

Notebooks, videogames and blogs as evocative objects: Building digital schools

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Abstract

Are digital tools part of the school culture? Why does this culture sometimes appear to ignore and relegate them only to free time? How can we favor educational processes that develop new forms of literacy by their very use? This paper explores what happened in a primary education classroom when commercial video games were introduced as educational tools. Their use in an environment for which they had not been designed helped to turn the classroom into a digital community, in which they coexisted with other more traditional tools such as notebooks, as well as really new one for some children, such as blogs. We show the transformation that took place when the children and their teacher, along with the investigators, employed different information frameworks to construct knowledge. We understand these old and new tools as evocative objects, a terms that may suggest different contexts of both learning and entertainment for the participants. Exploring how these changed their meaning, during the school year for each of the groups of participants – students, teachers and participant investigators, may help us to understand specific problems related to the acquisition of new literacies and transformations in the school culture.

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Are digital tools part of the school culture? Why does this culture sometimes appear to ignore and relegate them only to free time? How can we favor educational processes that develop new forms of literacy by their very use? In order to answer such questions we entered classrooms and collaborated with teachers and students. Exploring life there allowed us as ethnographers to unravel this complex set of phenomena, and to understand that classroom participants are still sometimes very far from using them. The concept of evocative objects (Turkle, 2005, 2007) has served as a starting point to explore school cultural practices that are closely related to the mental representations and imaginary worlds of the specific communities of practice (Holland, Lachicotte, Skinner, & Cain, 1998; Lave & Wenger, 1991) that people construct around the tools that they handle. These concepts help us to understand and explain the challenges that school raises when teachers need to learn and teach new discourses related to new forms of communication in which messages are transmitted by integrating alphabets and traditional forms of support with newly present visual codes in digital universes. An effective use of new media, which coexist with more traditional ones, demands the acquisition of digital literacies not just by the students but also by their teachers (Jenkins, 2008).

On the following pages we explore what happened in a primary education classroom when commercial video games were introduced as educational tools. Their use in an environment for which they had not been designed helped to turn the classroom into a digital community, in which they coexisted with other more traditional tools such as notebooks, as well as really new one for some children, such as blogs. We show the transformation that took place when the children and their teacher, along with the investigators, employed different information frameworks to construct knowledge. We understand these old and new tools as evocative objects, a terms that may suggest different contexts of

both learning and entertainment for the participants. Exploring how these changed their meaning, during the school year for each of the groups of participants – students, teachers and participant investigators, may help us to understand specific problems related to the acquisition of new literacies and transformations in the school culture.

Why evocative objects and imaginary worlds in school practices?

The concept of evocative objects could suggest different approaches to educational contexts when we focus on people who participate in them. Here we take it as a starting point for explaining classroom practices. According to Turkle (2007) *evocative objects place theories in a concrete spatial and temporal dimension, embodied in widely distributed institutions and socio-cultural relationships among individuals*. “Evocative objects bring philosophy down to earth. When we focus on objects, physicians and philosophers, psychologists and designers, artists and engineers are able to find common ground in everyday experience.” (p.8) Reading the author's introduction to this edited book gives us a broad image of the very different meanings that evocative objects have for different people, and also about how they agglutinate emotions, feelings and ideas. The book includes several kinds of objects of design and play, such as a keyboard, objects of discipline and desire such as a laptop, objects of history and exchange such as a radio, and many others. But why are these objects evocative for individual persons? This may be one of the main questions for us, and we can answer by saying that they are evocative because they have meant something in their lives, they were in a sense partners, and helped to give sense to their activities around the world. Even more, at a specific moment of their lives certain material objects began to be alive for them. Reading Turkle’s book, we began to think of specific objects as being present in the schools where we have been working. Adopting this concept as a starting point, when we acted as *ethnographers in classrooms, helped us to understand that evocative objects could be rooted in specific*

practices and agglutinate mental representations and values. There were many physical objects in the classroom, and all over the world they can easily be recognized as part of the school culture. From this perspective, we were interested in the sense that they have for all the participants in our workshops; both traditional objects such as notebooks and new technologies represented by videogames and blogs. But at that time participants were not asked explicitly about these objects, as seems to happen in Turkle's book, and it is for that reason we need to discover the meaning of these material objects for them. In order to discover these meanings we have been exploring how people used such objects and how they are involved in specific practices. So, what are the process that enable human beings to make meaning of material objects? Sociocultural psychology has interesting contributions to understand such processes. Ideas that are rooted in the concepts of classical theorists such as Vygotsky (1934/87) and Bakhtin (Bakhtin, Holquist, & Emerson, 1986), as well as of other more recent researchers such as Cole (1996) and Holland (Holland et al., 1998).

One of the most relevant ideas that build bridges between Turkle's ideas and others from Sociocultural Psychology may be the concept of "imaginary worlds" (Holland et al., 1998). Let us see how it is defined: "Under the rubric of culturally figured worlds or figured worlds we include all those cultural realms peopled by characters from collective imaginings (...). Figured worlds take shape within and grant shape to the coproduction of activities, discourses, performances, and artifacts. A figured world is peopled by figures, characters, and types who carry out its tasks and who also have styles of interacting within, distinguishable perspectives on, and orientations toward it." (Holland et al, 1998: 51) That is, imaginary worlds are social, cultural and involve different dimensions of human practices. More precisely, they can be defined by four dimensions.

- Firstly, *they are historical phenomena* into which we enter and which develop through the world of their participants. Figured worlds, like activities, are processes that involve people at the same time as they are conformed by them.
- Second, like activities, *they are social encounters in which participants situate themselves*.
- Third, *they are socially organized and reproduced*. Their meanings in our lives do not derive from holding them “in mind”, but from re-creating them by working with others.
- Fourth, they distribute “us”, not only by relating actors to landscapes of action but also by giving the landscape “human voice and tone”. That is, they help to identify each of us as an individual person, involving specific identities.

In sum, how can imaginary worlds be a complementary concept of evocative objects for understanding human practices? Perhaps because they allow us to focus not only on individual experiences, ideas, feelings or emotions, but also on the social dimension of human practices as one of the roots of the symbolism and meaning of human life.

Let us focus on the idea of *semiotic mediation, which is essential for an understanding of how human beings build meanings*. According to Vygotsky, *symbolic objects are placed on the environment as part of collectively formed systems of meaning, and products of social history*. “Although individuals constantly construct and reconstruct their own mediating devices, most of their construction is not original. They have been appropriated in the course of social interaction with others who, in turn, had appropriated the devices from others” (Holland, 1998: 36). That is, human thinking is social by nature because these mediating devices develop within the context of social activity, a place in the social world that identifies and organizes them. Without social life, people could not manage to function in symbolic worlds, and it is there, where they use words, that their minds are formed. Language and thought are interwoven in sociocultural theory, and both are social by nature.

