

ICT Tools in first school... ¿Why not?

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This paper presents a view about use and integration of ICT tools in first steps of formal and informal learning. The first-school offers one of the most important opportunities to integrate children in a new conception of education it is appropriate for the new age. This education guarantee the acquisition of the necessary skills to achieve a more competitive society. The small people, children under five years, begin to build their grounding, they are –in Prensky’s word– digital natives, whereas their teachers, parents, and educators are immigrants. From their old view, they will probably not be prepared to educate them for society demands. We are exploring experiences in different environments, views of experts, opinion studies, some tools and of course new challenges to avoid that first educational steps be carried out without ICT tools. In the same way, we are analyzing the attitudes of future teachers of pre-school about integration of new tools for the communication and collaboration (blogs, wikis,eportfolio...) and their possibilities to motivate, to transmit contents and to create new environments of communication among teachers, students and the educational community. With this information, we propose some ways to confront first-school as one more step in life long learning in a technological time, and some possibilities to form better teachers and complete this forgotten way of our educational process.

Keyword pre-school, information and communications Technology (ICT), collaborative tools1. General remarks

1. New Technologies Vs ICT tools, always “technologic immigrants”.

Most of our literature use “New Technologies” as basic concept of analysis, however, is not specific enough for us. It is a concept too relative for our reflections[1]. Relative in two different ways: from the historical point of view and from the environmental o geographical point of view.

If it is see the history, in the beginning when the human started to build his society, the fire was a *New Technology*, now it’s completely inside of our life; we can control it and use it for our comfort. In the same way, in 18th century, the press was probably one of the most incredible things over the world, was only one possibility to access the wrote information for a lot of people, whereas for someone was the most dangerous thing, someone who did not know how can use this amount of information were afraid for the future and security of their people. Now the press and fire are part of our *invisible* technologies [2].

On the other hand, in the same historical moment, there is different environments with different levels of development, and off course, different views about what is a *New* technology. Today, there is a “first” world, completely inside of this new age and with access to this digital environment, where the digital technologies are our *New* Challenges. Nevertheless, in 2006 there is another world: most of Africa does not know the agricultural revolution, also for some of this people the aqueduct is a wonderful thing too far away from their possibilities, but also for some of this people a lot of our invents are useless machines which are invading other contexts.

This is the reason because in this paper it is prefer to use ICT tools as basic term. It is because when we use this concept we talk about the *new technologies* for us, in our environment, and in our historical moment. We coincide with Murphy [3] when she said “The term ICT embraces a range of technologies broadly concerned with information and communication. The popular idea of ICT hardware in the classroom or computer suite includes one or more multimedia desktop computers or laptops and a combination

of the following: digital camera, printer, scanner, CDwriter, data projector, whiteboard, robot... [...] There will be a range of software available on the hard drive of the computers and as add-ons (usually as floppy discs or CD-Roms)". we add to this description the concept of *Social Software* as ICT tools which are opening the possibilities to collaborate with each other online.

In spite of this difference, there is some people who do not understand this *new* kind of technologies, and much less they understand how these devices can change the process of development of each society. Normally, this people is come from other society or technological model, probably the "last one", but this people is "just arrived" in this new time, and their conceptions are sometimes too primitive for the new moment; at the end, they are *immigrants* in the current new society.

2. Teaching today to the future citizenship

In this age, people who do not come from the digital age is considered as "*Digital immigrant*", and people who was born in the time of digital and telematic communications and knowledge, are –following the terminology of Prensky [4] "*Digital Natives*". Some people are really afraid because they do not know how these technologies can help them in their live. They are too new, too advanced, further of our traditional skills. Actually, sometimes it has considered them as a danger, not only for grown-up people but also especially it is dangerous for next generations. It is significant say that the educators of Digital natives would be not only at school but also at home, and in every context around their life.

On of the most important problem in education is that educators are people from the past, but are teaching today and helping people who will be citizens in the future society. But it is not only a problem in our time. In the past also we have had teachers that were older than us, and their teachers were older than they. The only one difference is the speed of change between one and another generation. We are living the fastest period of changes in the human history. Probably the difference of skills between our parents and us is smaller than the difference which will have between us and our sons. Theory, and science are telling about changes in the conditions of use of technologies in new generations: the brain is permanently changing, and the brain of pupils are much different from previous generations [5].

"Digital Natives accustomed to the twitch-speed, multitasking, random-access, graphics-first, active, connected, fun, fantasy, quick-payoff world of their video games, MTV, and Internet are bored by most of today's education, well meaning as it may be. But worse, the many skills that new technologies have actually enhanced (e.g., parallel processing, graphics awareness, and random access)—which have profound implications for their learning—are almost totally ignored by educators." It is the resistance, it is our resistance.

However, ICT are not only media in the education. We can not ignore them because they become ubiquitous, and because if we wish to help to educate citizens for this society, the digital side of these people is unavoidable.

