DEVELOPING DIGITAL CITIZENSHIP IN CHILDREN AGED FROM 3 TO 9

A PILOT PROJECT IN THE PORTUGUESE REGION OF ODIVELAS

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ABSTRACT

This paper focuses on the project «Digital Citizenship Education for Democratic Participation» (2015-2018), which centers on empowering children (aged 3 to 9) in three related contexts: family, school and community. We began training 25 Preschool and Primary school teachers who developed digital media literacy activities involving 366 of their students. Activities focused on producing and discussing on media, online news analysis, communicating and learning through media and advertisement critical analysis. In March 2016, we began a longitudinal action research involving eight out of the 25 teachers who agreed to develop digital citizenship activities with their students. Parents and their children were interviewd on digital literacy practices and mediation, as well as the boards of local community entities dealing with children. Results showed that through professional development training, teachers were able to develop digital literacy activities without deviating from their previous pedagogical plans.

KEYWORDS

Digital literacy, young children (3-9), teacher training, parents, community

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SOMMARIO

Questo articolo presenta il progetto «Educazione alla cittadinanza digitale per la partecipazione democratica» (2015-2018), che si focalizza sull'empowerment dei bambini (di età compresa tra 3-9) in tre contesti correlati: la famiglia, la scuola e la comunità. Abbiamo iniziato con la formazione di 25 insegnanti della Scuola dell'Infanzia e Primaria, i quali hanno sviluppato attività di digital media literacy coinvolgendo 366 studenti. Le attività riguardavano la produzione e la discussione sui media, l'analisi di notizie online, la comunicazione e l'apprendimento attraverso i media e l'analisi critica della pubblicità. Nel mese di marzo 2016, abbiamo avviato una ricerca-azione longitudinale coinvolgendo 8 dei 25 insegnanti che hanno accettato di sviluppare attività per la cittadinanza digitale con i loro studenti. Genitori, figli e rappresentanti delle comunità locali che si occupano di bambini sono stati intervistati in merito alle pratiche di mediazione relative alla digital literacy. I risultati hanno mostrato che, grazie alle iniziative di sviluppo professionale, gli insegnanti sono stati in grado di sviluppare le attività di digital literacy senza deviare dai loro piani pedagogici precedenti.

PAROLE CHIAVE

Digital literacy, bambini (3-9), Formazione degli insegnanti, genitori, comunità

1 Introduction

Young children's online practices have been largely ignored over the past decade by policymakers in most countries (Holloway, Green & Livingstone, 2013). Further, much of the research has focused on children and young people from the age of nine and up. Only 12% of approximately 1200 research projects identified included children under the age of seven, while only 20% included perspectives of teachers and 13% of parents. Research has also focused on Internet use by children and young people and not centered on learning with the media, about the media, and through the media (O'Neill & Staksrud, 2014).

Knowing how young children use digital technologies and their core activities is important (Sefton-Green et al., 2016), especially when media use among young children is growing as new digital devices continue to emerge. Data collected from 206 families with children ages zero to eight, in 18 countries, showed TV still leading children preferences even if rarely referenced during interviews. The tablet is the most popular device among young children and all the families use smartphones. Thus, children are living in rich digital environments even those from under privileged families (Chaudron, 2016). Over half of the 3-4 year-olds in the United Kingdom use tablets as well as a third of the under five-year old children (Marsh, 2014). Still in the UK, by the age of two, most children are using a tablet or a laptop (Sefton-Green, Marsh, Erstad & Flewitt, 2016, p. 8). A study in four European countries showed that among under five-year-old children, 60% use digital technologies and 23% simultaneously use television, computers and Internet (Palaiologou, 2016).

The multiscreen television is a factor. The number and the quality of the games they play continue to increase. Children's digital literacies practices are co-constructed across generations. Children have more independence in media use. They prefer tools that depend less on written text and more on still and moving images. They also love to produce and share using multimedia environments because the nature of their activities is undoubtedly more social than it was before (Marsh, 2014). However, data on young children's digital use and practices «does not tell us what such engagement means in terms of the child's learning especially their developing literacy […] their understanding of the world, their understanding of social relationships and indeed what implications such use might have for their education as a whole» (Sefton-Green et al., 2016, p. 9).

Children's early experiences of literacy through digital devices are reconfiguring meaning-making as their literacy practices are multimodal. They need to know how to deal with words, images and sounds, both in traditional and digital platforms. Thus, it is a key task for educators and researchers «to understand how young learners make sense of multimodal texts in digital environments, and how they impose order on the juxtaposition of different modes» (*idem*, p. 20).

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Young children «learn watching others, especially parents and other family members» and is further enhanced when they have older siblings, but also from grandparents, cousins, uncles and even neighbours» (Chaudron, 2015, p. 14). There is a need to articulate formal, non-formal and informal learning contexts requires expanding the concept of literacy, which keeps the traditional logic, based on reading, writing, listening and speaking, but includes «digital literacy» (Meyers, Erickson & Small, 2013, p. 356). There is a need to develop projects aiming to the «creation of digital citizens» who can exert a «full digital participation in society» (Ribble, 2011).

Digital citizens should benefit from a lifelong training on digital literacy. Digital literacy can be defined as «a social practice that involves reading, writing and multimodal meaning-making through the use of a range of digital technologies» as well as traditional technologies, once it «can involve accessing, using and analysing texts [in a broader sense: text, sound, moving and still image], in addition to their production and dissemination», which implies the «the acquisition of skills, including traditional skills related to alphabetic print, but also skills related to accessing and using digital technologies» (Sefton-Green et al., 2016, p. 15), such as «create, work, share, socialize, investigate, play, work, communicate and learn» (Meyers et al., 2013, p. 356).