Moving a little further from this idea, we can say that semiotic mediation as understood by Vygostky directs our attention to two processes: first, the genesis of the products, which involves the meeting of persons, cultural resources, and situations in practice (as explained above), and second, the appropriation of these products as heuristics for the next moment of activity. It is this second idea that allow us to focus on specific functions of these mediating devices. Considering Vygostskian ideas, *language and not just thinking has an important function in relation to human practices; it controls them*. Symbolic tools have special functions for directing human activities and practices. Holland goes into this idea in some depth. According to her, semiotic mediation begins to be a tool of agency for gaining control over one's own behavior. "It is an indirect means – one modifies *one's environment with the aim, but not certainty, of affecting one's behavior- and it requires a sustained effort (...)*. The process involves an effort because it may not succeed; it is clearly beyond the ability of any individual to accomplish alone. These tools of agency are highly social in several senses: the symbols of mediation are collectively produced, learned in practice, and remain distributed over others for a long period of time".(Holland et al. 1998, p. 38). Adopting these ideas, to amplify Turkle's (2007) perspective, evocative and meaningful objects can be related to human goals in order to transform the world in relation to specific practices.

But what is interesting for us at this point are the relationships between semiotic and material tools (Luria, 1992/1930; Holland et al. 1998). Symbolic tools are evinced in practice through the artifacts employed by people in their use. They are means by which meaning is evoked, collectively developed, individually learned, and is socially and personally powerful. According to sociocultural theories (Cole, 1996) artifacts have been manufactured or produced and continue to be used as part of, and in relation to, intentional human actions. Hence artifacts can be considered from a double perspective: 1) Material, because they are physical tools, contributing to real-world transformations, and

2) ideal or conceptual, because they have a specific meaning for the people who use them. Moreover, these artifacts are also present in discourses which organize them in categories, all of them related and having originated outside of their performances and being shared with other people in institutional contexts.

Adopting this former theoretical perspective and trying to build bridges between different conceptual frameworks, this presentation explores how the children, their teacher and the research team together transformed their traditional classroom, *as a cultural and imaginary world* populated by evocative objects, into a digital world. Being present in the classroom and exploring specific practices enabled us *to discover inductively the power of particular evocative objects*. In order to understand why these changes occur, we focus here on how classroom practices changed in the course of the school year, insofar as they were organized around these specific evocative objects that have specific meanings for individual participants. As mentioned above, these objects were notebooks, blogs and commercial videogames, all of which reflect the gaze that the teacher, researchers and children projected into the classroom. The data showed us how each of these objects enables us to understand practices in the classrooms and even to define a theoretical model based on them. We show *how these objects can become bridges that explain the changes and transitions that take place in educational methodologies, and how it is possible to utilize them to explain changes by unifying thought and emotions*.

Building digital schools: Working in the classroom

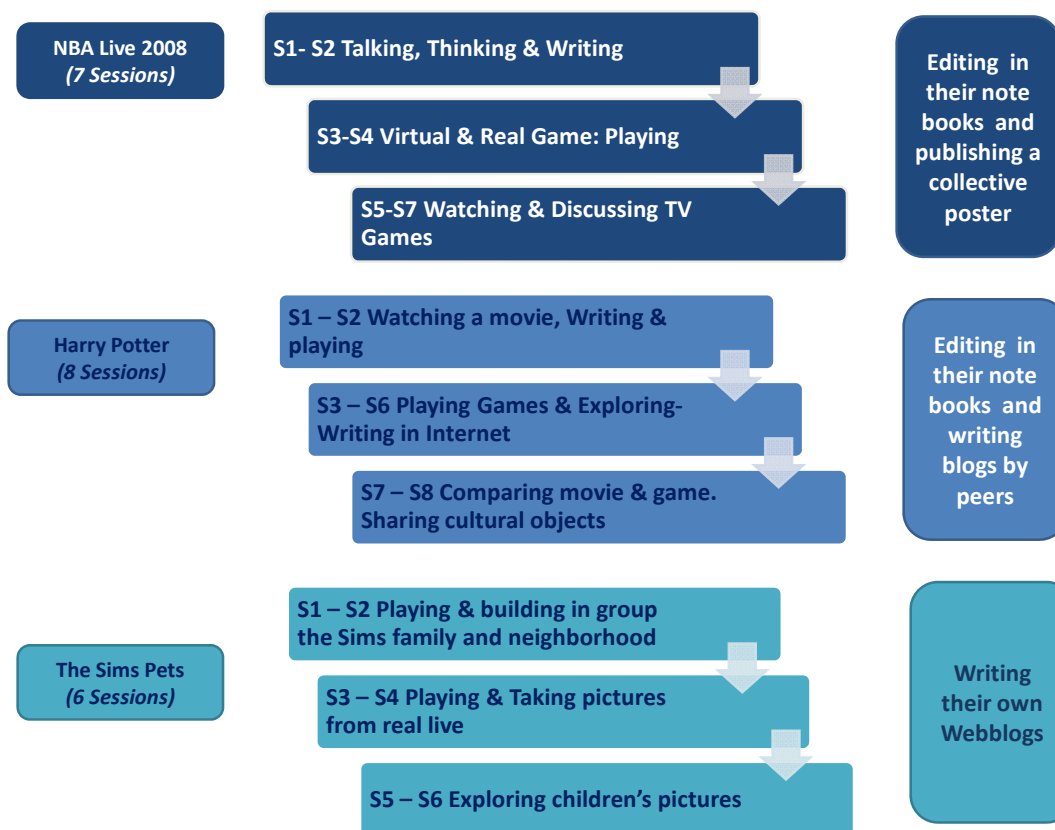
Adopting an action research perspective, we worked as participant observers in a public elementary school in Madrid joining a class of 6 / 7 year-olds once a week for a school year. Three workshops were organized *to help the teacher to bring digital technologies into her classroom in order to create meaningful contexts that would be as close as possible to the children's everyday lives*.

Videogames, digital images, movies and so on were utilized. This presentation focuses on these workshops, which took place over twenty-one two-hour sessions during the language class. The children used three videogames, selected because they take different approaches to virtual life; *NBA Live 07*, *Harry Potter and the Goblet of Fire*, and *the Sims 2 Pets*. We wished to help the children to act as journalists by writing about their discussions and opinions, sharing the likes and dislikes about videogames with new audiences and how they play games at school and at home. In most of the sessions they played the game for a while, they wrote about it to describe it to other children; for example describing their best strategies for winning, or why they liked it or not, as well as any other opinions that they thought might be interesting for real or virtual friends. In very general terms, the main goal for the research team was to explore how video games could be used in relation to other technologies that were helping to achieve a general educational target: the children would learn to use multiple discourses to reflect on the proposed topics, playing the role of journalists by explaining to other children or adults what they thought about videogames.

