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Abstract

Internet has become ‘the fabric of our lives’, as Castells (2001) defines it. It is entrenched in almost every dimension of our lives as through it we work, study, socialize and participate in society, among many others, and have become relevant in children’s lives as well. Dealing with children online risks has become an increasing concern for governments, schools and parents, as the higher and sophisticated the use, the higher the probabilities of encountering online risks (Hasebrink et al., 2011). Uruguay’s government created a unique ‘digital revolution’, as in 4 years almost every child had access to a computer and internet with Plan Ceibal. This enabled many opportunities but and at the same time might have amplified children’s online threats. Ceibal main beneficiaries come from low socio-economic families, with adults with no previous experience with ICT, teachers catching up with the technology, and the government implementing an almost unique experience in the world. It will be argued that empowering children should be a relevant strategy to currently address by Uruguay’s government. Reaching areas that are not exclusively related to online threats, such as violence in schools and sexual education, is also highly relevant, as they can be amplified through internet.

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Introduction

Uruguay is currently investing in ICT access and developing the digital skill of the population through different strategies. Providing a computer to every student and teacher of the public education schools and high-schools, and giving internet to schools among many public places was one with high impact. This One Laptop Per Child program situated the country as a unique example as it managed to do it at a national level.

These type of strategies have been addressed by different countries as a way of bridging the 'digital divide'. As accessing Information Communication Technologies (ICT) is highly relevant for many aspects of people's everyday lives, being excluded from this technology is likely to enable social inequalities (Helsper, 2008). Particularly the internet has become highly entrenched in different aspects of our lives, from studying, work, to socialising, among many others. It has become difficult to imagine our lives without this technology.

Children have been increasingly using the internet since it became massive in the 1990s. Nowadays, the children have been going online from a younger and younger age bringing many opportunities, but at the same time raising many concerns regarding risks. Online threats range from receiving or uploading inappropriate material (i.e. violent or sexual content), to being cyberbullied, or groomed, among many others. Children are victims of online threats not only as passively receiving unwanted content but also as active users, as being bullies themselves or uploading illegal contents. Establishing a balance between enabling children online opportunities and creating a safer context for them is a complex endeavour that has been increasing for governments, parents and schools (Hasebrink et al., 2011).

Uruguayan parents, teachers and government encountered themselves facing this dilemma within a few years, after Ceibal created a massive access to ICT for children (Rivoir & Lamschtein, 2012). The country present characteristics that might be working as risk amplifiers as teachers and parents have low or almost inexistent levels of ICT appropriation and the government, and as a consequence less awareness of the online risks and how to cope with them.

The main goal of this research is to explore Uruguay's current context and variables that might be enabling a scenario of children online risks being amplified. To achieve this, anecdotal cases

presented as a way to illustrate the Uruguay's current situation in this regard. Secondly, the main social, economic and political characteristic related to children online risks in Uruguay are presented. Thirdly, the main literature regarding children online threats is discussed. Finally, it will be argued that the situation in Uruguay is both empowering for children but at the same time risky amplifying risks. Given a scenario where adults lack digital skills, both student's parents and teachers, empowering children is highly relevant in the particular case of Uruguay. Also, it is suggested that Ceibal should work towards approaching issues that go beyond online risks, such as school violence and sexual education should be addressed, as online and offline threats are highly related.

Research methodology

Aim

The aim of this research is to help map and analyse which factors from Uruguay's current context might be enabling higher children online risks in this country.

Objectives

The central objectives of this research are: (a) to identify variables influencing children's online risks according to the main literature available; (b) explore patterns in terms access, skills and behavior towards ICT among children that are possibly related to online risks, as well as the ones of their parents/carers, that might be influencing the minor's online safety; (c) Identify current government policies regarding digital skills and children's online safety strategies; (d) Explore Uruguayan social, economic and political characteristics, and other variables, that might be influencing this issue; (e) Suggest strategies to reduce children online risks in Uruguay.

Method

In order to fulfil the objectives described above, the main literature regarding children online risks available was critically analysed. Data considered relevant regarding children online safety in Uruguay from government reports, academic research and international aid agencies, and media articles were compiled and analysed. One semi-structured online-call interview was conducted with a teacher in Uruguay in order to search for anecdotal cases to help illustrate the current scenario regarding this research topic.

Scope

Within this research it will be referred to 'child', as it is established in the United Nations Convention on the Rights of the Child (UNCRC), as individuals aged 17-years-old and under.

When analysing children online risks, threats such as internet addiction or effects on the cognitive development because of early exposure of children to ICT (Spitzer, 2012; Carr, 2010) it will be excluded.

Illustrating children online safety in Uruguay

The following case was identified interviewing a school teacher from a Department located in the east of the Uruguay, border with Brazil. The interviewee had her first computer around 2008, thanks to the government program Plan Ceibal which gave every teacher and students in the country access to ICT. Her curiosity towards the technology and willingness to help students take advantage of it drove her to get involved in trainings and activities from Plan Ceibal. Currently, she is the ICT school leader as she is a 'Ceibal Support Teacher'.

This case is not meant to represent the current general situation in Uruguay regarding children's online risks and student and teacher's behaviour towards ICT. The aim is to present an anecdotal case to illustrate some of the issues intertwined when analysing Uruguay's context regarding children online safety, and eventually help understand it.

Children, social networks and sexuality

In 2014, the mother of a 5th-grade student approached the girl's teacher because her daughter was not willing to go to school because she felt distressed as the classmates were making fun of her. The reason was that one of her classmates had faked a Facebook profile, pretending to be a 30-year-old man to deceive her. After she had accepted his friend request, he shared a picture of the girl naked that she had uploaded to her social network's profile. Within a few hours, the picture had been shared among most of the classmates and started making jokes and laughing at school. The girl is described by the teacher as 'a very special girl with integration and communication difficulties, a little isolated' and with a mother that was struggling 'to handle the girl very well' (Teacher, 30th July 2016, Online interview).

At the mother's request for help, the teachers found themselves without knowing what to do. As the picture had been already shared among other classmates, they felt it was not possible to undo the situation. As the teacher 'Ceibal Support Teacher' explained to the mother: 'Although she can remove the picture from her profile, it is already online, and 'surfing' on the internet everywhere' (Teacher, 30th July 2016, Online interview).

Eventually, another 12 years-old girl heard the teachers talking about the lack of possibilities to amend the situation and she approached them with a solution. She said that by reporting the issue to Facebook, the social network would remove the picture from everyone's profile. The teachers followed the advice, and the situation was considered solved.