1.1 *A project on digital citizenship*

In 2015, we started the project «Digital Citizenship Education for Democratic Participation» in Odivelas (Lisbon neighbourhood), with 145 million inhabitants, representing the second highest population density in the country (5424 inhabitants/km2). Half the population (51%) only completed basic education (9 years) and a fourth just completed the 1st cycle (four years). The school-age population is 11% (total youth population is 15%) and 16% of the total population are immigrants.

The research project proposes to answer the following question: To what extent a local, and replicable project, teachers and out-of-school contexts, including families can empower Preschool and Primary School age children in order to become active and effective citizens in the digital era?

Our hypotheses are:

– A concerted approach within the family, school and out-of-school contexts empowers Preschool and Primary School children to exercise an active and effective citizenship in the digital era;
– Teachers of the Preschool and Primary School, provided they have access to training and support, can develop pedagogical activities aimed at empowering children to be active and effective citizens in the digital era.
– Families can develop strategies to empower their children to exercise an active and effective citizenship in the digital era.
– Local community entities can develop strategies aimed to to empower Pre-

school and Primary children to exercise an active and effective citizenship in the digital era.

The project also aims to contribute to identify best practices in all contexts, to influence public policies, and to integrate digital citizenship education in the curricula. Finally, our project is intended to be replicable in Portugal or abroad.

Our research questions are:

– How can in-service teacher training on digital citizenship education improve teachers' digital literacy practices in classrooms?
– What are the digital literacies practices of young children in school, family and community contexts?
– How do both formal and informal learning contexts shape children's digital literacy practices?

In this article we answer to the first question.

At the field level, the project is organized in five phases:

1. Production and validation of data collection instruments;
2. In-service teacher training course (Jan-Feb 2016);
3. Longitudinal study with teachers who volunteered themselves after the training course (Mar 2016-Feb 2018);
4. Data collection from parents, children and out-of-school entities (Apr-Jun 2016);
5. Share results with participants and involve them on a digital citizenship education intervention plan (Sep 2016-Feb 2018).

2 Methodologies

The methodological approach of this exploratory project is founded on action-research. The study has undergone frequent improvements as we are following a prior research model as shown in Figure 1 that was developed by Sefton-Green et al. (2016) — inspired by authors such as Carrington (2013), Colvert (2015) or Green (1988). According to the model, there are three areas that are the basis of how the individual produces and receives the media messages, whether in formal settings or in an informal context:

– Includes the operational capacities and skills needed to read, write and interpret messages from different media and its various platforms;
– Criticism is the ability to interact critically with texts and digital products, seeking to answer questions related to the power and agency, representation and voice, authenticity and veracity;
– The cultural concerns interpretations and actions that develop according to its involvement in digital literacy practices in specific social and cultural contexts (Sefton-Green et al., 2016).

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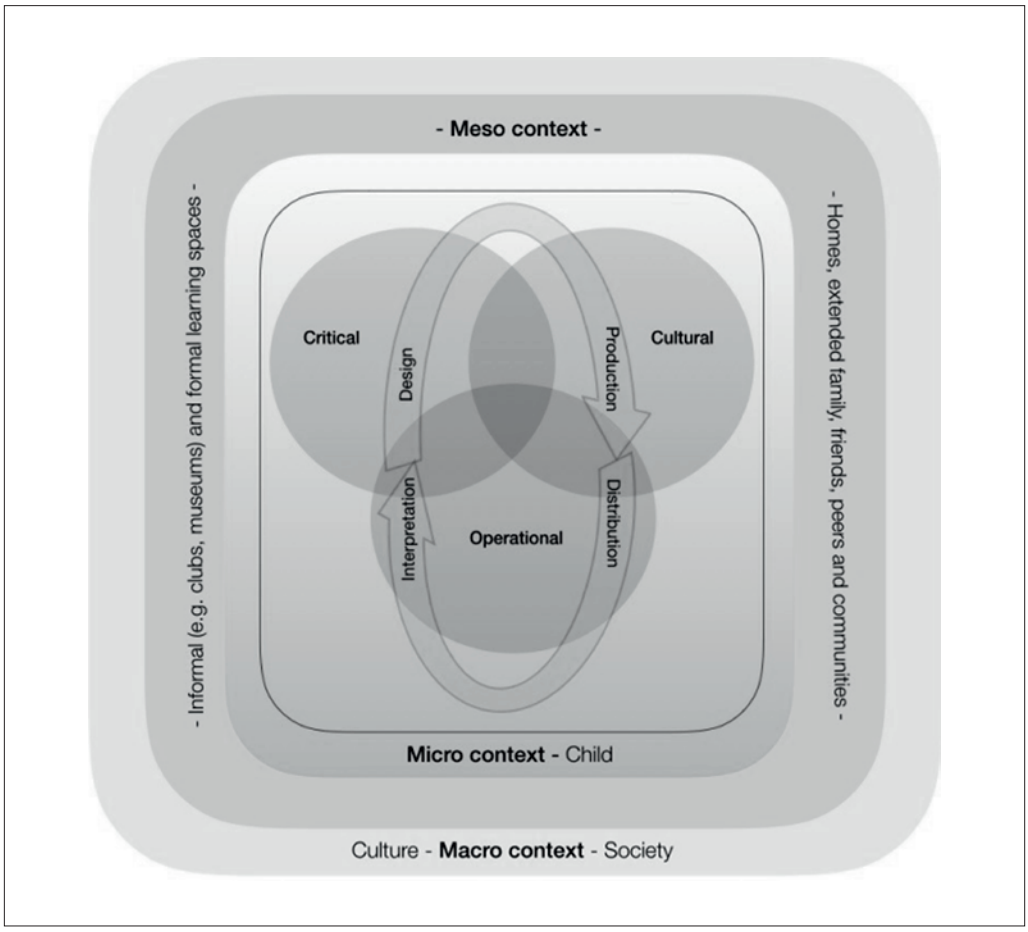

Fig. 1 The processes of and contexts for children´s digital literacy practices (in Sefton-Green et al., 2016, adapted from Colvert, 2015).