The research team had been working at this school for five years. The teacher was an expert and excellent professional, teaching for one year in the school. She participated in the experience at the suggestion of the school principal, who regarded our presence as a training opportunity for the teacher since she *did not know anything about the use of new technologies, and did not even use a computer either in class or in her everyday life*. The workshops were planned between the teacher and the researchers. A general draft was drawn up at first and was improved every day. Particularly during the first sessions, what happened in the class was jointly discussed.

Figure 1 includes the main parts of the three workshops and the most relevant educational activities during the sessions.

Figure 1. Multimedia workshops using videogames, notebooks and weblogs



In the same way as in other workshops led by the research team in collaboration with other teachers at the same school, the educational methodology was usually based on four fundamental activities: 1) *Speaking*, to introduce the topics from the videogame and as a complement to the activities proposed in the résumé; 2) *Playing* with the Play Station 2 console; 3) *Writing in small or large groups* supported by adults who helped the children to adapt their texts for near or distant audiences; 4) *Publishing* in different media, for example a large poster hung in the school entrance or on their own Blogs. *The materials analyzed in the workshops included 30 Hours: 47 Minutes :09 Seconds (21 Sessions) and 1.218 photos.*

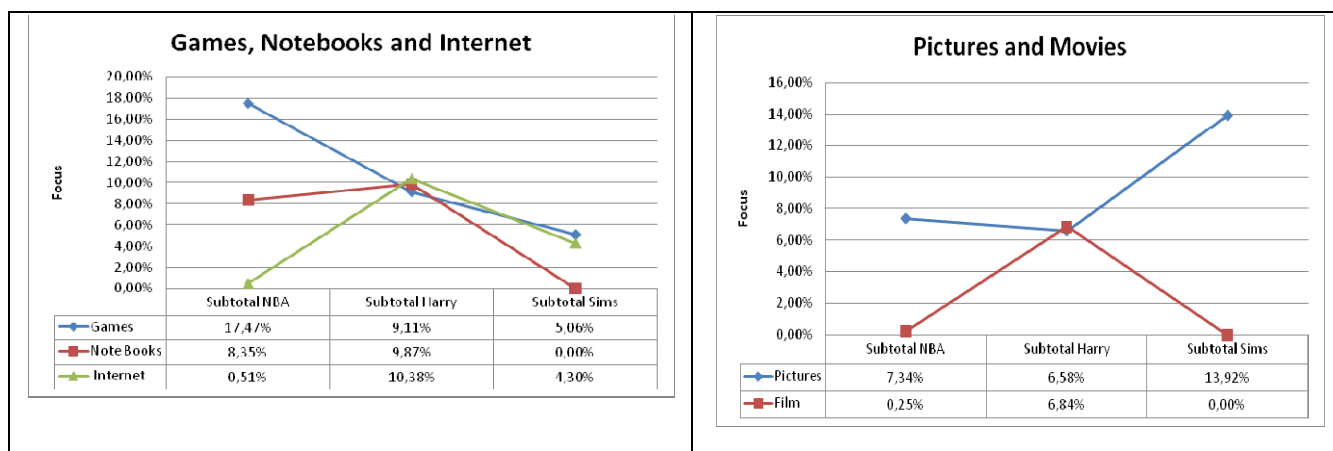
Our methodological approach to the analysis of educational practices combines the sources of data mentioned above: videotapes and pictures of each session, daily summaries written by the researchers, written or audiovisual texts used as educational tools in the classroom and the children's own products.

In our first approach to the data, all the sessions were transcribed and analyzed using N Vivo 2 and Nudist 8 according to ethnographical and discourse analysis techniques, in order to describe and interpret the educational practices involved. All the transcripts were segmented into sections that dealt with participants, activities, tools and conversational content. Each of them also included the researchers' comments. Exploring for evocative objects, a second approach included a content analysis of the transcripts in order to explore the use of specific tools by the participants, the teacher, the researchers and the children during the workshops, and the meaning that they had for all these people. *In the following pages we focus on each workshop in turn, in order to show how these specific uses and meanings were transformed in the course of the sessions during the school year.*

Discovering objects and people through the workshops

What objects did the researchers discover when they explored the school activities? This is the main question that needs to be answered as the first step towards discovering what meaning the participants attributed to evocative objects. The results of a content analysis of the frequency with which specific objects were mentioned in the protocols of each session, developed by the investigators during their first treatment of the video recordings of three workshops, appear in figure 2.

Figure 2. Material objects as educational tools in the workshops



A preliminary examination of these data suggests remarkable changes among objects during the workshops. First of all, *the Harry Potter workshop was different from the rest*. While in the NBA workshop, references to videogames and notebooks appeared more often and the Internet was absent, all objects appear in a homogeneous form during the Harry Potter's workshop, and references to them gradually decreased when we worked with the Sims during the third workshops, except for the pictures. The classroom activities enable us to partially explain these results. For example, the fact that children watched a Harry Potter movie led us to think about the relationships between different media, or the fact that they took photos at home during the Sims workshop in order to compare virtual and real worlds, could explain some changes in how material objects were used as educational tools. The following section focuses more specifically on the changes that took place in specific objects during the workshop.

First, references to *videogames* decreased through time, perhaps because they turned into something habitual in the workshop and it was not necessary to justify their presence in the classroom. Second, *the notebook* was the only element in which the children wrote during the first workshop. Normally, neither they nor teacher used any other tool to write, and at the same time the only audience for the children's messages was their teacher. Because the research team knew how important the notebook was for her and since we wanted to be in touch with the children's thoughts, the notebook

gradually became a new channel of communication with them. This fact, and a number of conversations with the teacher, helped her to become aware of the potential importance of breaching the classroom walls and looking for new audiences for the children's texts. At the end of the NBA workshops the teacher, the children and the research team participated in a new task, that of producing a poster to explain to other children of the school about what we had learned using videogames. From then on, although the notebook continued to be used in the class, the *blogs* were also protagonists. They gradually replaced the other writing tools which in fact disappeared at the end of the school year, when the children worked with the Sims. Finally, we can observe how references to the *Internet* increased, both as an information source and as a new writing tool.

Figure 3. Games and notebooks in the classroom



We now explore in more depth how the various participants were visible during the school year in order to understand the extent to which the presence of material objects can be associated not only with certain educational activities but also with adults' and children's goals. The idea of analyzing specifically the form in which each of the participants was becoming visible in the classroom was suggested by the reading of the summaries, the narrative descriptions that the investigators wrote up once each session finished. We focus on one of these summaries. Reading these texts, we can see, on the one hand, that the

teacher showed less and less interest in preparing the meetings jointly with the researchers and, on the other, how her educational models sometimes move away from those of the investigators. One of the summaries, which corresponds to the last meeting of the NBA workshop, was written at a time when some difficulties had arisen between the researchers and the teacher as regards the preparation of a final poster. This is the text of one of the researchers.