The interviewer reflects on how the mother felt 'trapped' by the situation, and decided to go to the school, instead of maybe calling the police. She says that after the government had given computers and the internet to the population through the schools, the educational institutions became the ones to go to in case different things related to the students and the computers happen. The teacher recalls another recent issue where she did not know how to solve, when two 5th grade girls got into an argument outside the school, and one of them posted on the other's Facebook profile a series of insults. As the girl how received the comments was crying and the mother did not know what to do with it, she also decided to go to the school. After a few days, the girls were friends again, as children that age do. The teacher says: 'Maybe in another time two friends were fighting and hair pulling him to the other. Now the fight is carried to the network' (Teacher, 30th July 2016, Online interview).

Issues regarding use of ICT that was brought initially by the government to schools is one in many other areas that schools have to handle nowadays in Uruguay, particularly in the ones from low SES status as their work goes many times goes beyond education issues, as for instance the alimentation and health of the students. The openness of the school to address the type of cases described above relies on the willingness of the teachers and principals, the interviewer explains.

She says that she had informally talked to students about the risks of sharing personal information like phone number and address online. However, it was never discussed among teachers and done with the aim of addressing children online safety in particular.

Reflecting on the case of the girl who shared a picture of herself naked, the teacher talks about the lack of sexual education in schools. She says that is a subject that was recently brought to schools as the Education Administration established that it has to be addressed in initial and primary schools. However, the interviewer says that there are resistances among teachers as some of them feel the subject is a 'taboo', and others might be afraid of 'offending parents'. She says that the Education Administration published a book with guidelines for teachers to

work with issues of sexual education with students, but she has not seen it yet although she knows it has been criticised by other colleagues.

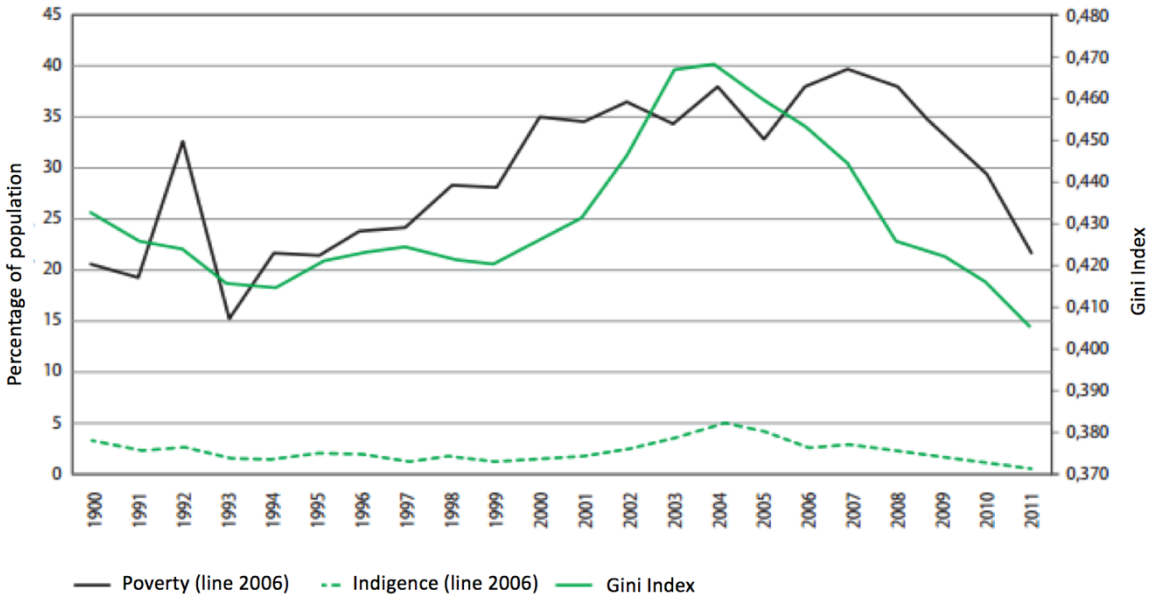
Factors involved in the Uruguayan children online safety

There are many factors that are influencing children online safety in Uruguay. Particularly after the creation of Plan Ceibal, but also regarding issues that go beyond the online world as it was illustrated in the case above. In the following sections some of the main factors interrelated within children online safety in Uruguay will be presented with the aim of shedding light on which might be the main ones amplifying the risks and to what extent.

Social and political context in Uruguay

Uruguay has a long history of welfare based government, which was developed at an early stage and was even present through its dictatorial periods (Fernández & De los Campos, 2004). After the military dictatorship during the 1970s, the percentage of the poor population increased and was accentuated during the 1990s neoliberal policies. After a significant financial crisis in 2002, poverty increased from 16.5% to 31.4%. Social inequality levels (see Figure 1) reached historical levels and could not be reverted until 2008 when the figures reached levels again similar to the ones during the 1990s (Fernández & De los Campos, 2004).

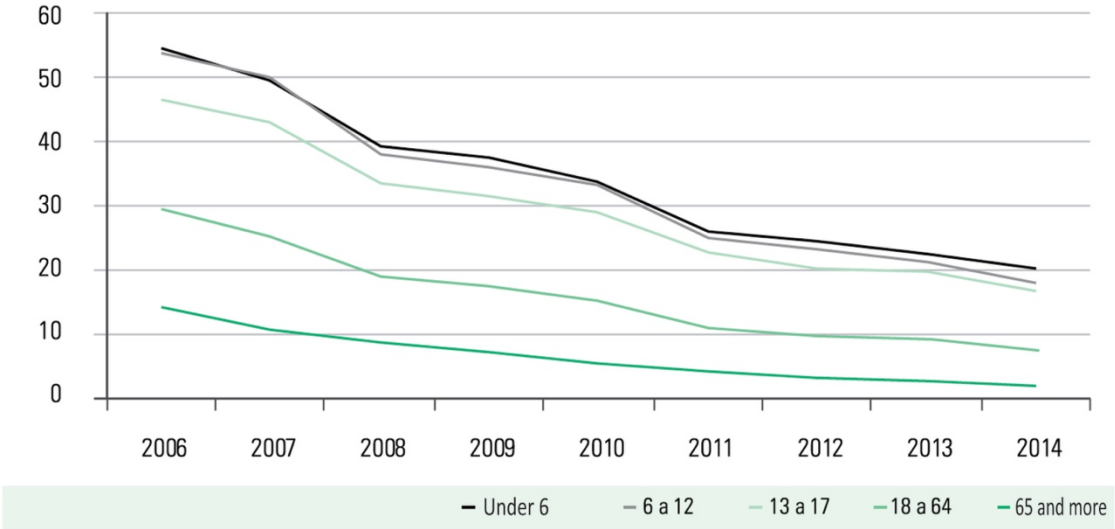
Figure 1: Evolution of indigence, poverty and inequality in Uruguay (1990-2011)