The three areas are not singular, but interrelated. When a citizen wants, for example, to communicate a message, they draw on these three areas and makes decisions within the context of these four levels: design (if the message is multimodal or not); production (as creates the text); distribution (which are the channels you choose) and implementation (imagine how the receivers will interpret the message, depending on the background).

All these processes take place within the frameworks that influence the digital literacy practices of children, including: micro (with the child), meso (formal and informal learning contexts, family, friends and the local community) and macro (society as a whole, the Nation-State).

Similarly to the predicted model, our project design goes from the micro to the macro framework, through a mixed method approach (qualitative and quantitative). It aims to intervene in micro and meso frameworks with children, teachers, families and the local community, focusing on the empowerment of children concerning digital literacy skills. But as a whole and given its characteristic replicable nature, we aim to have an impact on the macro framework, on a long-term logical projection.

An ecological framework like this suggests balance and consistency, but the use of technology is much more eclectic, changing rapidly, and multidimensional (Carrington, 2013, *quoted* by Sefton-Green et al., 2016). We aim to maintain balance and consistency, but have structured a dynamic project, subject to frequent rebalancing, which has room for tensions, incompatibilities and frequent reconfigurations in order to maintain actively involved participants.

2.1 Participants

The project and the teacher training were publicized in October 2015. The study was limited to 30 of about 300 pre-school teachers of the 1st Cycle who taught in the Odivelas public schools network. The enlistment and participation was voluntary. As a result, 28 registered, but only 25 attended: 10 from Preschool and 15 from Primary School. Seventeen are between ages 36-50, three between 26-35, and four aged 51 or more. Two have been working for 10 years, thirteen between 11 and 20 and nine for 21 or more years. One did not complete the questionnaire.

At the end of training, we participated in school initiated parental conferences of teachers whose classes has been involved in the study. We invited parents to participate in the project by providing us with reflective interviews, and permiting us to interview their children. We obtained a convenience sample, composed by parents who accepted the conditions.

We interviewed 34 mothers and three fathers allowing us to include data on 43 children, of which twenty-three are between 3 and 6, sixteen between 7 and 9 and four are 9 or up. These numbers could increase since we have more scheduled interviews. Contacts with local community entities dealing with children were established, namely with the local library, the local Musical Society and the sports club.

2.2 Procedure

The in-service teachers training was organized and tested in 2013, included in a Council of Europe Pestalozzi training module. In 2014 it was reorganized and accreditaded for the Portuguese In-Service Teacher Training Council. Collection data instruments organization and validation process were developed in 2015.

The teacher training course (25 hours, eight sessions) started on January 4th and ended on February 29th 2016. Data were collected from teachers through a questionnaire organized in four sections (27 questions): the first part was directed to collecting preliminary data such as age, sex, years taught, length of service, academic training and if they had other children attending Kindergarten or 1st Cycle. The second focused on media use often in the form of access and the most common Internet activities. In the third section we used Likert scales (four

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items) to collect data on the teachers' perception regarding: 1. the pedagogical potential of the media; 2. the use of media in their daily teaching activities; 3. dialogue with students about media social; 4. perception of use by students and their effects; 5. level of knowledge in terms of Internet security. The fourth, using the same type of scales, aimed to understand if teachers talk to guardians and parents about the use of media by children and, if they do, what was the most mentioned medium. Finally, the fifth was to collect data about possible obstacles to the use of Internet and Social Media in pedagogical situations [questions were adapted from Mathen, Fastrez & De Smedt, 2015].

Data from parents was collected through a structured interview guide organized in four sections (29 questions): personal data; social media personal use and practices; perceptions on their children media use, risks and opportunities; parental mediation (questions were adapted from Mathen, Fastrez & De Smedt, 2015).

The interview guide aimed at children [adapted from Chaudron (2015)] was organized in three sections: Ice-breaker, Introduction (family personal data); Interview (children media use and activities developed, skills, parental mediation and family rules).

A diary was kept in order to register the coordinates from all the participants, as well as to take notes after each contact with parents, teachers, children and community organizations.

2.3 *Data analysis*

Data collected from teachers through the questionnaire were analysed using the Statistical Package for Social Sciences (SPSS). We also analysed teachers' final reports using Atlas.ti based on five categories of analysis previously established: 1. activities carried out; 2. involvement of the families of students; 3. integration of activities in the pre-established educational plans; 4. the action advantages for students; 5. the action benefits for teachers.

Similarly, to analyze data collected from parents we will use SPSS and Atlas.ti, after transcribing the interviews and proofread them. Data collected from children will also be transcribed and proofread before content analysis with Atlas.ti. Data from the diary, interviews and questionnaires will be triangulated to help us construct valid coding schemes.

3 Results

The teachers are large consumers of media: 21 noted that they television watch everyday; 23 stated they used the Internet everyday and one noted they use it five days a week; 18 indicated that they listent tot he rádio every day. On the other hand, teachers noted they tend to be less consumers of newspapers or

magazines. Only five noted they read the paper everyday while 22 stated they read magazines two-days per week.

Twenty of the 24 teachers have at least one profile on a social network: Facebook was the most popular with 17 stating use followed by YouTube (13), while referring the LinkedIN (2) and Instagram (1). However, only nine stated that they check into their profiles every day (six visiting less than one day a week and five between two and five days).

The personal computer is the main means of access to the Internet (24/24); only nine use the school computers for a point of access. Eight of the respondents access the Internet via mobile phone or tablet and they represente the younger staff. Those who use the smartphone are also the ones most likely to use the tablet. The use of the family computer is limited as only two indicates such as an access point.

The teachers use the Internet as a communication tool, especially via email (24/24) and to search for information on public services (17), travel (15), libraries / encyclopedias (14) or for entertainment (14). Only 11 turn to Facebook for news. Nine seek online courses but only one admits being a frequente subscriber. Few use communication tools such as instant messaging (7) or Skype (4).