Transcript 1. Teacher's and researchers' uses of new and old technologies

"I don't know exactly who suggested the idea of preparing a poster at the end of the workshop, but perhaps what the teacher and the research team understood by a "poster" was different. Perhaps because in other schools we had seen big posters over all the walls, we were thinking of something similar where we would include the children's written texts, some of the classroom pictures and so on. I was surprised when she brought us a few relatively small yellow cards, not big enough to carry much information. For that reason, we thought of other ways to present the children's opinions in these pieces of paper. We prepared a sketch that we worked on in class (though perhaps that wasn't a good idea). A general discussion took place in the classroom. The children offered a lot of ideas about what they learned with videogames. It was really interesting. We gathered all their comments using the video projector. Finally, in order to be able to include the photos and the ideas of the children we included in the poster some PowerPoint slides that we are employed at class. The main problem after that session was that the teacher was not happy, and even though she didn't say anything she seemed to have other ideas about what the poster should be like." S7 NBA Live 07 Workshop Session 7. 2006, December 5

Two main comments are suggested by this summary. First, teacher and researchers ideas were really far apart. The research team had a very clear goal; to present to other children around the school what had happened in the workshop. By doing so, we wished to open up an audience for the children's writings, but it is difficult to know what the teacher's goal was. Second, we used several electronic devices for presenting the information: the electronic projector in the class, PowerPoint software, digital pictures and so on. Such situations, or other difficulties, may explain why the teacher was losing interest

in being a really active participant and proposing new tasks. In fact, when during the next workshop computers were playing an important role in developing the children's writings or looking for new information, new difficulties appeared. In fact, the teacher hardly ever used the computer by herself, even when she was supporting the children, once the computer was on and Google or a Word document on the screen. How the participants' conversation and activities developed in the classroom is shown in Figure 4.

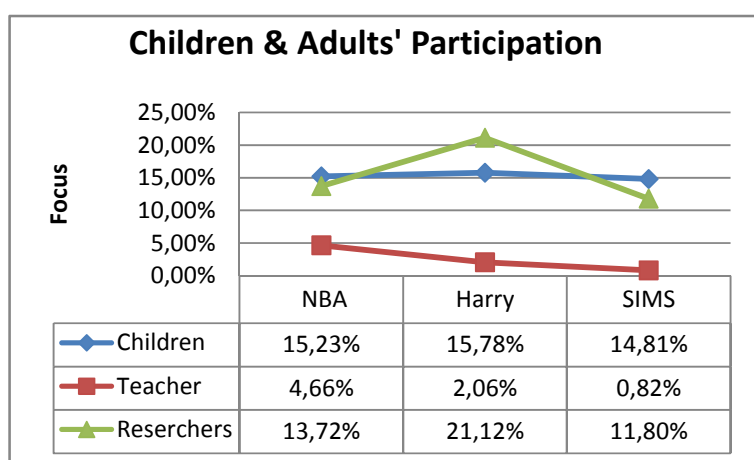


Figure 4. Children's and adults participation

Observing the patterns of change of each of the participants we see that while the children take part in a very similar way all along the three workshops, the visibility of the investigators increases in the Harry Potter workshop and there is a clear descent in the presence of the teacher.

Considering the participation average, it is almost the same for children and researchers with the teacher's being really small (children, 15.27%; teacher, 2.51%; researchers, 15.55%).

A preliminary analysis of the data enables us to conclude that there are important differences as much as in the presence of specific objects during the workshop as among the participants. In order to explain these differences, we now explore the meaning that these objects seem to have for every participant. The concept of evocative objects and imaginary worlds will help us with the interpretation of these data.

Evocative objects, imaginary worlds and the participants' goals

Each of the objects acquires meaning for the participants, and this we examine from a double perspective. On the one hand, analysis of the transcripts reveals co-occurrences of specific people and objects. Moreover, the analysis of the classroom conversations following Gee's model (Gee, 1999) shows how objects may be evocative for the participants in the context of their imaginary worlds and in establishing relationships with their own goals.

Videogames as evocative objects

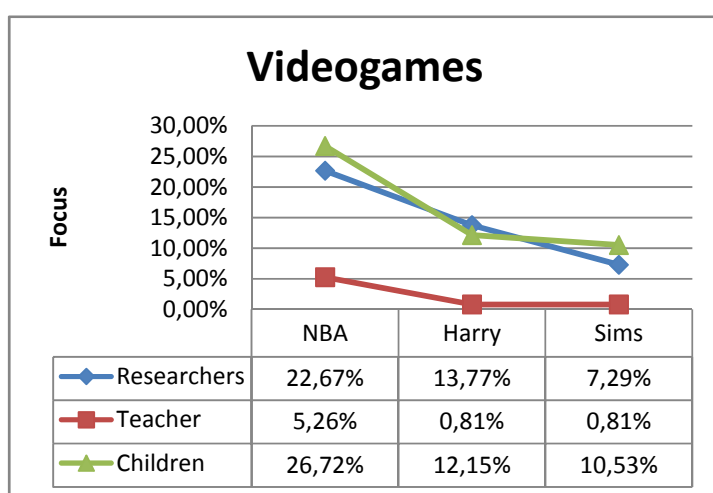


Figure 5. Presence of games during the workshops

The most relevant data shown in Figure 5 are how all the participants' references to videogames gradually fall. Although the patterns of this change seems to be similar among the children and their teacher, its presence during the sessions are almost coincident between children and researchers in terms of the means of these values (researchers, 14.57%; teacher,

2.29%; children, 16.46%)

Focusing now on the conversation contents, several examples reveal how children and researchers approach them in relation to different functions of the games as educational tools. We see how in one of the initial conversation about the games, on the first day of the NBA workshop, the researcher introduced the topic by showing how they would use them in support of the writing process. A few days later, at the beginning of the Harry Potter workshop, the children began to use the consoles without any kind of introduction; at thatpoint, once the consoles had been installed in the classroom, the participants

spent some time organizing small groups to work with the games. Finally, a new situation appeared at the end of the school year when, on the first day of the final workshop, the session began with the children playing in the whole group and learning how to build a house for the Sims family.

Transcript 2. Justifying the use of games in the classroom

NBA Live Session1 00:22:01

Researcher 1: Do you know why we are going to learn with video games? Because you will become game reviewers

Researcher 1: What we are going to do is to learn with video games. Do you know why we are going to learn with videogames? Because we want you to become game reviewers. Do you know what is it to be game reviewers? Maybe you have a better word.

Teacher: Eloy, what do you think that it is?

Eloy: Some people who speaks well

Carol: My mom was a reviewer because she was writing about videogames

Researcher 1: (She defines the word, putting big emphasis and speaking very slowly) "People who tell other people how good or bad games are. Does that sound like a good idea to you?"