Source: PNUD, 2013

In 2004, and within this context of a social and economic crisis, the left party 'Frente Amplio', won for the first time the government national elections. With the aim of tackling the country's indigence and poverty, the Social Development Ministry (MIDES) was created, the minimum salary was increased, cash transfers and tax and health insurance reforms were instrumented, among other national policies (UNICEF, 2016). Uruguay's unemployment rate began to decrease, reaching by 2011 historic low levels, as the national GDP also evolved positively. Poverty continually decreased as a consequence these public policies and a favourable macroeconomic situation: from 32.5% in 2006 to 9.7% by 2014 (UNICEF, 2016). Uruguay currently presents one of Latin America's lowest levels of poverty and social inequality. However, poverty remains significantly concentrated within the younger segment of the population: 18.4% of the children being poor by 2014. Although child poverty was reduced significantly as by 2006 reached 52%, this was not homogeneous across the country. The north of Uruguay is lagging and Montevideo remains heterogeneous in this aspect (UNICEF, 2016:9-17).

Figure 2: Poverty evolution in Uruguay among age segments (2006-2014)



Source: UNICEF, 2016

Bridging the digital divide: government ICT policies and Plan Ceibal

E-inclusion and e-government in Uruguay

The government also launched a diverse set of policies regarding e-inclusion and developing the population's digital skills, as well as the e-government. In 2008 the 'Agency for the Development of the Government's Electronic Management and the Information and Knowledge Society' (AGESIC) was created, with the aim of promoting the social appropriation of ICT as well as the good uses of the technology, as well as leading the implementation of a electronic government[1]. AGESIC develops 'Uruguay's Digital Agenda' (ADU) covering areas of inclusive access to ICT, generating the digital capabilities the population needs for the future, e-government, development of production, health and environment (AGESIC, 2011). The 'Ministry of Education and Culture' (MEC) created the 'National Plan for Digital Literacy' (PNAD), working towards improving digital skills among the adult population, encouraging the use of ICT to a better access to goods, services, education and culture in order to contribute to a social integration (MEC, 2010). Working with this goals, 126 'MEC centers' (Centros MEC) were inaugurated across the country, working together with the national telecommunications company (ANTEL) and local governments. 'MEC centers' give the citizens access to ICT, as well as workshops and participate in different cultural activities (MEC, 2010).

The policies were recognized by the United Nations (UN) E-Government survey ranking Uruguay number 26 in the world, and leading in the region, in the E-Government Development Index, which considers country's online services, telecommunication infrastructure and human capital (UN, 2014: 203).

One Laptop Per Child, Plan Ceibal

In 2007, the Uruguayan government, with the aim of improving the quality of the public education and reducing the 'digital divide' among household of low and high income, launched the IT and Education program 'Plan Ceibal'. Ceibal started by providing laptops to every student and teacher of primary and secondary public schools and giving internet access to every public education institution.

[1] www.agesic.org.uy

The program was inspired by MIT's One Laptop Per Child (OLPC) organization, led by Nicholas Negroponte. It was also supported on research results that show the strong association between social and digital deprivations (Helsper, 2008), as ICT has become highly entrenched in many aspects of citizen's everyday life. The 'digital divide' 'refers to the 'haves' and 'have-nots' regarding access to ICT. However, the 'gap' is not considered as dichotomy, but a continuum with different levels of technology appropriation or digital skills (Anderson, 2010: 13). Different governments work with strategies of access to ICT and digital skills among the population in order to help the country's development and economic growth.

Children's and ICT

Accessing computers and internet

Through Plan Ceibal, the government managed to almost eliminate Uruguay's digital divide in terms of access to computers within a few years (see Figure 3). By 2014, 607.575 students and 57.388 teachers had received their own personal digital devices and had access to internet in their education institution (MEC, 2014:16). Almost 100% of the school aged population is within the educational system, from which 83% attends public schools: in Montevideo is 71% and outside the capital city is 89% (MEC, 2014:51). This means that the majority of the school aged population in Uruguay has received a personal computer from the government.

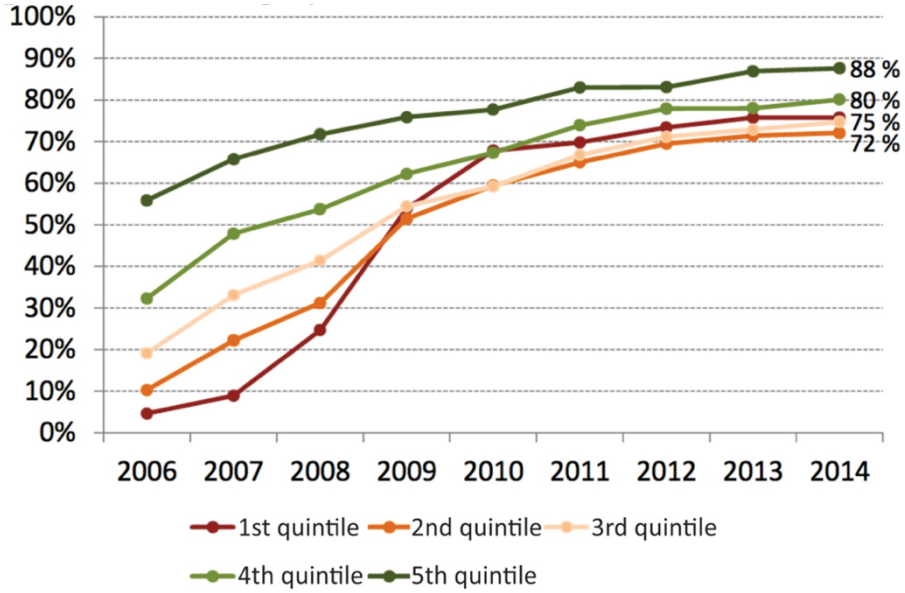
Given that the main telecommunication company in Uruguay is owned by the government (ANTEL), it was possible for Plan Ceibal to connect 99% of the schools and high-schools, both rural and urban, and 100% of the vocational universities (UTU) (Plan Ceibal, 2015a). Before Plan Ceibal, 74% of the schools did not had access to internet (Vaillant, 2013:14).

In terms of the country's household access to internet, there was no specific public policy to provide free internet in the student's or teachers homes. By observing the evolution of the internet access among households of Ceibal beneficiaries, it seems that the program enabled the lower income families to hire internet services, as their household access increased since Ceibal started (see Figure 4). Ceibal also provided with internet to NGOs, and installed hot-

spots at 249 slums, parks and other public spaces aiming to provide internet to the students in a radio no longer than 300 meters from their homes (Rivoir & Lamschtein, 2012). Plan Ceibal also established that their internet service could be used exclusively by the program's computers.

