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The role of adults in children digital literacy

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Abstract

Collected data from different studies show how users acquire great skills in terms of technology's use, but they don't gain such skills in a safe use of technology. The objective of this study is to identify the level of digital literacy on a sample of teachers and families. It can be observed a lower competence when managing their own identity on the Internet, and in general, lower competences when it comes to take part in conflict situations on the Internet, as well as the ones related to management of digital identity. In terms of children's digital literacy, adults play a very significant role in three main aspects: (1) As direct responsible of their digital literacy. (2) As enablers of behaviour models which promote a positive conviviality and cyber conviviality. (3) As adult referents which children can ask for help.

1. Introduction

Both digital natives and digital immigrants (Premsky, 2001) use ICT on a regular basis, specifically the Internet. However, teenage and youth population is the one who more quickly and widely has been digitalized in their habits, in contrast to adult population. A large number of studies focus on this population, analyzing the different aspects related to their use of the Internet (Del Rey, Casas y Ortega, 2012; Rial, Golpe, Gómez y Barreiro, 2014; Gómez, Rial, Braña, Varela y Barreiro, 2014; Vanderhoven, Schellens, y Valcke, 2014; Ortega et al., 2014; Garaigordobil, 2015; SaveTheChildren, 2016). There are also studies focused on previous ages as childhood's early years or preadolescence (Area, Borrás y San Nicolás, 2015; Aguaded, Marín-Gutiérrez y Díaz-Parejo, 2015; Fernández-Montalvo, Peñalva e

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Irazabal, 2015; Pérez-Rodríguez, Ramírez y García-Ruiz, 2015), although they are not as abundant as the ones focusing on higher ages. However, reality shows both age groups regularly use the Internet in order to receive, create and manage information, both their own and other's (Del Rey et al., 2012; Marín y González-Piñal, 2011; Mayorgas, 2009).

Literacy for digital cultura mustn't focus so much on technology's use skills, but in the acquisition and mastery process of ICT skills (both consumed and/or produced) (Area y Pessoa, 2012; Rangel y Peñalosa, 2013; Avello y López, 2015; Fernández-Montalvo et al., 2015). Digital literacy encourages each individual to be able to build a digital identity in the net as an independent, cultivated and democratic citizen (Area et al., 2015; Area y Pessoa, 2012). Digital literacy should also take into account every relational process linked to conviviality that takes place in the digital world. Regarding this idea, Ortega et al. (2014) clearly highlight the fact that "the social life of students (...) has on the communicating digital device an extension of a direct scenario in which so far has been occurring the relational process known as coexistence" (p.616).

In Spain, children give special importance to ICT. They value them positively and consider "Internet is a place to create and improve friendships, and also mobile phones offer them freedom, intimacy, lack of control, spontaneity in expressions, flexibility in action and meeting plans with others, etc." (Ortega-Ruiz, 2012, p.47). In addition, "access to ICT is happening at increasingly earlier ages. 30% of 10-year-old Spanish children has a mobile phone" (Cánovas, García de Pablo, Oliaga San Atilano y Aboy Ferrer, 2014, p.3). The rol of adults is decisive when promoting safe use of the Internet behaviours and knowledge in these children. It is essential that "everyone (parents, tutors, teachers, institutions and governments) should work collaboratively in order to create safe and accessible environments for children and teenagers wherever they may be: at home, in the school or in public facilities" (Internet Society, 2012, p.2).

Collected data from different studies (Echeburúa and Requesens, 2012; Inteco, 2009; Livingstone, Haddon, Görzig y Ólfsson, 2010) show how users acquire great skills in terms of technology's use, but they don't gain such skills in a safe use of technology. Underage children are daily exposed through the Internet: they manage their digital identity, build their visibility, set up their social status and define their privacy. Being in the cyberspace means having a self-image, a digital identity which is built up from their own activity on the Internet, as well as others' activity (Gionés-Valls and Serrat-Brustenga, 2010). When mismanaged, this information involves the development of subjects' risk behaviours. These behaviours can lead to problematic situations of diverse kind and range.