3.1 *Media use in classrooms and learning perceptions*

All 24 teachers agreed that the media have educational potential in the preschool and Primary school. Students can learn school subjects through them (23) but at the same time they can also find other content not related to educational subjects, depending on their specific interests (23). Almost all of the teachers agreed that the use of the media for Preschool and Primary School students promotes learning (23), extends the vision students they have the world (22), promotes better collaboration among students (20), stimulates creativity (21) greater involvement with the school subjects (20) and allows sharing with wider audiences (19). Only six teachers (three Preschool and three Primaries) stated that the media is more distracting to students than helpful.

Despite this data, in the classrooms of these teachers, media content was used with sporadic frequency. Traditional media such as newspapers/magazines printed (19) and videos/films on CD/DVD (20), digital media such as videos/movies online (16), digital games (12) or Wikipedia (10) (Figure 2).

Televised content either through the television or through online media is used minimally with only 2-4 of the 24 inquired educators addressing these items. This point was reflected in radio content, newspapers or magazines online as well. Social media (online social networking) are absent from the rooms, although 20 of the 24 teachers use them on a personal level. Others stated they used some features including «images for exploration of knowledge or as an illustrated dictionary».

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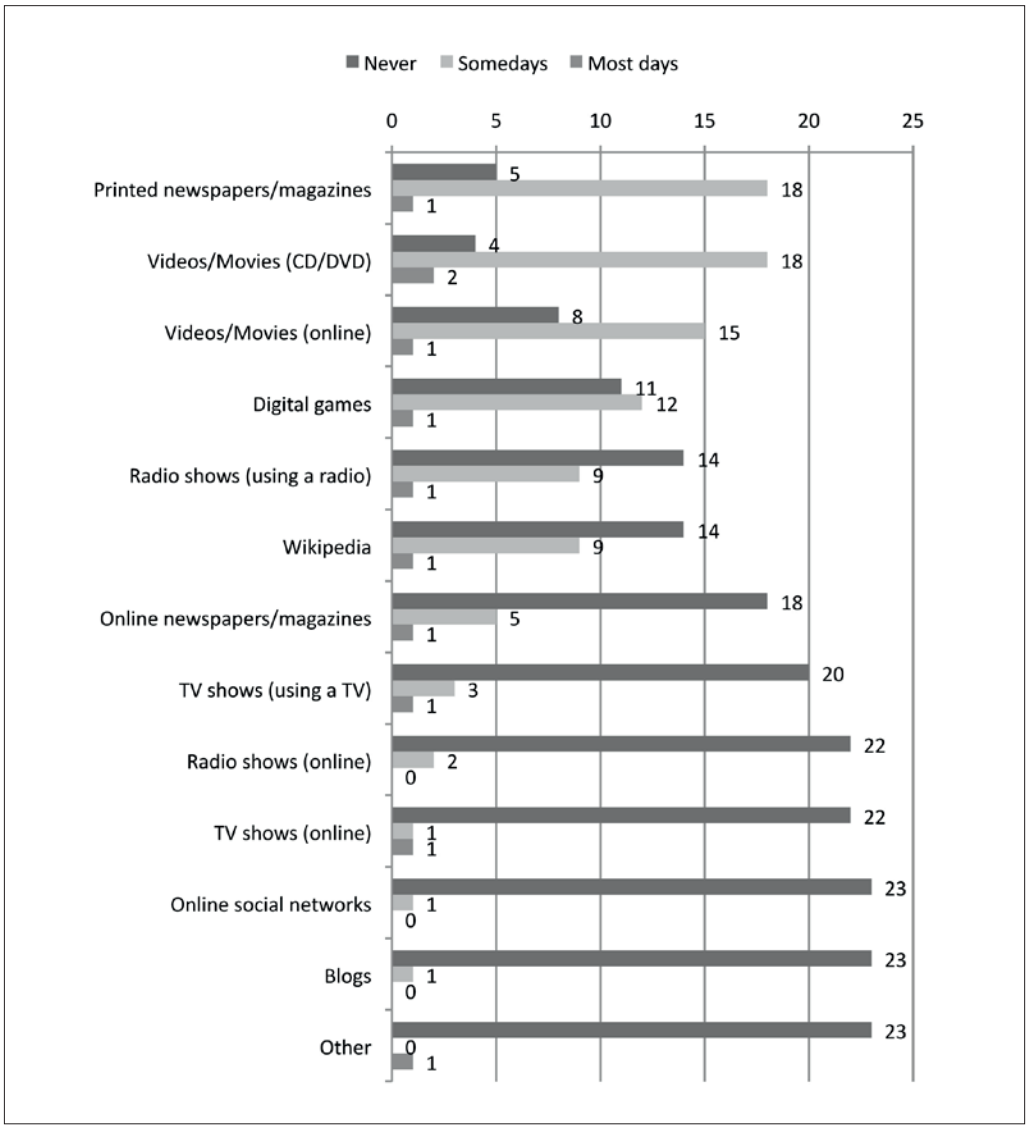

Fig. 2 Classroom used resources (N = 24).

Only half of the teachers stated using the school computer with Internet access, and only seven students use these computers as well (Figure 3).

The equipment most commonly used by teachers was the camera as the data indicated. The phone (most of the time as a camera), and rare use of computers in the library or camcorder followed. The use of interactive whiteboard and tablet, where available, is reserved for teachers.

Among teachers of Pre-school and Primary School, there are similarities in the use of the camera (8/10 and 11/14 respectively). The other devices commonly used by Primary School teachers include the school computer with Internet access (13/14 against 6/10), and mobile phone (10/14 against 6/10). Only the first grade teachers use the tablet (3/14), the digital board (2/14) and the video camera (1/14).