Reading the previous transcript, we can see how the researcher is interested in the fact that children approached the writing process, understanding it as a communicative situation aimed at presenting their ideas to a wider audience than only their teacher. Moreover, her goal seems to be clear; she wanted to use new tools for teaching children to write. In that context, for her videogames can be evocative objects related to something new. But the children do not really understand the word "reviewer", and the concept turns out to be difficult for them. Let us see how games were used during the first session of the next workshop and what kind of transformations took place..

Transcript 3. Organizing spaces for playing videogames

Harry S1 00:51:45

51:45 The class is being organized to play

Researcher 2: We are going to work at two groups, the same as always

(Children are happy and they begin to stand up)

Teacher Nobody has said that you should get up

Researcher 2: We are going to organize the group that was playing with Hector (Researcher 3)

(Some children went with Héctor)

Researcher 2: And the others come here

Researcher 1: OK what you need to do is not to play each game for too long, so that you can change around more. You have to change a lot, because we have only two consoles

Carol I will play with Pablo

By then, it was not necessary to justify using videogames in the classroom. They just needed to be organized. The children were happy and everybody seemed to be aware that they would learn something, or at least that they would have fun in the classroom. In any case, the teacher was the only person who wanted the children to remain sitting until someone tell them explicitly to move. Perhaps her goal was that the children should keep quiet, as usual in the classroom. At that time evocative objects are not so much specific objects as spaces, while for the teacher they related to the specific kind of organization related to desks and chairs in the classroom.

Finally, we see what happened during the first session of the last workshop on the Sims. At that time, no particular justification or spatial organization were needed. The game was projected on the big screen and the children were playing it together supported by the researchers, the people that were conducting the activities, because the teacher's voice had almost disappeared. Reading the following transcript we will see how the youngest researchers took on the role of a teacher at that time.

Transcript 4. Playing and learning with the Sims

SIMS S1 00:31:32

Researcher 2: What is the first thing that we need to do when we enter the game? Let see, all of us are looking over there (to the screen)

Researcher 2: What is the first thing that they ask us there (on the game screens)?

Adri: The neighborhood and what is the neighborhood?

Carol: It is the street where you can live

Researcher 2: Very good, and who is going to live there?

Carol The Sims, the Sim

Researcher 2 : Very well, the Sim, or the Sims, the family that we are going to create

Researcher 2: And name will we give our neighborhood?

Researcher 3: What is your neighborhood called? Where is our school, do you know it?

Children: New Alcala

Researcher 3: It is the name of neighborhood, not of just one street, but of several streets. They are all together, because you have many houses, and many people live there, and this is a neighborhood

Researcher 2 : Does everybody live in this quarter?

Children: Yes!!

Researcher 2: Well, Do you like this name?

Children: Yes!!

Researcher 2: Perfect, it is done

Researcher 2 writes that name on the screen and the children are spelling it at the same time

Children and researchers were playing the game but at the same time adults taught children about differences between streets and neighborhoods. The game was used clearly a learning tool, it was integrated into the classroom activities. They didn't need to justify for what reason they were using it, just they used it. Thinking in other tools present in traditional classroom something similar could happen with many of them, for example, nobody need to justify for what reason books or notebooks are used there.

Thinking now in evocative objects and imaginary worlds as related to the participants goals of their activities it is maybe easy to recognize that adults and children teach and learn altogether using new technologies. Their common goal seems to be playing and learning to play the game, even learning some new concepts that they need to play, for example the idea of a neighborhood that seems to be new for some of them.

Notebooks as evocative objects

We knew how important the notebook was for the teacher from the first contacts that we had with her. She was really interested in the fact that the children always used a specific type of notebook, even with exact spacing between the lines.

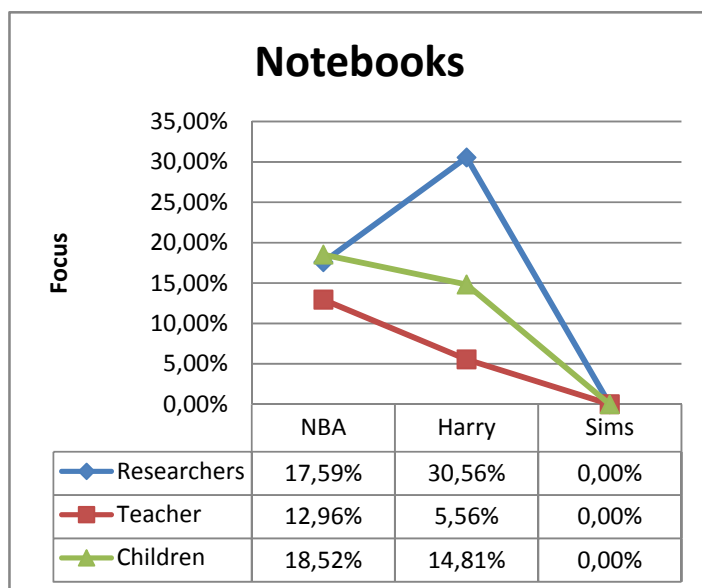


Figure 6. Notebooks & Participants: Co-Occurrence

Figure 6 helps us to understand the meaning that the teacher attributed to the notebook during the school year, while the pattern of change was among the children and the researchers. Although in all the cases the relevance of this object was decreasing, the differences were much more evident in the case of the teacher than the other participants..

A new analysis, focusing on the classroom conversations, enables us to

understand a bit more why notebooks can be evocative objects. It is important to realise that from the beginning it was difficult for us to understand completely why the teacher gave so much importance to the format of a notebook. We felt that there were more important aspects of the process of learning and of teaching children to write. At the same time, we were conscious of the importance of supporting the teacher's ideas, so we bought the notebooks ourselves and tried to turn them too into an important tool of the workshop. It would be used not only to allow the children to write their ideas about videogames, but also to keep in touch with their families, because we thought that by sending our messages they might know more about our activities in the workshop. The notebooks therefore included personal messages from the researchers for each of the children's families. The teacher never wrote in them, and

she was even astonished that these messages were different in every notebook, as she restricted herself to correcting in class the children's texts, going around the desks when they were writing; almost always aspects related to the spelling. Figure 7 shows the organization of the class when the children were writing in their notebooks during the first meetings of the workshop.

Figure 7. Children writing in their notebooks supported by the researchers and the teacher



The following conversations help to understand the meaning of the notebooks for the participants and why they could be considered as evocative objects for some of them. We focus now on the first session of the NBA workshop, when the teacher and the researchers are explaining how they will be using the notebook. The meanings emerging from their discourses are different and are worth exploring.

We will focus now in another session, just at the beginning of the Harry Potter's workshop. The teacher and one of the researchers explained the uses of the notebook.