Although similar programs have been conducted in many countries around the world, Uruguay's stand out for being the first one do it at a national level and among every student and teacher of the public educational system, from kindergarten to secondary schools.

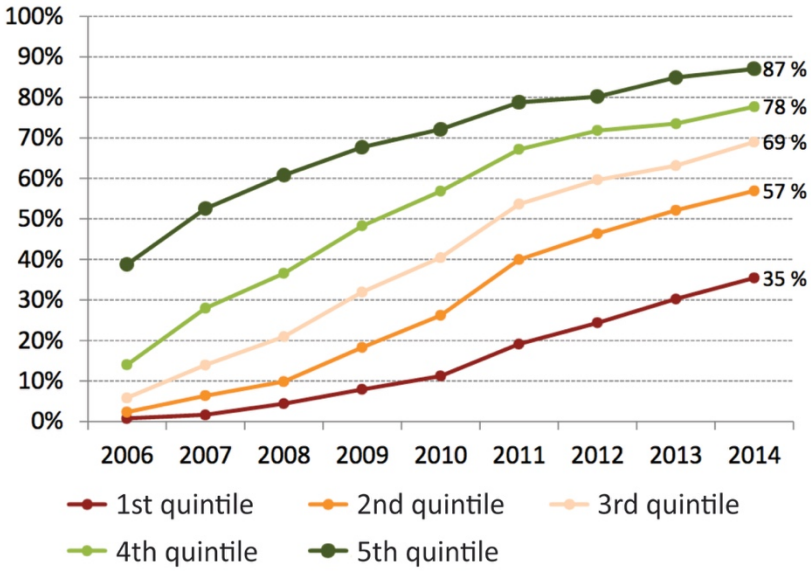
Figure 3: Evolution of population with access to computers across quintiles of per capita income in Uruguay[2]



Source: Plan Ceibal, 2015a

Figure 4: Evolution of population with internet access across quintiles of per capita income in Uruguay

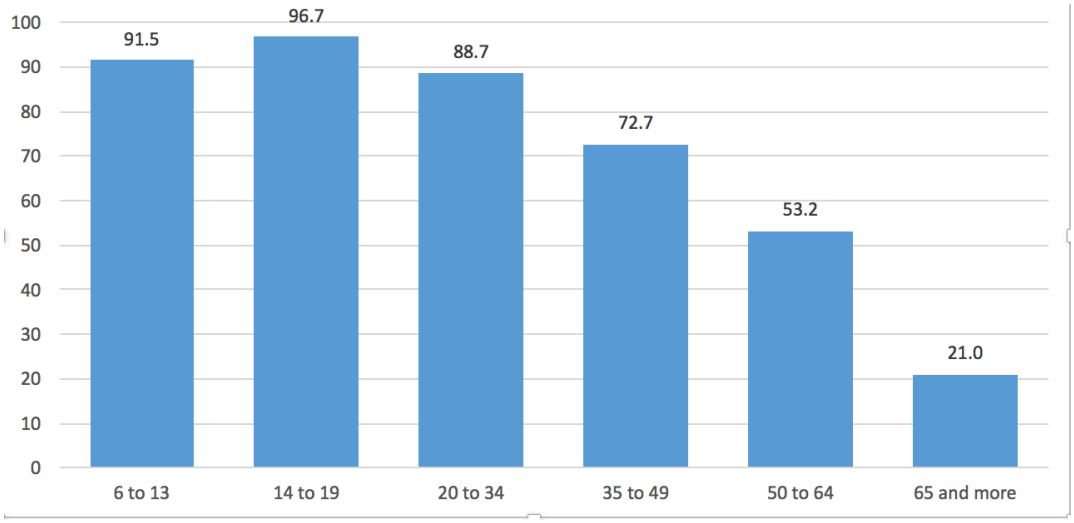
[2] Average household income in 2014: 1st quintile: 140,37GBP and 5th quintile 989,36GBP



Source: Plan Ceibal, 2015a

As a result of Ceibal, the main computer and internet users in the country are children (INE-AGESIC, 2013:31), creating a digital skills gap in terms of age among the population. The percentage of internet users starts decreasing significantly within population aged 35 years old and over (see Figure 6).

Figure 5: Population that uses internet according to age range

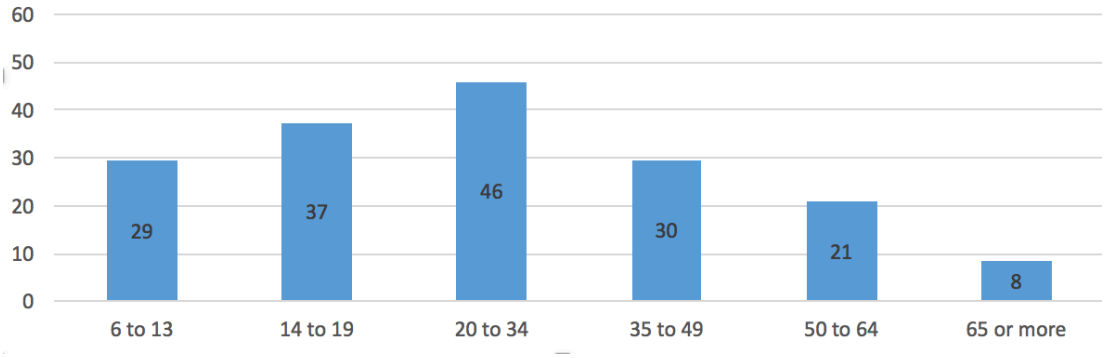


Source: INE-AGESIC, 2013

Accessing smartphones

Smartphones have become one of the main means of access to internet, and children have also been increasingly acquiring this technology from a younger and younger ager worldwide. By 2013, 26% of the overall Uruguay population had access to a smartphone. Among the younger population, 23.9% of the children aged 6 to 13-years-old and 37.4% of the ones aged 14 to 19 years-old owned this digital device (see Figure 6). As with ICT, although differences are les significant, access to smartphones among the younger segment of the population is higher than among adults. Data regarding smartphone access according to income shows this technology is not significant among the lower income population (INE-AGESIC, 2013:30).