As Cánovas et al. (2014, p.20) affirm, "it is becoming more necessary than ever that adults retake the referent rol in this matter, as there are many underage children who show their need of receiving training and information". Therefore, the objective of this study is to identify the level of digital literacy on a sample of teachers and families. The concept of digital literacy used is the one given by Area and Pessoa (2012) in their Integrated Literacy Model (Area y Pessoa, 2012; Area and Guarro, 2012; Area, 2014; Area et al., 2015). As indicated by Gionés-Valls and Serrat-Brustenga (2010) digital literacy consists on teaching how to safely use the Internet through a proper management of personal identity in the digital world. This is a concept included into the category known as "new literacy". This expression refers to an effective use of the Internet not only to be able to cope comfortably with it, but also to be able to safely manage all the data that is transmitted and received through the Internet (De Pablos, 2010).

The sample of adults is part of a larger study on the levels of digital literacy of a sample of children from 3rd to 6th grade of Primary Education. That study aims to define the children's usage patterns of the Internet and mobile phones, analyzing at the same time the digital literacy of the adults in charge of those children's safe use of the Internet (Cánovas et al., 2014). Digital immigrants training (Premsky, 2010) is basic when it comes to preventing the development of risk behaviours on the use of Internet through digital literacy (Area y Pessoa, 2012; Area et al., 2015; Fernández-Montalvo et al., 2015).

2. Methodology

The aim of this study is to present the collected data from a sample of teachers and families. They were tested on the level of conceptual and procedimental digital literacy they show when using ICT.

2.1. Participants

The sample of this study is composed of 30 teachers from 3rd to 6th grade of Primary Education (90% are women and 10% are men). The sample of families is composed of a total of 42 parents (78,6% are women and 21,4% are men); their sons and daughters attend 3rd to 6th grade of Primary Education. In Fig. 1 it can be observed the distribution by sex of both samples.
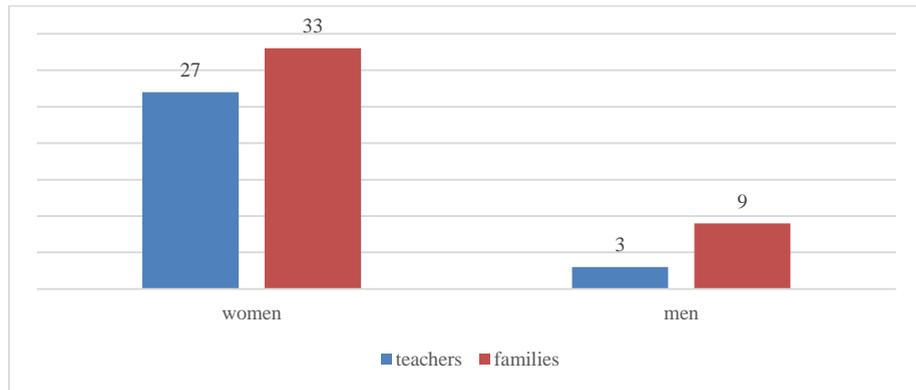

Fig. 1. Distribution by sex of both samples of teachers and families.

2.2. Assessment instruments

The instrument used to carry this study out is a list of 28 questions. The first three items identify sociodemo Fig.ic data of the sample regarding their sex, age and school grade their children attend. The following 25 items include questions about their level of conceptual digital literacy (10 items) and their level of procedimental digital literacy (15 items). The items have a dichotomous response (yes/no).

2.3. Procedure

Data collection of the participants in the study was carried out by two professionals who belong to the investigation team in charge of developing this study. Specifically, they were an education psychologist and a pedagogue, both of them with previous experience in this kind of issues. The assessment was conducted in a single session at the end of the school year, between May and June 2015. In this session, the data for all the variables considered in the assessment instrument was collected. The two professionals previously mentioned were present in the assessment session, as well as the teacher of every class assessed. The statistical analysis were developed using the SPSS program (version 15.0 for Windows).