Transcript 5. Looking for the notebook's title

NBA S1 00:24:16

Teacher: There is a notebook for everybody. (...) and there is an introduction that we will all read. Basically it says what we will be doing during the workshop. You will also take the notebook home and write there what are you doing at home with the consoles, for

example who are you playing with. Because you know how to write, you need to write with your own handwriting what you are doing at home when you have your games, whom you play with and which game you play, how long you are working and if you like it.

Researcher 1: And also their dads and moms can write; all the people who play with you, because we are also very much interested in that. So that they also tell us what they learn with you.

Miguel My mother will not want to write

Researcher 1: Will your mother not want to write? Very well, anyone that does not want to write does not have to; it is a free choice.

The previous transcript is maybe one of the most interesting in revealing the meaning that the researchers, the teacher and the children gave to the notebooks and, even better, to the fact of learning to write by using them. Focusing on the teacher's introduction we observe how she was interested in the children's handwriting, when she says: "*Because you know how to write, you need to write in your own handwriting what you are doing at home when you have your games*". In contrast, the researcher was probably more interested in these idea that family members could write their own messages, "*and also your dads and moms can write*", she said. Finally, Miguel was conscious that *his mom wouldn't want to write*. At that point, activities were related to specific objects and people were projecting their own goals onto them, which may be why notebooks are evocative for all of them, but they evoke different ideas, motives and even feelings. The conversation continues a little for a while on the same topic. Then another researcher suggested that the children could draw on the notebook, and although the teacher seemed to accept that, she would prefer them to write.

Researcher 2: Also drawings can be done.

Researcher 1: You can do drawings, if you prefer to draw rather than use words, it is OK.

Teacher: And if you want to write and draw that is better still.

Researcher 1: For sure.

Teacher At home they write people who like to do so: you, your parents, your cousins, people who play with you, and so on.

Carol: I am going to speak with my brother I hope he can write, because he comes here to the Henares School, perhaps he can write because he has a lot of homework.

Finally, another interesting and new idea, introduced during the conversation and related to the meaning that children associate with the notebooks, was brought up by Carol, one of the more active girls in this group. She was going ask her brother, who was a student in the same school, to write in the notebook because he had a lot of homework. This is a clear reference to the fact that children really associate notebooks with this kind of task. These ideas reappear several times during the workshops; for example, in a similar case of school practices when the Harry Potter workshop began and a new notebook was brought into the classroom.

Transcript 6. Looking for the notebook's title

Harry S2 00:15:16

Researcher 2: Do you remember that one day we draw the consoles? Because this will be the Harry Potter notebook we are going to draw Harry Potter

Researcher 1: But now you need to decide on a title for the notebook. Or do we put the same one again?

Let us think of some titles and write them on the blackboard

The children then suggested several titles, and one of the researchers noted all of them.

Carol: The 2º B group learns with video games (...)

Child: The 2º B group likes Harry Potter

Researcher 2: A good title (...)

Manuel: The 2º B group plays with Harry Potter (...)

Andrea: The 2º B group plays with the Play Station with Harry Potter

Researcher: This 2 is similar to the previous one

(...)

After mentioning several possible titles they voted for each of them. Just one was to be selected; the same for all the notebooks.

Researcher 2: Who likes that one? (She counts the votes, the children have raised their hands)

The first one has 8 votes (*The 2° B group likes Harry Potter*) (...)

Researcher 1: What is the second one?

Researcher 2: The second one is "*The 2° B group learns with Harry Potter*" and the third one is "*The 2° B group plays with Harry Potter*"

(...)

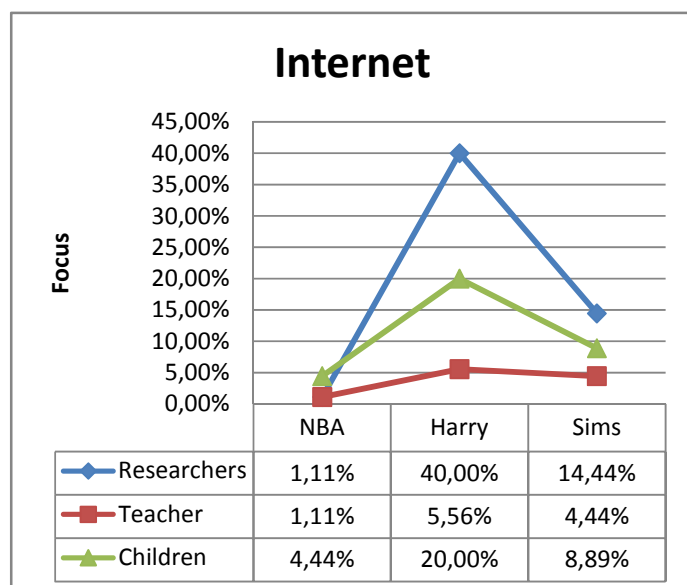
Researcher 2: We were going to join two titles

Researcher 1: OK, let's join them

Researcher 2: *The 2° B group likes and learns with Harry Potter*

Finally the title that the children wrote beside their drawings was *The 2° B group learns with Harry Potter*. What is really relevant is that, being at school, the children were conscious that they needed to learn something, not just to play.

The Internet and blogs as evocative objects



We focus now on what happened with the Internet, which is regarded as a source of information and simultaneously a space in which the children can express themselves through their own blogs. They began to be used during the second workshop and, as we have discussed before, at the end of the school year they substituted the notebook as a tool of expression.

Looking at Figure 8 we notice once again that the pattern of change are more similar between the children and the researchers and they move away from the teacher's pattern.

The use of the Internet began during the second workshop. From the second meeting of this workshop until the end of the school year we met every day in the computer classroom. This gives us an idea of how the organization of the space and the presence of the computers gradually displaced the notebooks, especially in the last workshop, when we worked with the Sims. The children worked in pairs on the computers or used the consoles in two large groups, since the game on Play Station 2 allowed several players to participate simultaneously.

The workshop commenced with a brief reference to the final product of the previous workshop; the poster that they were to place in the school corridor. The children looked for themselves on the pictures; they all wanted to be there. The researchers explained that everybody in the school would see it and know how we were working with videogames. This may have been a seminal moment in the writing process as we tried to generate in the children a consciousness of the fact that that they were writing for a specific audience. It is clear that it was an important goal for us. *After discussing the poster it was the researcher who mentioned the Internet.* The following transcripts help us to understand the role played by the Internet in the classroom. This evolved from the Internet being regarded as a tool that enables us to look for information, to a support for the children's text; new ways of teaching and learning to write appeared, in relation to this new tool. The following transcript begin with a mention of the computer classroom, the new setting for our workshops; at that moment some of the children mentioned the Internet and how they use it.

Transcript 7 First mention to Internet

Harry S1 C16 0:01:00

Researcher 1 Tomorrow we are going to go to the computer classroom and will upload all this on the Internet, and you will be able to see it on the Internet at home, all the pictures and everything else. (...)

Research 1: Do you like this idea?

Victoria: I have Internet on my mom's computer..