Figure 6: Population with access to a smartphone according to age range

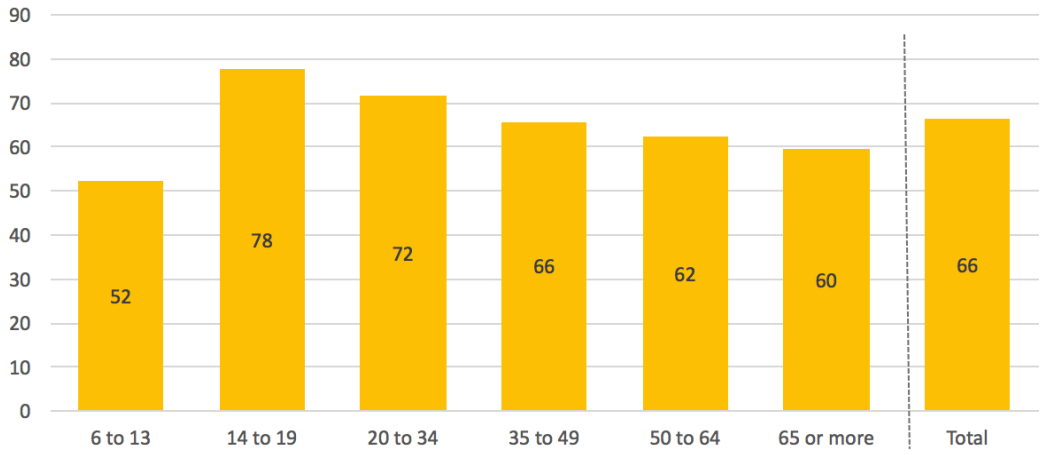


Source: INE-AGESIC, 2013

Appropriating the digital ICT

In terms of the population's use of internet, 66% of the population that have internet access declare to use it in a daily basis. As it is expected because of the higher access to ICT among the younger population stated above, children are also significantly more intensive users of internet than adults, particularly teenagers, as 78% of internet users with 14 to 19-years-old go online everyday (see Figure 7).

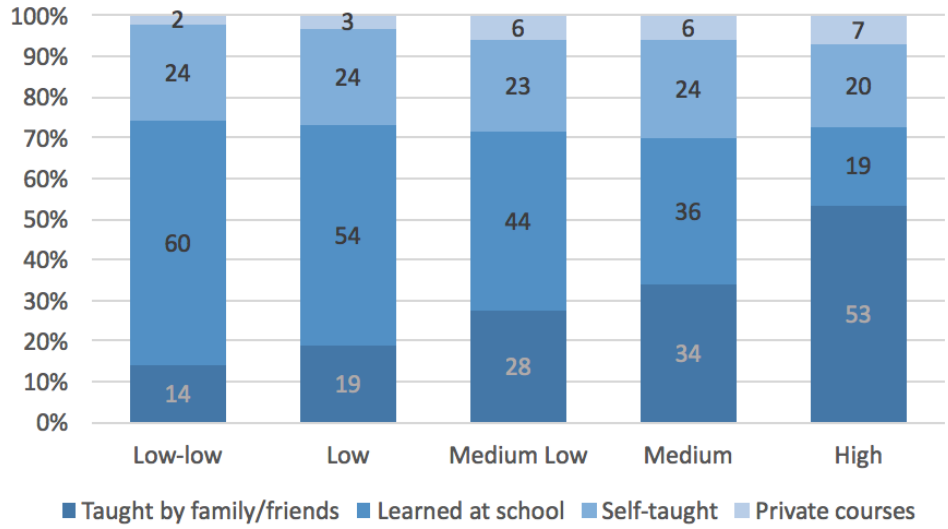
Figure 7: Population with internet access that uses it on a daily basis according to age



Source: INE-AGESIC, 2013

Research among parents of school aged students shows that the children learned mainly to use Ceibal's computers at school. Analyzing it according to the family's SES, children from higher SES families learned in general with their parents (see Figure 8). This is mainly because households of lower SES mostly had no previous expertise with ICT prior the arrival of the government's computers. When asking school teachers about how they consider the students learned to use Ceibal's computers, 45% say that they did it by exploring the devices with other peers, while 36% say they learned by themselves, and 19% say they learned with the support of a teacher (Rivoir & Lamschtein, 2012:66). Parent's perception in terms of where the children learned to use the computer seems to be accurate, as they did learn it at school. However, this does not mean that children have learned to use the computers with the support of teachers, as the educators say they generally did it while exploring the technology among peers or by themselves.

Figure 8: How the child learned to use Ceibal computer according to the household SES



Source: Rivoir & Lamschtein, 2012.

In terms of what children do online, a survey from 2013 among the Uruguayans aged 12 to 19-years-old, 95% used it to access social networks, 91% to chat, 89% to download or listen to music, and 77% use it to upload photos (Aliano, 2014).

Going online outside the household

Plan Ceibal hot-spots

Children going using their computers going online in public spaces and near schools has become a common scene. It is usual to see them gathering among friends and sometimes family members, particularly for those who did not have access to it at home. Children going to school and nearby to use internet without adult supervision became also a complex situation for the educators, which found themselves with not many resources to establish limits and provide a safe environment (Rivoir, & Lamschtein, 2012:41). As the availability of internet at the student's households has increased since the program was launched, this situation is not as usual as it used to be. However, accessing internet from home does not guarantee a safer environment, as a survey showed that 60% of the children interviewed said 'never' have an adult with them when they go online (García de Diego, 2012:33).

Cyber-cafes

Uruguayan children, as most of them access Ceibal's free internet, are not main users of cybercafes compared to some Latin American countries were the main customers are between 15 and 19 years-old. Children going to cybercafes is many times associated as a risk situation, as they generally go online without adult supervision and in some countries tend to be places inappropriate for children, as they are businesses accommodated for adults to access pornography, as for example in Peru (García de Diego, 2012:6;22).

Although the use of cybercafes by Uruguayan children is low, some of them are attracted to this places to access contents or websites that they cannot use with Ceibal's computers (i.e. some games that need certain software) or because the content is blocked due to content filters installed in Ceibal's servers, to avoid their parent's supervision, or as a social activity with peers (García de Diego, 2012:22-23).

In 2009 the Senate approved a regulation to be designed and executed by an interdisciplinary team and led by the national 'Institute of Children and Adolescents' (INAU). With the aim of protecting children from accessing contents and sites that might threaten their wellbeing, cybercafés were commanded to install a special software that prevents under age clients to access gambling, violent, crime, drugs and sexual online contents (Melgar, 3rd September 2009).

ICT expertise among parents and teachers

Digital skills at student's household

The context of poor and almost inexistent digital skills among parents, particularly among lower income family, when Ceibal's computers were delivered to the children increased the relevance the school's role as enablers of the children's meaningful appropriation of this technology and how to behave online.