3. Social Software Tools for the pre-school

The Web is immersed in a process of restructuring that allows facing up to new ways to approach us to the Knowledge. For decades it has been passive in the use of the net, and now the Web demands from us that we edit information and build knowledge collaboratively. To achive it, the Web is launching communication tools which are allowing the symmetrical interaction with one another online. Today, some of this application programs are knowns as *Social Software*, which are considered as a lot of tools that extend the possibilities of communication and conectivity among people. Thus, this tools promote the collaboration and interaction orientated to a common aim.

Tepper [6] defines *Social Software* as “various, loosely connected types of applications that allows individuals to communicate with one another, and to track discussion across the Web as they happen” (p.19). Some of this applications are old knowns for the users of the net, as electronic mail and bulletin board systems. Nevertheless, other of them are most recent: the instant messaging, the collaborative editing tools as the blogs, the wikis, the electronic portfolio and the online collaborative document editor tools as *writely*. Other applications are included as well in the terms of *Social Software* other applications such as online role-playing games, social mediatecs, photo or video management and sharing applications such as *Flickr*, and social bookmarks managers as *Del.icio.us*.

The social software tools represents a new way of expression that is more suitable for the new skills of the people. The young have integrated scanning skills, ability to multi-task and ability to process and to change discontinued information [7] Therefore, it suggested that the education will make the most of benefits of their use: the collaboration might help to development a learning most significant, that was encouraging the complementarity or negotiation of ideas, and that was achieving a rise of the social interaction among the pupils.

The reality is different: “It is almost a cliché now to say that design in schools focuses on individuals designing and making, whereas in the world outside these are team or organisational efforts [8] (p.161) If the Web began a process of restructuring from 2000 with the *DotCom* boom, the school must do the same already. The school must adapt to the social and technological changes if it does not want this changes turn it into a primitive institution of knowledge.

In this reform of the school, the teachers must take on the challenges that the ICT tools are arising them. The teachers will make collaborative designs that allow as much the face to face interaction into the classroom as the virtual interaction with one another members of the educational community, other pupils and other teachers. The European initiative *eTwinning* is an example of how it is possible that pre-school and primary pupils from so distant countries are learning to use social software tools.

The weblogs are one of the social software tools that more versatility has to be used in all the educational levels. In 2003, Teppen [6] was already expressing that “soon blogs may become our primary way of interacting with one another online” (p. 20), and he was not wrong. The blogs are an evolution of the personal web pages, which use is so widespread among the teenagers. The teachers can use them like diary of classroom, like communication and collaboration tools among teachers and parents and like site of exchange of experiences among pupils and teachers.

According to these functions, the use of the blogs would be appropriated for all levels of the elementary and secondary school, such as well for the rest of social software tools. Nevertheless, the use of these tools in pupils under five years is limited to the acquisition of the reading and writing skills, since mostly of software social tools are applications of textual orientation, with the exception of the tools of visual orientation as such the videoconferencing and multimedia management and sharing applications. Even so, the blogs are more attractives, intuitives and y graphicals tools than others such as the wikis and electronic portfolio[6]. They can provide a record of process while the wikis are better for working out process, and these would be a less appropriate activity for the evolutive development of the small children.

4. Some results about the attitudes of the teachers

The most of the teachers of the spanish educational institutions of pre-school and primary have not enough information about the uses of social software tools in education. In addition, the teachers have less skills to process discontinued information than the young of the current generation, in spite of technologies such as computer, Internet, DVD and the games console have come massively to theirs homes, according to a statistic about Information Technologies at home of Spanish Statistical Institute [9]

Future teachers, as much students university as newly persons with a degree in education, have got training about the possibilities of the social software tools in education, and some of them use them often. They are young people with 21-25 years old that live in audiovisual and simultaneous culture of the television and video. Also, some of them take part in virtual communities and are capable of doing any number of tasks simultaneously.

This information have been analyzed in a group of Sixty future teachers, to know their attitudes and the possibilities of the social software tools of education. All individuals were female and the most are twenty or twenty-one years old; only four individuals were more than thirty. They have got a lot of technologies at home, such as computer (98,3%), Internet (80%), mobile (100%), DVD player (95%) or DVD recorder (78,3%), and other less common devices as console games (31,7%) and webcam (26,7%). Practically all future teachers use very well the application of document processor, and some have used web design software. Likewise, 80% of them know do a search at Internet. A high percentage uses the electronic mail habitually (98,3%) and the instant messaging (96,6%), as more of 50% of them access to the Internet between two and five hours per day.