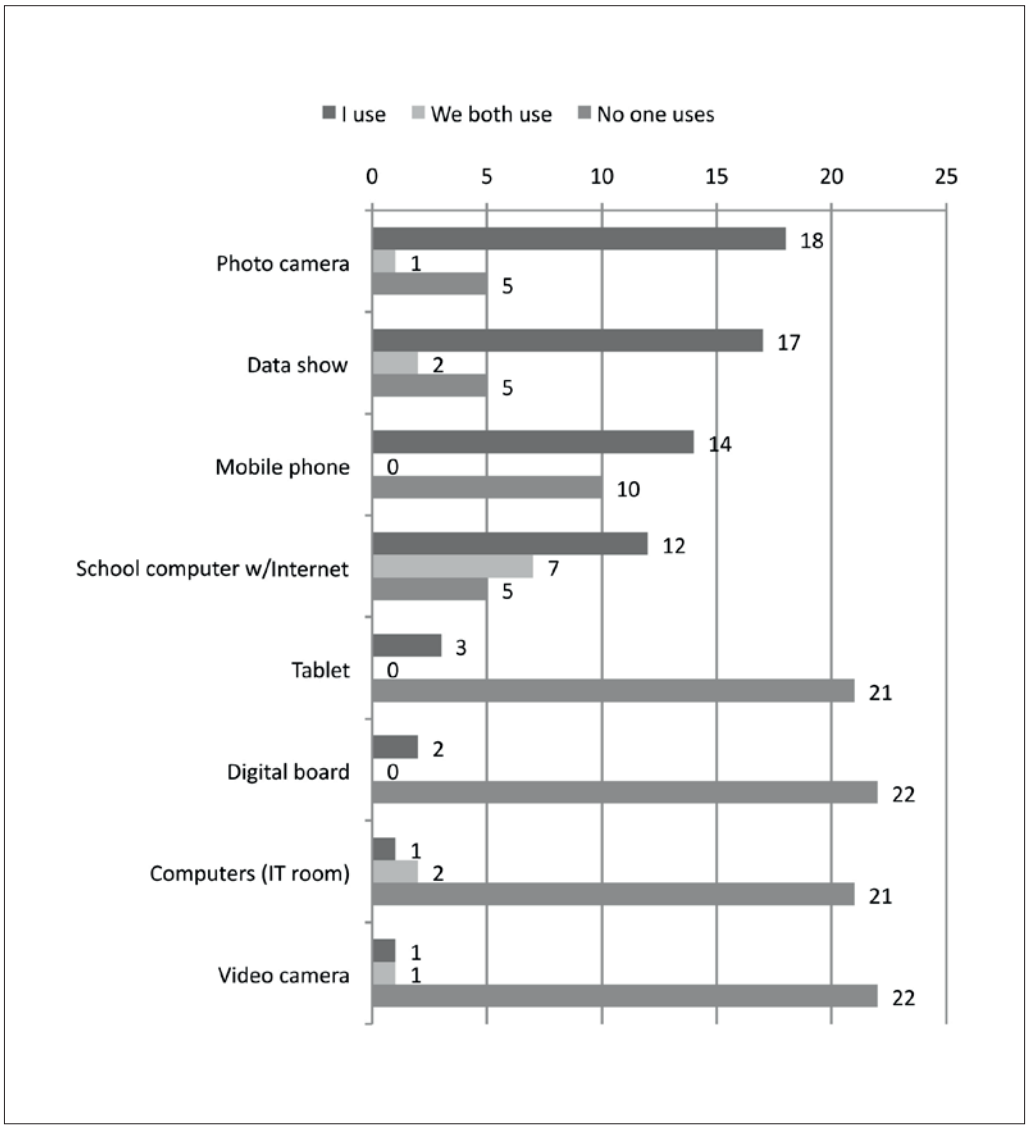

Fig. 3 Devices used in the classroom (n = 24).

Only one Preschool teacher stated using equipment along with student via the computer in the school library. In Primary, 11 teachers claim to use equipment together with students, including the school computer with Internet access (7/14), the photo camera (1/14) and the video camera (1/14).

In short, students from nine of the ten pre-school teachers do not use digital devices in the classroom. In Primary, only the students of half of the teachers use the computer with Internet access in the classroom. The reason for the infrequent use was pointed out by teachers as the lack of time to use media and technology in the classroom, the pressure to prepare students for exams, lack of resources available for use by students and lack of technical support in schools (all with 22/24), the latter being the reason that most teachers say totally agree (11/24) (Fig. 4).