3. Results

When comparing the results obtained in both samples, the level of conceptual literacy shown by teachers and families is high (Fig. 2). In both samples the subjects affirm knowing usual concepts such as: bullying, cyber bullying, personal data or Internet privacy. These concepts are related to commonly seen risk behaviours on the Internet. However, concepts such as digital identity, analogic identity, status or visibility on the Internet are less familiar for the subjects. Although these concepts are the ones which promote a safe information management, as well as own and other's behaviours on the Internet.
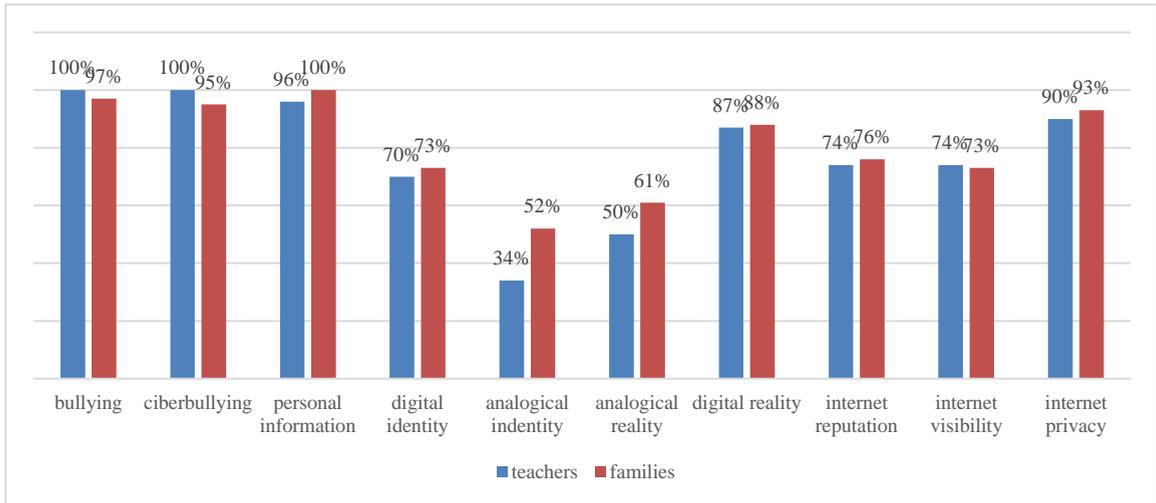
Fig. 2. Level of conceptual digital literacy.

In the analysis of the level of procedural digital literacy of the sample, it can be distinguished between those behaviours which imply to be able to cope comfortably with the Internet at an instrumental level (Fig. 3). And (between) those behaviours which imply to be able to safely manage the transmitted and received data (Fig. 4). The data collected show no difference between teachers and families in terms of procedural digital literacy (Fig. 3), when talking about being able to manage on the Internet at a more instrumental level. It is remarkable the fact that none of the groups know how to delete data posted on the Internet. The level of literacy of adults lows down when it is about implementing actions that help to safely manage the identity on the Internet (Fig. 4). It needs to be highlighted the fact that setting up an identity on the Internet is something that great part of the families sample doesn't know, as well as an important percentage of the teachers sample.
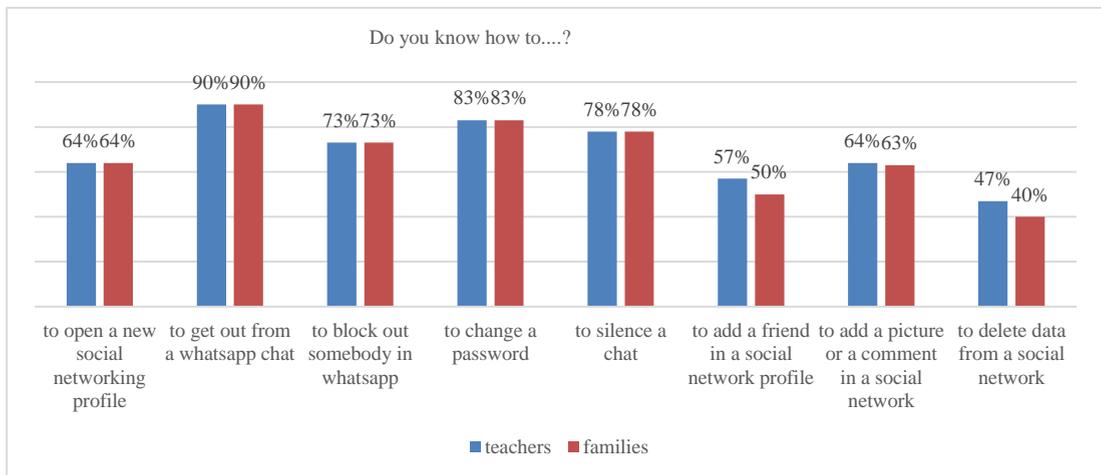

