:27	
					0:22:39	
Session 5	26-Mar-07	Photograph what it must have	Photos of children in the school	250	1:01:24	
Total				457	8:26:52	

Table 5  
CEIP Ciudad de Jaén. Real and virtual worlds

# Technical Data

## Methodological approach

- Ecological and ethnographic approach, of a quantitative and qualitative nature. Case study.

## Scope and participants

- Two Primary Education Public Centres in the Community of Madrid where researchers had participated in previous occasions. This project was conducted during the entire school year with a group of students from year 2 (CEIP Henares) and their teacher and two groups in year 5 (CEIP Ciudad de Jaén), successively, and their corresponding teachers.
- Sixteen workshops, held at the Seventh Science Fair from the Community of Madrid, attended by the research group as part of the stand coordinated by the University of Alcalá.

## Video games and platforms

- *The Sims 2 Pets, Harry Potter and the Goblet of Fire, NBA Live 07*
- *PlayStation 2 and Nintendo DS*

## Required data types:

- Audio and video recordings of all the sessions carried out and photographic material obtained for the analysis according to the information that follows:

Centre	Hours/Minutes/Seconds video recordings	Photographs
CEIP Henares 21 sessions	30:47:09	1.218
CEIP Ciudad de Jaén 17 sessions	15:53:45	740
Total	46:40:54	1958

**Table 1**

**Primary Education Centres 2006-07 School year**

Science Fair	Hours/Minutes/Seconds video recordings	Photographs
Thursday 12	4:10:15	84
Friday 13	3:48:26	97
Saturday 14	3:05:20	126
Sunday 15	2:58:04	57
Total	14:02:05	364

**Table 2**

**Seventh Science Fair April 2007**

**Analysis and interpretation**

Once all the information was digitalized, the documents were analyzed using the program *Atlas.ti 5.2* (<http://www.atlasti.com/>)

Based on the information obtained through the analysis described herein, the relevant qualitative information included in this report was obtained.

## Notes

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<sup>1</sup> Although the studies within this context are not many, there are some that should be mentioned. The first one was conducted within the framework of an agreement of collaboration between the researchers that make up the group *Futurelab* in England (<http://www.futurelab.org.uk/>) and the industry, *EA y Microsoft* participated in the project, and its final report was published in 2006. A presentation of the project and its development can be consulted on the INTERNET ([http://www.futurelab.org.uk/projects/teaching\\_with\\_games](http://www.futurelab.org.uk/projects/teaching_with_games)). Another relevant report was conducted by the group *Teem* (UK), an organization that supports the work of teachers in England (<http://www.teem.org.uk/publications/>).

<sup>2</sup> Barbara Roggof has extensively developed the concept of community. The book she coordinated in 2001 stands out, with the collaboration of participants from a school community where innovative educational

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experiences were conducted, supported by the institutional presence of the families in the classroom: *Learning together. Children and adults in a school community*. Oxford: Oxford University Press.

<sup>3</sup> *Ethnography* is a methodological approach that may be characterized by the following features: a) It confers greater emphasis to the phenomenon's social nature than to the act of comparing it to a related hypothesis; b) a low number of cases is researched, maybe as low as 1, it is an in-depth research; c) the data analysis implies an explicit interpretation of the meaning and functions of human actions, expressing it through descriptions and explanations where quantification and statistical analysis play a secondary role. Our study has also adopted the *case study* methodological perspective, which leans on observation to deepen and analyze in detail the multiple factors that influence the activity that is being developed. In a very recent volume coordinated by Judith Green and collaborators (2006), *Handbook of complementary methods in education research*. Washington DC, AERA & LEA one can find works of great interest to justify this methodological approach.

<sup>4</sup> The most classical authors that have worked on the relationship between thoughts and language from the psychological and educational perspectives, as it is well known, are Russian psychologist Lev Semyónovich Vigótsky (1836-1934) and Jean Piaget (1896-1980) from the University of Geneva. Although both authors disagree at times, for example, over the way in which they explain the effect of society in the human development, they both agree on the important role played by mental representations as elements that, as means of conscious knowledge, contribute to guiding and orienting human conduct.

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<sup>5</sup> A classical work along these lines is the one conducted by Barbara Rogoff and collaborators (1993) when they approach the analysis of educational family practices in different cultural contexts. *The concepts of guided participation and cultural universals and variation. Guided participation in cultural activity by toddlers and caregivers*. Monographs of the Society for Research in Child Development, Serial #236. The author approaches the family context through participating observation by researchers. Her analyses combine a qualitative approach, through the definition of a set of categories, with the graphical resources that allow comparisons between the situations being studied.