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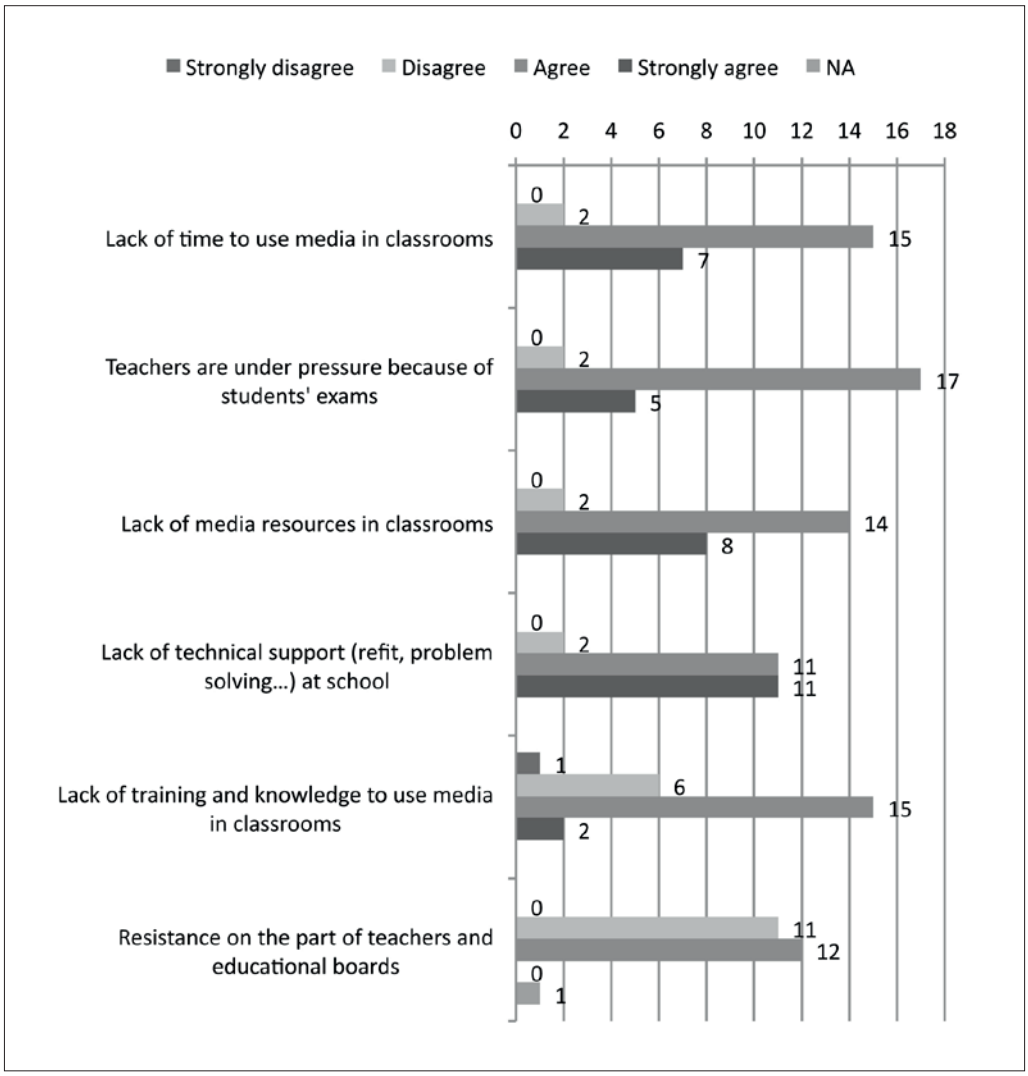

Fig. 4 Obstacles to media use in classrooms (n = 24).

Twelve of the 24 teachers believe there are teacher and school board resistance regarding the use of digital media in the classroom. Seventeen (9/10 Preschool and 8/14 Primary teachers admit difficulties in terms of knowledge and training. More Primary teachers feel prepared for the use of digital media in the classroom. The age of the teachers is not a factor for lack of knowledge as four of the seven teachers are under 40 years of age indicate that there is a lack of technological professional development at this level.

Finally, eight teachers (seven in Primary and one in Preschool) state that between 50% and 75% of their students use social media such as YouTube or online games. Four Primary teachers state that between 25 and 50% of students use this form of media. The remaining 12 indicate lower than 25% of social media use, and four of these teachers claim that none of their students using this form of media. Therefore, teachers have the perception that students use less technology than what happens in reality.

3.2 Activities developed during the training course

The training course focused on technical competences, cultural competences (critical analysis, reflexive and creative production of media messages), tackling hate speech online, intercultural issues, human rights and children rights. Teachers organized themselves in 10 groups and developed digital literacy activities with 366 of their students (147 preschoolers and 219 primary schoolers).

The activities were embedded in the work that had been previously planned, were to use the media as a resource, but with an ecological perspective, traditional and/or digital. Participants always had the support of the trainer and the resources available through the course blog (http://canecas2016.edublogs.org/). Each group established a theme and its justification, the objectives to be achieved and the development of the activity. They presented the results and produced a final report. The activities and the participants involved are presented in Table 1.

TABLE 1

Activities developed by teachers and students during the training course.

	Activity core objective	Participants
1	Address risks and opportunities on the Internet and use the tablet in an educational context	Three teachers (2 Preeschool, 1 Primary); 77 children: 51 aged 4-6; 26 aged 7-8.
2	Promote the safe and creative use of media for teaching pedagogy and involving the educational caregivers.	Two Preschool teachers; 11 children aged 5/6
3	Produce a book of illustrated rhymes and develop phonological awareness	Three Preschool teachers; 70 children aged 4-6
4	Analyze online newspapers on the government's decision to terminate the national exams in Grade 1	Two teachers; 20 children aged 9-10
5	Increase the interest in the present role of the media in reporting on what is happening in the world.	Two teachers; 26 children aged 8-9
6	Analyze the issue of the refugee crisis from images of newspapers and online surveys	Three teachers; 20 children aged 7/8 and 24 aged 9/10
7	Raise awareness among students of diverse learning contexts, including the media	Three teachers; 25 students aged 5/6.
8	Explore the printed newspaper, its role in society, the role of news and images.	Three teachers; 15 students aged 4/5
9	Address the concept of bullying through visualization, analysis and discussion of videos	Two teachers; 27 students aged 7/9
10	Identify advertisements, analyzing their message and purpose	Two teachers; 51 students aged 6/7

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In the developed activities there was an evident concern by teachers to better know the media diet of their students. In one case, amongst 77 students, between ages 4 and 8, 67 had a personal tablet and 15 had a smartphone. In another disadvantaged socio-economic school, amongst approximately 51 students, between ages 6 and 7, 39 had a computer at home, 38 hadtablet and 24 use a smartphone, although the device does not personally belong to them.

Use of media raised mainly two types of questions to teachers. The first was the safe use of the Internet. For example, a teacher in the 1st Cycle previously explored with students the precautions when carrying out online surveys (manual *Smartie, the Penguin*, available at http://www.childnet.com/resources/smartie- the-penguin).