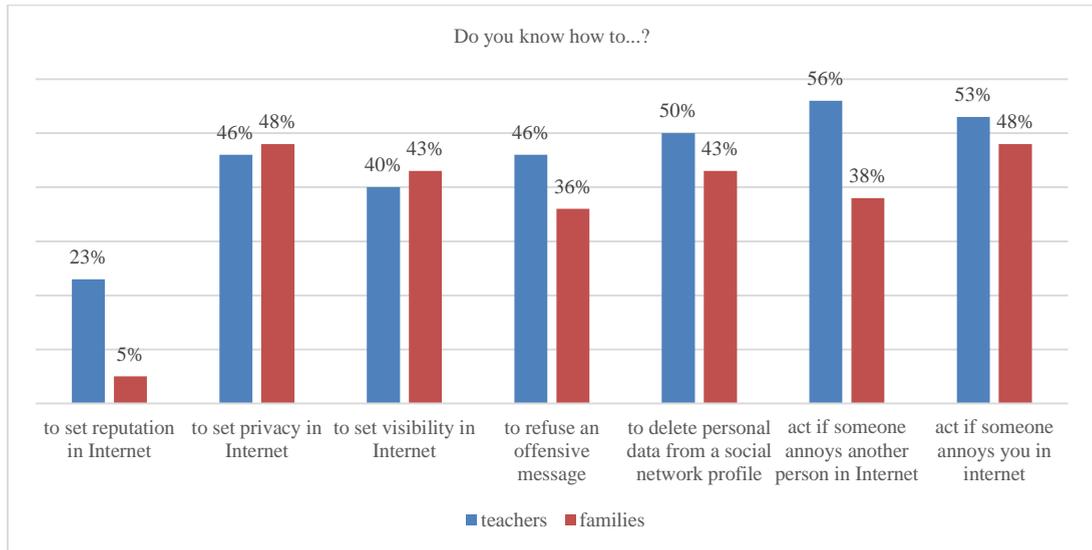Fig. 3. Procedural digital literacy (instrumental level).

Fig. 4. Procedural digital literacy (identity management).

4. Conclusions

The analysis of the data shows that teachers' level of digital literacy at a conceptual level is high. The digital literacy at a procedural level decreases, and their competences linked to management of self status on the Internet are low. It can also be seen low competences at a procedural level when it comes to take part in conflict situations on the Internet, as well as the ones related to management of digital identity. Regarding the families, their digital literacy at a conceptual level is high. The percentages decrease on the digital literacy at a procedural level. It can be observed a lower competence when managing their own identity on the Internet, and in general, lower competences when it comes to take part in conflict situations on the Internet, as well as the ones related to management of digital identity.

In terms of children's digital literacy, adults play a very significant role in three main aspects: (1) As direct responsible of their digital literacy as an instrument for their rights protection and as an essential aspect of their education (Gionés-Valls & Serrat-Brustenga, 2010; Area et al., 2015). (2) As enablers of behaviour models which promote a positive conviviality and cyber conviviality (Ortega et al., 2014). (3) As adult referents which children can ask for help (Internet Society, 2012). This help will not only focus on issues linked to conflict resolution, but also on all those issues lined to: (a) a proper conflict management, (b) petition of help when facing situations (experimented or observed) which imply risk behaviours in the analogic and digital worlds.

In the frame of training for families and teachers, it is significant to work basic aspects linked to the conflicts resolution, active listening and assertive language. As an addition to this adult training, it is necessary to focus on topics related to conviviality and cyber conviviality. In order to do so, it is essential to plan a specific training on digital literacy at a procedural level. This training should be focussed on the development of basic competences linked to a safely management of privacy and digital identity. Its aim would be to act as a guide and reference point for children. Taking into account that it not necessary to be ICT experts in order to know how to direct and guide the behaviours developed by underage children on the internet, as well as it is done in the analogic world (Gutiérrez &Tyner, 2012).

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