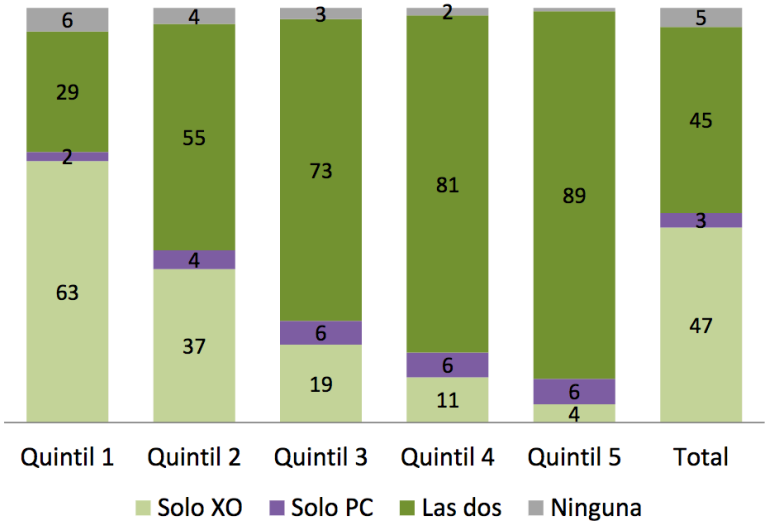
As it was stated before, Ceibal gave computer access to a significant amount of households when it first started. As the country's economic situation evolved positively and market prices

of computers have been going down, many of the households that once had only a government computer now they have a 'regular' computer. However, among the low SES families Ceibal computers are still only one available (see Figure 9).

A survey among primary student's family members revealed that 6 out of 10 school aged students have taught someone within their family how to use Ceibal laptops. As 7 among 10 taught their parents, and 5 out of 10 their siblings. Besides the students, the main users of the government computers within the household are the siblings. In the case of the student mothers, 6 out of 10 have never or almost never used the computers (see Figure 11). However, in some cases have happened the opposite situation, where children are not willing to share their computer with other family members (Rivoir & Lamschtein, 2012:67-69).

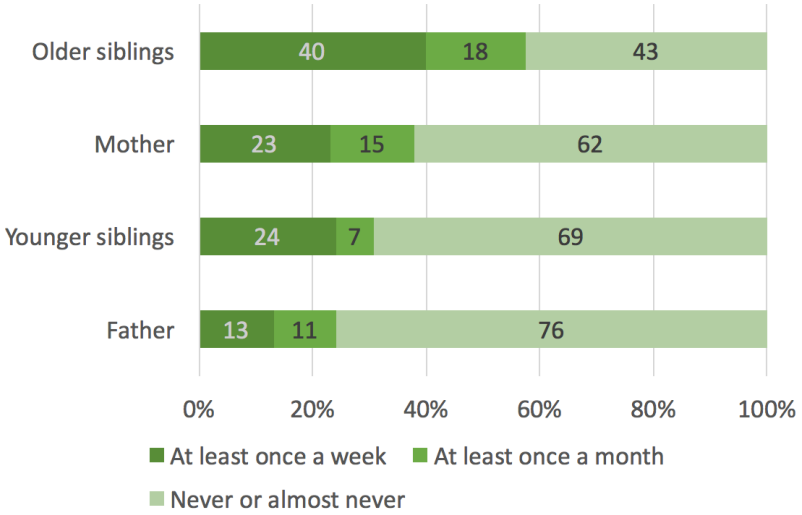
Recognizing the relevance of family member's digital skills, Plan Ceibal launched the program 'Everyone Learns' (Aprender Tod@s), consisting of school teachers in low income neighborhoods training student's family members on the use of ICT in after school hours. workshops aim is mainly to approximate adults to the computers, loose the 'fear' to this technology, and learn about the opportunities it enables (Plan Ceibal, 2015b).

Figure 9: Access to computers in households according income quintiles in 2014



Source: Plan Ceibal, 2015a

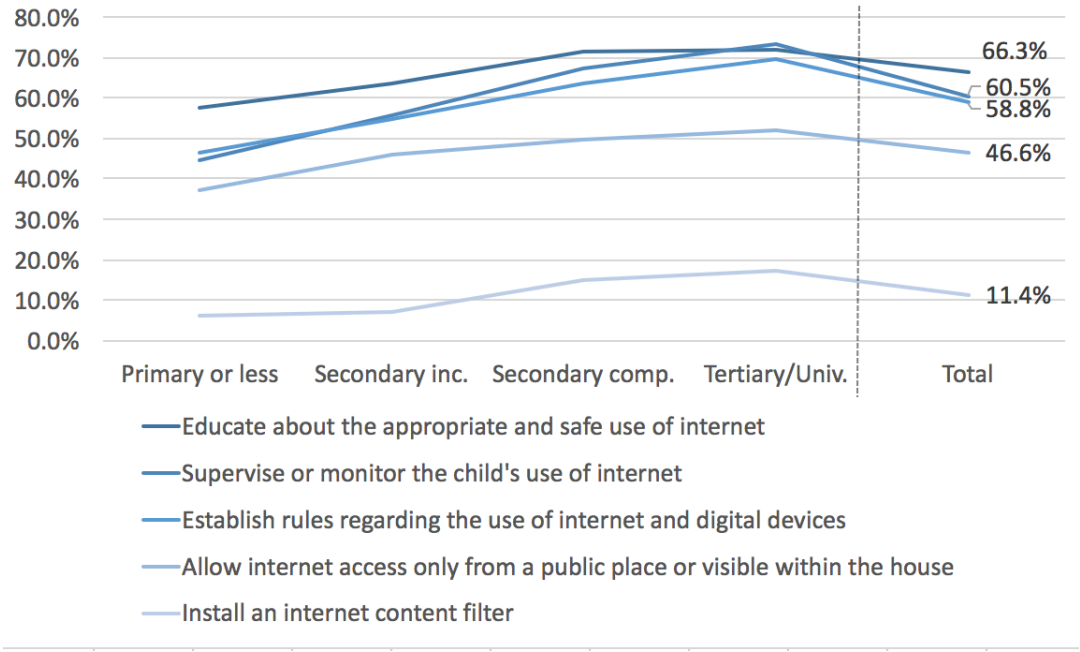
Figure 10: Frequency with which the student's family members use Ceibal's computers



Source: Rivoir & Lamschtein, 2012

In terms of parent's actions regarding the children use of internet and talking about issues related to online risks, around 60% state to have addressed this issue in some sort of way. The main actions regard educating the child about an appropriate and safe use of internet, supervising or monitoring their use and establishing rules around the use of digital devices. Adult's actions regarding children online safety prove to increase positively with the education level of the parents (see Figure 11).