The second question focused on the lack of resources in the school. In many schools, there was usually computers and a projector in the library, but not in the classroom, but with no tablets or smartphones. The following was the resulting distribution:

– two Preschool teachers asked parents to authorize their children to take tablets to school, but most were reticent, fearing that the tablets could be damaged.
– two Preschool teachers asked parents who used the tablets at home, to work together with the children in order to help them to draw, complete word associationa assignments, and perform numberical assignments. The children then reproduced the screens of tablets through screen capturing, then printed the document and brought it to school. In the opinion of the teachers, this activity was very important, as parents and children found that you can use the tablet for more than entertainment purposes.
– not having the means to do online research or the delivery of daily newspapers, at school, two teachers created an assignment for students to complete at home where resources were more readily available. They asked their students of the 4th year (8-9 years) to obtain news information at home regarding the decision of the Government to eliminate the 4th year exams. The students were interested in the task and completed the assignment. This allowed for a richer group disscussion at school on the following day.

The teachers were able to integrate the activities in educational lesson plans that were organized at the beginning of the school year (in September). Topics discussed included how a book is organized, the role of newspapers, children learning from media-pros/cons, bullying and prevention, as well as critical analysis of media content (newspapers and online, YouTube videos, comics), including advertising. Activities focused on the development of phonological awareness, the association of words to objects, image interpretation and exploratory creation of collective text from images.

Students debated current issues by analyzing news stories, in particular news issues that concerned them such as: the government's decision to terminate the tests on the 4th of the 1st Cycle Year; the question of Zika virus; domestic violence; the refugee crisis in the Mediterranean Sea; and a bomb threat at Faro Airport.

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At the same time, when dealing with current issues, many children do not go beyond the headlines in order to understand the news. This point became clear in an activity developed with 20 students of 2nd Year and 24 students of the 4th Year. This activity began with a look at the body immage of Alan Kurdi, a three-year-old Syrian child of three years found on the beach in the Mediterranean in 2015, and immortilized by the media. During the exploration of the image, the students of 2nd year failed to explain what had happened. Only two students of 4th Year remembered seeing the image on television and knew that the child had drowned, but could not provide an explanation for this occurance. After researching at home, with parental assistance, family members and /or peers, all the students knew what had happened.

By the same token, there are pupils who demonstrated having a greater knowledge of some news. In an activity with 15 students from Kindergarten (five-year-olds), the teachers explored an image of a small boat with refugees in the Mediterranean. While some associated the image to a boat ride or the people who were fishing, others mentioned «that boat is going to other worlds», who were «refugees who went to a bigger boat» or «people fleeing war» revealing knowledge that surprised the teachers.

In terms of the distinction between advertising and news, the teachers concluded that students of 6/7 years of age have a hard time making the separation and were too influenced by ads.

Although the process was more important than the product, we consider that the latter revealed the ease with which teachers have integrated activities in their lesson plans. The work of two groups resulted in the production of books: an identification of domestic and wild animals, with a digital component (PowerPoint); a rhyme, in which 70 students (4-6 years old) were asked to write on notecards, two words that rhymed with each other, and draw objects that these words represent.

In the case of the book of rhymes, students participated with the number of productions possibilities. The book was then bound and made available in the library. A digital version (Power Point) was also produced. Previously students voted on the title of the book and which drawings /words that should integrate it, thus practicing in democracy at school.

In the other groups, the students produced other written materials, such as completing worksheets previously organized by teachers with drawings or collective texts in the classroom. The teachers organized themselves into groups freel. This point was important to note as some teachers belonged to different schools, which limited previous opportunities for working together. Even when it was possible to associate Preschool teachers and 1st Cycle teachers in the same group, this was not the rule, and in fact, it only only occurred in one group.

3.3 *Training course assessment by teachers*

The training course was evaluated using the evaluation form used by the Training Centre Leonardo Coimbra, the National Teachers Association. On a

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scale of four items (from Low to Very Good), 14 teachers evaluated the action as Very Good and 11 as Good. The usefulness of the knowledge acquired (scale of four items from high to very little), 19 considered them very useful and six stated it was of some use. In their comments, the teachers highlighted four aspects:

– Improvement of teaching practice: «It has enabled me, with the knowledge acquired, lead students and to reflect on different resources you can use to learn (P1); «It ended up surprising me, in the sense that I was able to grab «the interest of the students and motivate them to critically participate on current issues» (P3); «The action gave much emphasis to issues that seemed irrelevant but, after all, are quite relevant» (P4); «He taught me to further explore some techniques that I was not familar with, but it was not so aware of the importance that they had» (P11).
– The working group and the involvement of students «allowed to carry out activities in the classroom for the first time. There was freedom to approaches in the classroom themes/resources according to each class/school» (P13); «Group work allowed new learning/attitudes» (P14); «Conduct activities with students in the classroom was a very positive aspect» (P25).
– Sharing knowledge: «Very interesting and enriching the shared experience» (P21); «The presentation of the work was very enriching and allowed me to do some learning and put it into practice in my teaching activity» (P23).
– Knowledge of the use and practice of students with media: «From the work done by the students, we reached the conclusions that we had not even weighed initially, for example, students from Preschool see little television, but use the tablet daily more of an hour» (P24); «I helped to realize the reality with regard to technologies in which my students are inserted» (P8). Therefore, the teachers did not know the customs and practices of their students in relation to the media. Something that is understandable, because in the questionnaire which was answered at the beginning of the training it became clear that this was not a subject that was regularly discussed in class between teachers and students. Although 15 teachers (12/14 in the 1st Cycle and 3/10 in Preschool) admitted talking to children about the frequency of use and practices in the media, these dialogues took place just every once in a while. No teacher admitted discussing these issues with children many days or every day.

4 Discussion, conclusions and next steps

The current study contributes to the body of research on digital literacy practices of young children (3-9). It points to the lack of these practices in Preschool and in Primary school classrooms, mainly due to the lack of teacher training. Nevertheless, after in-service teacher training, teachers are able to develop digital literacy activities with young children using traditional and digital media.

Teachers of children, ages 3 to 9 years, recognize great teaching potential to using the media, either in formal or informal contexts. About three in four

respondents stated using media content in their teaching practices, especially printed newspapers or magazines, films, videos or digital games, while other media formats such as television or social networks are virtually absent from classrooms.