Researcher 1: OK, so you will be able to see it there.

Adri: I downloaded news in my laptop.

What is interesting here is that the researcher introduced the idea of the Internet as a place where the pictures and texts from the children's poster could be uploaded. This is how the Internet is evocative for her. In contrast, the children associated the concepts with their parents' computers or with looking for the news.

But let see in the next transcript how the teacher introduced this topic to the children. To understand the conversation we need to understand that at that moment we about to begin the Christmas vacation. The research team prepared some tasks so that the children could look for information about Harry Potter on the Internet and we brought them a handout with some questions and several Internet addresses. The teacher explained what they needed to do at home and how to use the handout. What is specially interesting in order to understand her methods and the role of evocative objects are the relationships she established between the notebook and this new information related to the Internet.

Transcript 8 Children are to look for information in Internet**S2 C1 Harry 0:42:56**

Teacher: Very good, so now we have three questions (in the handout) that focus on Harry Potter. You will copy them in your notebook and answer them during Christmas.

Researcher 1: OK, but now not, do not copy them just now.

Teacher: Not now, not now.

Teacher You take the questions from her and you put the answers in the notebook. We always do the same, we always put the date. it does not matter which day you do it but you write the date. If you do not know it you leave it blank, but you copy the question. But I believe that you will know the answer, that you are going to know it, because you have some links in your handout. It that OK? And another thing, there below you have another Internet address.

Researcher 1: Two.

Teacher: Two, where you can start to look for information about Harry Potter.

Teacher: Who has a computer at home?

Researcher 1: Internet

(Many children raise their hands)

Researcher 2: Almost all of you have Internet at home?

Researcher 1: Very well, almost everyone; that is marvellous.

Teacher: For those of you who do not have it, it is not a problem.

This conversation shows several lanes to understand once more a clear contrast between the meanings that the Internet had for the teacher and the researchers. It may have been a clear evocative object for the research team, but evidently not so much for the teacher, and if it was, her feelings about it were also different. First, *the teacher mentioned the Internet and the notebook together*: “You take the questions from there and you put the answers in the notebook”. She seemed to have no idea that the children could write anywhere else, for example on a word processor, where they could work easily and quickly, since they needed to look for the information in order to answer the question from the Internet, that is, using the computer at the same time. Secondly, for the teacher the notebook seems to be associated with specific tasks that the children always repeated in very similar ways: “We always do the same, we always put the date”. Thus, at the school the staff try to teach routines, and writing in a notebook with very similar lines and content supports this practice. Thirdly, it is not clear whether the teacher related the Internet with its URLs as specific links appearing on the handout when they look for

an answer “because you have some links (to look for the answer) in your handout Is that OK?”; we are facing another standard task at the school; the children need to look for the correct answers, but perhaps they do not have many to look at different options, all of them correct and complementary. This may be why the teacher thinks that they have “links” in their handouts in order to look for the answers. Finally, different reactions came from the teacher and the researcher after they hear that almost all the children have access to the Internet at home. The investigator said: Very good, almost everyone; that is marvellous”, and the teacher commented: For those of you who do not have it, it is not a problem. Once again, it is difficult to interpret this expression, but what seems to be clear is that specific emotions are suggested for a specific word, Internet; different people may associate the Internet with positive values or, in contrast, have some kind of negative attitude to it. Reading the second part of the same conversation, we understand better that the teacher is probably not afraid of the Internet, but rather, surprised that the children had been using something at home that she did not use herself.

Transcript 9. Some children had used the Internet at home

Researcher 2: And has anybody ever looked for anything?

Carol and Bea say that they used internet at home

Researcher 2: And so you did it? Who wants to tells me? (several have raised their hand).

Teacher: Guillermo

Guillermo: I looked for words that I didn't know, I put them in the Internet and it came out what they meant.

Teacher: By yourself? Or helped by mom and dad?

Guillermo: By myself.

(...)

Researcher 2: Let's see now; Carolina?

Carol So (...) I went into Google, I put (entered) images to take for the printer, I put Google images searcher and photos of Harry Potter came out for me.

Researcher 2 we are going to aim at this page that Carolina has told us about.

Carol: Google.

Researcher 2 : Do you all know it?

Researcher 2: First Carol goes to the Internet, then you have to look for Google.

Previous transcript show two relevant ideas for us. First, the teacher seemed to be surprised when Guillermo, one of the children, explained that he went to the Internet to look for the meaning of words; for him, this tool has the same functions as a dictionary on paper had for his teacher, and the child even uses this new tool by himself, without any help. Second, the children explained very clearly how they use Google: “I put Google images searcher and photos of Harry Potter came out for me”. There is no response from the teacher after Carol’s statement. What is interesting for us is how precisely she described in her own words how Google works.

We now move from the session 2 to session 6, when the children are writing their blogs in the computer room. The researcher approached Jessica and Ana and mentions to the whole group of class that they can see all the text at home; then Ana said to the researcher that she saw something that her mother wrote. So the Internet really was a tool for communication among families and the school’s people, who at that time were the researchers. The Internet now had the same function as the notebook, except that everybody in the class can read the text on the screen at the same time.

Transcript 10. Mom writes in the Blog

Harry S6 0:07:10

Researcher (speaking for all): Listen!! I will tell you a very interesting thing.

Ann: My mother had written

Researcher 1: OK kids! Listen, a really interesting thing. Ana is going to read you the comment that her mother made in the blog, to see what you think. Your fathers and your mothers or your friends can also write there.

Ann reads her mom’s text:

“Hello children, I wanted to tell you what a good time we have had this week with the story of Harry Potter, because we played almost not at all with the NBA game; it seemed too much for us”.

The transcript shows how Ana is happy because her mother wrote in the blog. She sent a text for the all class and tell the kids how her family preferred to play with Harry Potter, much better than NBA, this game was too much for them.

We now move to the last transcript to see how the children were using the Internet to write up their texts. We need to remember that these were school texts, very similar to those they had been writing before in their notebooks. It is difficult for us to tell how these texts could be innovative. In order to understand their meaning for the participants we need to explain a little what happened in this workshop. As we said before children and researchers began to play really at the beginning. They needed to build a house and the neighborhood for the Sims family. Relationships between real and virtual life began to be a major topic of their conversations, and new tasks were proposed for the research team. Perhaps in a similar way as for traditional homework, the children needed to take pictures at home that they would later present to the whole class. The topic proposed for these new texts was to focus on the people who live at home and the spaces that they love the most; the main goal for us was to teach children that people, like the Sims family, choose their places for specific reasons. Almost at the same time, the children wrote in their blogs what the people in the Sims family would be like. It is the general context in which we need to place the text that they published on the Internet.