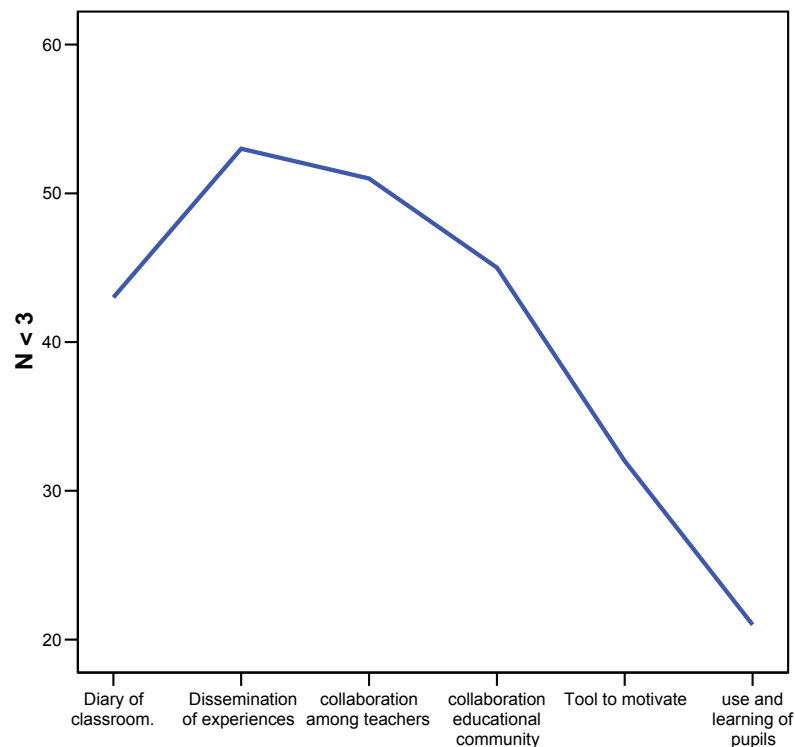
These teachers know or have used the blogs sometimes (66,7%), but not the wikis, as just it has a 40% of them. They have valued very positively the integration of the blogs for first-school (59,6%), and think that their main potentials are:

- It is organize the information in chronological order (55,9%) and for subjects.
- It is easy to use and gives freedom to users (75%)
- It is promoting the communication and collaboration among educational partners (84,7%)

Nevertheless, they consider that the blogs are not appropriate for use them with the children under five years, because it is hard to adapt their use to the reading and writing skills of the small childrens (60%)

It is significant proves that only three of the future teachers asserted that they would not use the blogs in first school. Even so, a high percentage has identified the limitations of the blogs. The main limitations of this social software tool is its textual orientation, although they consider relevant to use them to disseminate educational experiences (98,2%), to encourage the design of site for communication and collaboration among teachers (92,9%) or any members of educational community like the parents (84%), and even, to make a diary of classroom for pupils to read it and write into blog (graphic 1).

The future teachers of pre-school level see some problems to incorporate the social software tools in the school. First, they say that have had little training about the applications of social software (57,9%). Second, teachers consider that there is no much infrastructure in the school (52,6%). Likewise, the teachers assert that it has lack of support of the educational administration (43,9%). Finally, they point out that the pupils under five years do not have got the necessary skills to learn with social software tools. 50% of individuals consider that the planning of an activity using the applications of social software would not demand a long time. Last, a high percentage is very motivate to use software social tools, and have valued very positively their training for do it.



Graphic 1: Functions of the blogs in the first school

5. Conclusion

There are a very small number of experiences of ICT use in first-school, with children under five years and little or no verbal communication skills. Researchers of University of Bristol presents their first report of the experience PIE (*Participation in Education*). They analyzed the integration and use of ICT in a school with pupils 0-5, and said: “wide variety of often innovative and creative methods is being employed to involve with children with little or no verbal communication in their education. However, it is also apparent that there are few consistent guidelines or protocols to support staff in this work and few opportunities for sharing practice”[10].

The discussion about the potential of ICT tools in first-school is very interesting. Some experts are talking about it and some of them are very optimist, “It is my recommendation that computers be introduced to young children when they are about three years of age” [11] (p.26). Nevertheless, the herself authors, add in other document “Children younger than 3 learn through their bodies: their eyes, ears, mouths, hands, and legs (...) Computers are not a good choice for the developmental skills these children are learning to master: crawling, walking, talking, and making friends” [12].

On the same way, Jones [13] affirms that “In any learning environment for children, ICT based activities should never replace the use of concrete materials and manipulatives. Children must be permitted to explore books, measure water and sand, draw with pencils and crayons, and write on paper, together with all the other traditional experiences of kindergarten and primary school. However there are many ways computerbased activities can be used to complement and enrich the learning experiences of young children.”

In this work, it has analyzed the need to make collaborative designs that allow as much the face to face interaction into the classroom as the virtual interaction. The software social tools can not use like substitutes of the face to face education, above all if it is training to small childrens.

It has finished that the use of social software has benefits for the schools and the learners, in spite of a lot of them do not have acquired the writing and reading skills. This is a manly poble to incorporate the social software tools into a school. Their great advantage are that encourage the participation of the all members of the educational community, even of professionals outside the school.

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