<sup>6</sup> Jerome Bruner, North American psychologist, provides some theoretical basis in which to rest narrative and analytical approaches to data. In an empirical context it is essential to consult the volume published by Denzin, N. K. and Y. S. Lincoln, Eds. (2005). *The Sage handbook of qualitative research*. Third Edition. Thousand Oaks, CA, Sage.

<sup>7</sup> One can consult the page

<http://www.aprendeyjuegaconea.net/uah/php/index.php>

<sup>8</sup> Lave, and Wenger (1991) have developed this concept from an anthropological approach in their work *Situated Learning. Legitimate peripheral participation*. Cambridge, MA: Cambridge University Press. The concept of practice community introduced by these authors has been re-visited as a source of inspiration for Artificial Intelligence theorists that work on problems that arise from a sociological perspective. Very recently, the publication *American Behavioral Scientist* (2007, #50) has dedicated a monographic issue to the relationship between the concepts of community and network, coordinated by Filippo Dal Fiore. The article by this author may prove particularly interesting: “*Communities versus Networks: The Implications on Innovation and Social Change*” (pp: 857-866).

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<sup>9</sup> Among the authors that have studied in greater depth the educational role of commercial video games we should highlight the studies by James Gee. This author is interested in their role within the processes for acquiring new means of literacy that people obtain in communication contexts. In his works he explores how video games are related to different semiotic codes that allow the interpretation of information in multimedia contexts. Also focused on the educational power of video games, it is worth mentioning the work by James Newman (2004).

<sup>10</sup> The term popular culture is not easily defined. David Buckingham started dealing with this concept in 1998 and associates it to the representations of the world conveyed by the media that express a culture shared by children and youngsters. Communication technologies such as the television or the films, together with the new heroes they contribute to build, are essential elements in this culture. Other authors have recently explored the issue. For example, Henry Jenkins (2006a) prefers to talk about a participatory culture, a phenomenon that stresses technologies and shared contexts, generated in the most diverse formats, as well as in their associated practices. A very recent work by Marcel Danesi (2008) approaches popular culture and analyzes its peculiarities on the basis of the communication channels and media in which it is present.

<sup>11</sup> Among the authors that have highlighted the emotional components that arise from the interaction with video games it is worth mentioning the work by Ian Bogost. This author traces the different elements in this interaction, for example the way in which subjectivity is present or the differences in the interactions between players and the different platforms.

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<sup>12</sup> The presence of video games in the Seventh Science Fair in Madrid generated the possibility of exploring characteristics from the leisure situations from which educational processes that are closely linked to the social practices associated to the new communication technologies arise. Regarding these issues, one may consult recent works included among the bibliographic resources (Balkin J. M. and col, 2006; Silver D. & Massanari, A., 2006; Mossberger, K., 2008).

<sup>13</sup> To approach the characteristics of the video game considered as a means of discourse one can consult the excellent work by Jesper Juul (2005), *Half-Real*. The second chapter of this volume, *Video Games and the Classic Game Model*, provides a critical review on the possible definitions and conceptions given with regards to what a video game is or may be, and the differences in the way of understanding the interaction with players depending on the theoretical perspective adopted.

<sup>14</sup> Children managed to become aware of the possibilities and limitations of the game within a process of interaction with adults. The dialogues that took place in the classroom are inspired by the ones held by Piaget (1974 a, 1974 b) with children, when he was trying to analyze the processes of acquiring awareness in problem solving situations.

<sup>15</sup> Speaking of multimodal codes takes us directly to the work by Gunter Kress (2001; 2003). The concept of “trans-media” or “multimedia experiences” is much wider and intertwines with the one provided by Henry Jenkins (2006b) in his reflections over a participatory culture. Closely linked to the Harry Potter phenomenon, explored from this same perspective, the work by Heilman (2003) can be consulted.

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<sup>16</sup> Henry Jenkins (200c), in his work on the game's narrative architectures, has focused on the spatial dimension of the narrative present in video games, which turns their design in a peculiar process different to the one that takes place in the elaboration of other oral or cinematographic narratives, among others.

<sup>17</sup> We have to point out, in any case, that not all authors agree with the idea that stories are essential in adventure video games. We can recall the controversy between “ludology” (Frasca 1999; Aarseth 2001) and “narratology” (Ryan 2001). The presence of a world of rules or a world of fiction is what each of these positions highlights, maybe in an excessively exclusive way with respect to other dimensions.

<sup>18</sup> The work by Vera John-Steiner (2000) is especially relevant at this point. From her perspective, there are two main types of collaboration when it comes to analyzing the creative process. The first one can be defined as “*mutual complementarity*”. Vera John-Steiner points out that there can be a shared thought that does not imply the elimination of the development of one's own personality. The second is considered as collaboration which implies the *mutual enrichment* and to which Vera John Steiner refers as a “*distributed collaboration*”. This type of collaboration implies, most likely, a continuous exchange that allows exploring other people's thoughts.



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