Transcript 11. Children reading their blogs

S2 C2 0:09:01 They read what they have done on their Sims family

Carol

The Sims family has to be friendly, kind, careful, ... but I mustn't forget, they have a girl, a boy, a cat (boy and girl). And let see if we are lucky and they fall in love. Kiss

Carol's.

Dawn

I want my Sims family to have a house with a swimming pool, a billiard table, a very big house, that has table football, that the house has a lot of games, a pinball machine, a ping-pong table and a dog.

The children read their texts in class. As we mentioned, looking at them it is difficult to say whether they would be more similar if the only possible audience would be their teacher, as when they wrote in their note books. What it is clear is that they introduced their own desires and motives, but their previous experience of playing with the Sims had a lot to do with these ideas.

General discussion

The first reflection suggested by our data, analyzed after working for a whole year in a primary school with the children and their teacher, is that the ways in which the participants used material objects in the classroom did not always converge. Even these objects seemed to have different meanings for them. Moreover, these differences could determine the relationships between the participants. The concepts of evocative objects and imaginary worlds, on which everyone projects thoughts, emotions and feelings, helped us to understand these meanings. All of these can be understood as semiotic and meditational tools that give sense to activities carried out in social and institutional contexts. Material objects turn out to be the engine of human practices, associated with people's goals and simultaneously contributing to transform them. We have considered videogames, notebooks and blogs as material objects present in the imaginary worlds of the workshop's participants; these objects are related to their previous practices and are also covered by social and cultural meanings that are rooted in the communities of practice in which they usually operate. In the classroom were the imaginary worlds of the teacher, the researchers and the children, all of them filled with evocative objects, not always convergent, but all of them supporting the construction of a digital school. For example, the facts that the teacher had previously had very few contacts with digital objects and that her

practices in the classroom were associated with her previous experience using a different set of objects than the researchers, could have caused some difficulty in achieving a smooth changeover to new digital schools. Interpersonal relationships were even influenced by the use of either digital or traditional material objects.

We can answer, secondly, *why the patterns of change that appears in the meaning that specific objects have for the children seem to be much more convergent with the researchers than with their teacher*. The answer is not easy. A possible explanation is that it could be easy for the children to accept the changes associated with new practices because they are also present in their everyday lives outside the school; notice that they were absent from the teacher's activities. Most of the children had been already in contact with digital objects, although these were not primarily learning tools for them. There is some complementary information in our data in relation to this idea. For example, the fact that digital objects to which a school meaning has not traditionally been assigned, since they have been designed for entertainment, began to be considered as learning objects. This was observed, for example, when the children were looking for a title for their Harry Potter notebook. At that time they had already worked with videogames in the classroom and when they tried to describe what had happened in the previous workshop, in order to reflect that in the title, several boys and girls mentioned the idea of learning.

The question that arises after these reflections is related to the possible actions that can be performed, from an institutional perspective, in order to transform traditional schools into digital environments. It seems clear that changes need to be associated with the meaning that digital tools might have for the teachers. Our current experience in other schools suggests that these meanings are related to the previous use of the technology, but also to ideas such as the curriculum content that, according to the teachers, needs to be present in the classroom, and to the way in which the curriculum can be taught. That is, the meaning of material objects for everyone depends not only on their previous experience of

using them, but also with the imaginary universe in which they are situated, with the cultural universes of the time that are related to the school and perhaps with the participants playing the role that they are expected to play. Any action that researchers or citizens might wish to perform to create digital schools, in order to contribute to the development of digital literacy, needs to consider the imaginary universes of their participants, the agents who inform and construct the school environment.

Finally we focus briefly on some reflections suggested by the specific meanings that the participants in the workshop attributed to videogames, notebooks and blogs.

Videogames become typical educational tools

We still remember the first time that we introduced a commercial videogame into the classroom. This was a surprising concept for the children and their families. Why should entertainment media be used in the classrooms? This was the question that they seemed to have in mind. Children did not ask explicitly, but they were excited and motivated, perhaps because they expected something new. At that time objects were especially evocative for the children. In our analysis of the classroom conversations, we explored in depth how these new tools held different meanings for the teacher, the children and the researchers, and how difficult it was for them all to share the same goals involving educational purposes. Focusing on children's view of the games offers us a new mechanism for exploring classroom practices. For example, we can observe how it was the children who taught the adults new uses of the tool and even new teaching and learning strategies and possible content. For instance, sometimes the adults understood how videogames began to act as a bridge to establish relationships between real and virtual life, a new topic in schools in recent times. But in an attempt to understand why the idea that videogames can be educational tools was much more difficult for the teacher than for the researchers, we have discussed this aspect above.

Another interesting idea emerges from our data when we focus on how references to videogames decreased in the course of the workshops during the school year. From our perspective the way in which they were used can explain this pattern. During the first workshop the research team needed to justify why they brought videogames into the classroom. We have explored some conversations when children and adults discussed how children could be videogame reviewers by writing texts for other children outside their own class. But later, during the second and final workshops, the presence of videogames was completely accepted and they were just used for learning, and no justification or special mention of them was needed.

Looking for new uses for traditional notebooks

From the very start of the workshop notebooks were an *essential element for the teacher*, although their specific meaning seems to have changed over time. A few examples have showed how notebooks acted as a support that allowed her to feel secure when she was involved in using new digital educational tools. We have explored how the teacher was so close to the notebook because it sustained certain ways of teaching and learning that kept her feeling safe. Her interest in using these objects moved the research team to employ notebooks for new purposes; for example they began to act as a bridge between the school and the children's families, a traveling resource that helped parents to understand how videogames and other digital technologies, created for entertainment, were being used in the classroom. For most of the time, the researchers and the families exchanged their thoughts via a simple notebook. In this presentation we reflect on why we consider notebooks to be evocative objects, and explore how for many adults the school is associated with teaching and learning how to read and write, so that even when digital technologies support learning nowadays, notebooks remain friendly companions. Although the notebook was a particularly evocative object for the teacher, at the end of the day her perspective

was shared with other participants as one way of approaching personal interests and educational methodologies.

Discovering new audiences when writing blogs

We also remember some conversations with the teacher, as we tried to convince her that introducing blogs in the classroom would enable the children to leave the purely school universe and share their thoughts about videogames with much wider audiences. But these tools lacked sense for the children and their teacher, who was fearful of something that she did not fully understand. Exploring the classroom conversations we discovered how they evoked, for the investigators, a new way of learning. This presentation offers some examples of how they were used and how they helped to generate new educational methodologies associated with new literacies and ways of thinking that are closer to new audiences and that transcend the boundaries of the school world.

In sum, we found that **the concepts of evocative objects and imaginary worlds emerged as a powerful support for our understanding of school practices and educational methodologies.** Each type of evocative object seems to be a nuclear element that brings together not only other material tools, which have their own meanings, but also practices, values, thoughts and emotions. Focusing on these evocative objects enabled us to understand how the goals and the views of the participants were reconstructed and shared in the course of time.

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