If media content is used, the direct interaction of children with technology in the classroom is weak or absent. In Preschool, only one teacher refers to the use by students and it is with the computer in the library. In Primary School, half of the teachers (7/14) stated that students use the school computer with Internet access. However, 14 teachers stated that the use of mobilephone is forbidden to students, as is the use of the tablet. That is, the use of digital equipment most preferred by European children under 8 years is not made available in schools (Chaudron, 2016).

Most teachers (22/24) considers that the lack of time and resources explains the weak use of digital technologies. Yet, even when there are resources made available to educators, there is lack of adequate technical support, particularly in terms of equipment repair and troubleshooting. Even with support is available, there is resistance to change on the part of teachers and educational boards, as was indicated by half of the respondents. Two in three teachers also point to the lack of training or professional development in the area of media and technology in the classroom, which is consistent with the international literature (De Abreu, 2011; Redecker, Ala-Mukta & Punie, 2010; UNESCO, 2015).

Taking into account previous research data about the use of the media by young children, poor use of digital media in the classroom can also attributed to an erroneious perception on the part of teachers (Chaudron, 2015, 2016; Marsh, 2014). Only a third of respondents believe that between half and three quarters of the students use media such as YouTube or digital games. More research will need to be conducted on this point, but our data point to this erroneous perception. Further, this observation is supported by the teacher training reflections, which stated how surprised they were by the increased use of digital technologies by children.

Although the use of digital media in the prescribed activities was not a condition, two teacher groups developed activities using tablets involving children and parents. This inclusion was important because many of the parents of young children do not know whether their children should use this form of media or not. At the same time, parents believe schools should use these technologies (Palaiologou, 2016).

The teachers organized educational activities with the aim of bringing students to analyze and produce media content, which means developing skills of critical analysis, reflective and creative production. They analyzed media content focused on current themes. In some cases, themes were chosen and researched by students, thus linking popular culture and school. Students reflected on communication in different media and the media function in society, i.e., the teachers did not use only the media to teach, but also to teach about media. We therefore recommend more teacher training and professional development be held.

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We are currently working with eight of the 25 teachers (three Preschool, three Primary teachers, a teacher of Special Education and a teacher librarian), working in the same school, in the development of activities with their students. We are collecting data from parents, children and local entities that work with these children. The results will be shared with all of shareholders to begin a process of interventions, which will apply in the 2016/2017 academic school year.

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References

Carrington, V. (2013). An argument for assemblage theory: Integrated spaces, mobility and polycentricity. In A. Burke & J. Marsh (Eds), *Children's Virtual Play Worlds: Culture, Learning and Participation* (pp. 200-216). New York: Peter Lang.

Chaudron, S. (2015). *Young Children & Digital Technology: A qualitative exploratory study across seven countries*. Luxembourg: Publications Office of the European Union.

Chaudron, S. (2016). *Young Children, Parents and Digital Technology in the Home Context Across Europe: The Findings of the Extension of the Young Children (0-8) and Digital Technology Pilot Study to 17 European Countries*. Oral communication presented at DigiLitEY Project Meeting 3, Larnaca, Cyprus, 17-18 May.

Colvert, A. (2015). *Ludic Authorship: Reframing Literacies through Peer-to-Peer Alternate Reality Game Design in the Primary Classroom*. Unpublished PhD, Institute of Education, University College of London

de Abreu, B. (2011). *Media Literacy, Social Networking and the Web 2.0 Environment for the K-12 Educator*. New York: Peter Lang Publishing.

Green, B. (1988). Subject-specific literacy and school learning: A focus on writing. *Australian Journal of Education*, *32* (2), 156-179.

Holloway, D., Green, L., & Livingstone, S. (2013). *Zero to Eight: Young Children and Their Internet Use*. LSE, London: EU Kids Online. Retrieved on October 17, 2016, from http://eprints.lse.ac.uk/52630/

Marsh, J. (2014). *Young Children's Online Practices: Past, Present and Future*. Paper presented at the Literacy Research Association Conference, Marco Island, USA, 3-6 December. Retrieved on October 17, 2016, from https://www.academia.edu/9799081/Young_Childrens_Online_Practices _Past_Present_and_Future

Mathen, M., Fastrez, P., & De Smedt, T. (2015). *Les enfants et les écrans: Usages des enfants de 0 à 6 ans, représentations et attitudes de leurs parents et des professionnels de la petite enfance*. Retrieved on October 17, 2016, from http://dial.uclouvain.be/handle/boreal:165802

Meyers, E., Erickson, I., & Small, R. (2013). Digital literacy and informal learning environments: An introduction. *Learning*, *Media and Technology*, *38*(4), 355-367.

O'Neill, B., & Staksrud, E. (2014). *Final recommendations for policy.* London: EU Kids Online, LSE.

Palaiologou, I. (2016). Children under five and digital technologies: Implications for early years pedagogy. *European Early Childhood Education Research Journal*, *24*(1), 5-24.

Redecker, C., Ala-Mukta, K., & Punie, Y. (2010). *Learning 2.0 – The impact of Social Media on Learning in Europe*. Luxembourg: Office for the Official Publications of the European Communities.

Ribble, M. (2011). *Digital Citizenship in Schools* (2nd ed.). Eugen, OR: International Society for Technology in Education (ISTE).

Sefton-Green, J., Marsh, J., Erstad, O., & Flewitt, R. (2016). *Establishing a Research Agenda for the Digital Literacy Practices of Young Children: A White Paper for COST Action IS1410*. Retrieved on October 17, 2016, from http://digilitey.eu

UNESCO (2015). *Keystones to foster inclusive Knowledge Societies – Access to information and knowledge, Freedom of Expression, Privacy, and Ethics on a Global Internet*. Paris: UNESCO. Retrieved on October 17, 2016, from http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/internet_draft_study.pdf

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