Figure 11: Parent strategies to cope with children's online risks according to parent's education level



Source: INE-AGESIC, EUTIC 2013 – Individuals Database – Processed specifically for this research

Teacher's digital skills

Analyzing the teacher's experience with computers, in many cases Ceibal's computers were the first one they ever had access to, as in the case of the student's parents. Teachers in Uruguay, and also in Latin America, generally come from lower SES (UNICEF & Vaillant, 2013:31).

In order to train the educators with basic digital skills, when Ceibal started it conducted massive courses aiming to reach all teachers, disregarding the different skills that each could already have. Currently, main teacher training program are the 'Ceibal Support Teacher' (MAC), working with teachers according to their specific needs and encouraging the use of the technology. In 2014, there were approximately 300 of the 2000 schools had a MAC. Also there are many online courses regarding how to use the program's digital platforms and other

resources (Plan Ceibal, 2015a). However, one of the main criticisms from within the educational system has been the lack of teacher's training before the computers were delivered to the students (Vaillant, 2013:28-29). More training and support on how to use the technology in class has been a constant demand from teachers since the first years of the program (Vaillant: 2013:29).

In terms of the initial teachers training program, it has included ICT training before Ceibal, as by 2005 courses on 'Education and Technology' were incorporated. By 2008, teacher training students received Ceibal computer and had to attend the course 'Informatics, education and the integration of digital technologies'. It is still criticized that the initial teachers training program lacks of a transversal approach including the use of ICT among all courses (UNICEF & Vaillant, 2013:11).

This situation is not exclusive Uruguay or developing countries, as research shows that even in industrialized countries the approach in teacher's training towards ICT is generally presented as a support tool and less through formal specific courses at the initial teachers training (UNICEF & Vaillant, 2013). Many international organizations are currently working in this issues, discussing which should be the teacher's digital skills, creating guidelines for educators and policymakers, and working towards a better incorporation of ICT in schools around the world, such as UNESCO, 'International Society for Technology and Education' (ISTE), Partnership 21st Skills and the 'American Association of Colleges of Teacher Education' (AACTE), OECD and competences for the 21st century (UNICEF & Vaillant, 2013:16-22).

Uruguayan public schools

Given that poverty in Uruguay is concentrated among children, the educational system has a fundamental and challenging role to support this segment of the population. The work of the public schools is often beyond teaching, as they also deal with complex family situations (i.e. parents imprisoned, drug abuse and violence). In some cases, teachers feel they even play the role of parents or psychologists with their students (INEED, 2014:2016). Schools are also highly segregated in terms of the SES, particularly in Montevideo, as in most cases children attend the school that is closer to their household (INEED, 2014:85).

Some of the public policies aiming to help the very poor or indigent families was the creation of 'Full Time Schools' (Escuelas de Tiempo Completo), where children would spend extended hours in a supervised environment and access to alimentation. These schools were also equipped with a 'Community Teacher' (Maestro Comunitario) working towards strengthening the relationship between the school and student's family members.

The sense of unease from teachers towards their profession is not new they deal with complex and new situations everyday while not having enough support to deal with them. Moreover, many times they are targeted by society as the ones responsible for the negative outcomes of the country's education, and working within an institution where recognition for efforts and good performance is not often rewarded (INEED, 2014:193-194). In Uruguay teachers generally work in more than one educational institution, either private or public, stay for few hours within each institution, particularly in secondary schools (INEED, 2014:202).

Uruguay has some of the lowest rates of population with formal education completed, as 28% of the 18 to 20 years old have approved the 12 years of basic education. Uruguay ranks in a lower place compared to Paraguay, Brazil, Bolivia, Argentina and Chile (INEED, 2014:110).

Violence has also been increasing among students and towards educators. They are often presented by the media, sometimes involving family members threatening or attacking teachers. A study from 2014 among teenagers from Montevideo regarding issues of bullying showed that 44% of the interviewees had at least once been victims of a verbal aggression, while 8% says they are always victims of this behaviour. Moreover, from 20 to 30% of the students declared that at least once they felt afraid of going to school, from which 9% were afraid of one or more classmates (Brum & Noya, 2014:42). Research shows that level of involvement of the student's parents is relevant in this situations, as in cases of violent children their parents tend to be more absent or there are communication problems among family members (Brum & Noya, 2014:43). Another identified factor enabling among peers is repetition rates, as it increases the presence of older. This can affect the coexistence in a negative way, mostly when they are transitioning from younger ages to teenagers, some times enabling tensions among peers (Brum & Noya, 2014:52).

Children Online risks in Uruguay's agenda

Internet filters

Plan Ceibal has installed content and website filters in all their internet servers that is updated constantly in order to prevent beneficiaries from accessing materials considered 'inadequate' by Ceibal. It also blocks the access to domains identified in a world wide 'black list' as inadequate for the global community of internet users. The program also encourages users to report web sites with inappropriate content (Ceibal, 18th November 2013).

Tablet's parental control

Plan Ceibal tablets, which are delivered to children from 4 to 7 years old, two different users, one for parents and other for students. The one designed for adults works as a 'parental control' solution which allows them to restrict the children's access to apps that are not predetermined in the tablet. This solution also enables parents to monitor which are the apps that the child uses frequently. Moreover, as the tablet is intended to be a resource for all the family members, it enables adults to download other contents that are restricted for children (Ceibal, 11th August 2014).

Online risks campaigns

There are many online resources, either in Ceibal's website or the Education Administration website Uruguayeduca. Also AGESIC with CERTUy launched the campaign 'Your data is valuable' (Tus datos valen) and 'Safe you connect' (Seguro te conectas), talking about not sharing personal information and encouraging children to ask for adults' help, create strong passwords and always remember to log out when you leave a computer and pay attention to what they publish online.

It was also promoted the campaign 'Take care of your online image' (Cuida tu imagen online), which consisted of rising awareness through playing a digital game: 'Privia' (mix with 'Tivia' and 'Privacy'). The game covers subjects of personal data privacy, sexting, social media, digital footprint, and how to use a webcam, among others. It was developed with the support

of OEI, Iberoamerican Network of TIC and Education, led by 'Friendly screens' (Pantallas Amigas).

Research

Particularly among Latin America countries there is a lack of research in terms of how children interact with ICT, and their behavior online and who they connect with, as well as issues related online risks in general. Relevant research was conducted mainly among teenage population and in Argentina, Costa Rica and Brazil, the last one recently conducted the first 'Brazil Kids Online' (Garcia de Diego, 2012:5).

In Uruguay, research in this regard is almost inexistent. AGESIC has been approaching the issue conducting surveys in terms of the population's, including minors, use of internet and digital devices (in 2010 and 2013). In the most recent survey, questions regarding adults concerns and actions with children online safety were included. From Plan Ceibal, research has been mainly analyzing how the beneficiaries use the learning platforms and other digital contents provided by the program, and evaluating teacher's ICT trainings.

The 'End Child Prostitution, Child Pornography and Trafficking of Children for Sexual Purposes' (ECPAT) network surveyed children aged 11 to 18-years-old, in a group of low income neighbourhoods in Montevideo. Results showed that 20% of the students said to have been working issues related with online safety in schools (García de Diego, 2012:25). For this same study, 59 teachers were surveyed with 60% declaring to know online risks, and a similar proportion believing this subject is very or quite important. In terms of children's online actions that teachers perceive to by more threatening, they are mainly 'accepting unknown people to the friend list' followed by 'meeting in person with people you only know through internet' and thirdly, 'sharing personal information'. Consulting the teachers if they have approached the subject of online pornography with students, around 25% said they did. Most of the teachers, which have not addressed this issue with students, say the main reasons for not approaching the subject is because they 'have not had the opportunity' (García de Diego, 2012:28). Among the surveyed children, 15% said they have experienced a situation were 'someone published photos of them without permission', and a similar proportion said they

had ‘received pornographic materials from someone’. When asking about who they have reached when these situations have happened, in most cases the children declared that they talked about it with a friend, followed by not talking to anybody (García de Diego, 2012:43).

In 2013, research regarding children online pornography in 10 Latin American countries[3], including Uruguay, identified the amount of internet users that downloaded child pornography images or videos through the Peer to Peer online service Ares between 2011 and 2012, placed Uruguay on the top of the ranking (Delgado & França, 2014). The investigation constructed a “Participation in the Online Child Downloading Pornographic Content” rate considering the amount of users that downloaded child pornography materials among 20.000 online users. Data showed that every 20.000 Uruguayan internet users, 2.35 downloaded child pornography. The highest rate was located in Montevideo, following by departments that attracts tourists (Colonia, Rivera and Maldonado), and the rate increases during summer (Delgado & França, 2014:63). In Uruguay, regulations regarding children pornography, either images or videos, is penalized only if it is disseminated, but not in the case of storing or reproducing it[4]. This is because it considers that the illegal material might be sent to online user without requesting it (Delgado & França, 2014:59).

[3] Countries included in the research are Argentina, Bolivia, Brazil, Colombia, Chile, Ecuador, Paraguay, Peru, Uruguay and Venezuela.
[4] Law 17.815 (2004)

Literature review

In the following chapter, the relevance of ICT nowadays will be presented, as well as the different actors and its interests towards enabling children online access. Given that opportunities and risks are positively related to children, it will be presented the relevance of analysing risks, particularly the science and technology in developing countries.

Defining risks in a global era and developing countries

Identifying and understanding causes related to nowadays risks is highly relevant, as it enables governments to evaluate their probabilities and impacts in society, to establish strategies to prevent them and prioritise the public policies agenda. Risks change through time reflecting the social, economic and political context. For instance, once the main threats were hunger, epidemics or natural disasters, and nowadays are more concentrated in global warming and terrorism. Beck's 'Risk Society' is a concept coined in the early 1990s, reflecting on the new and global risks within modernity, such as 1986 Chernobyl disaster. Modern society mostly deals with threats that were introduced by human action, and which often have global impacts (Beck, 1992). Recent examples are the US 2008 housing mortgage crisis, triggering an international financial crunch with consequences that some countries are still struggling to overcome.

Risks can be particularly devastating for developing countries, as present greater lack of awareness concerning current threats and have weaker institutions compared to industrialised nations. This situation not only tends to amplify the hazards but also intensify the impacts (Smith, 2009:103). For instance, when governments invest on introducing science and technology solutions in these countries, as it is deeply associated with development in a positive way, either as related to economic growth and to help take care of problems common within these particular contexts such as communicable diseases, hunger, etc. However, in many occasions without evaluating or foreseeing threats that might come with it (Smith, 2009:4-5).

Internet 'black-boxed' in our lives

ICT has become highly intertwined in almost every aspect of our lives, from work to socialising, leisure, communication, to participate as citizens. Especially with Internet, it has become difficult to imagine our lives without it. A Castells argues, internet ‘is the fabric of our lives’ (Castells, 2001:1). We access it through our phones, computers, and our financial transactions, health information, security services, among many others, rely on the interconnectedness of technological artefacts and information.

ICT is highly related to the development and economic growth, it is part of the relevant infrastructure to enable trade, connect economies, as well as major political and social activities, are developed around them, among many other aspects. To be excluded from accessing the internet nowadays has significant negative impacts on societies not only at an economic but cultural level as well (Castells:2001). The UN Millennium Development Goals acknowledge this and encourage and funds policies to help nations to bridge the world’s ‘digital divide’.

As we become highly dependent on this technology, our vulnerabilities also increase and new threats appear, as losing our data with virus deleting, our information being stolen by hackers, bank accounts and social media data security breaches. Moreover, the concept of ‘digital footprint’ or 'digital reputation' was recently coined as the information we share, and that is associated with our identity can create ‘image’ of ourselves to others. Also the information we put online might spread at a fast pace, losing control over it, not knowing which it would be the audience, and which can probably have an impact our future, being difficult to imagine how our data could be used tomorrow.

The Internet is one of the most malleable technologies as it is highly dependent and adapting according to how users appropriate it in a very dynamic way: ‘the timespan between the processes of learning by using and producing by using is extraordinarily shortened, with the result that we engage in a process of learning by creating, in a virtuous feedback between the diffusion of technology and its enhancement’ (Castells, 2001:28).

Aiming a network that would enable freedom of communication, the Internet was initially designed in the US in the 1960s and 1970s with a decentralised, multi-layered structure, and with open communication protocols, these characteristic have enabled the internet to become dynamic and adaptable according to users needs and interaction with it. By the 1990s, most

computers were designed with the technology necessary for networking and the internet started to be privatised and commercialised (Castells, 2001:12). Currently, it is unfolding a complex discussion of which actors should govern the Internet, to what extent and which particular areas, and how to regulate it, given its nature of dynamic change. Powerful stakeholder's interests are woven into the midst of controversies of government surveillance and IT companies harvesting and profiting from user's online information, with Terms of Service (ToS) that are unlikely to be read by the users.

Children going online

Within this context, the proportion of children accessing the internet has been increasing, and significantly in the last years, and from a younger and younger age. Also, children's online activities have been changing through time, as with the use of social media, and also as the potentialities of the ICT have increased significantly, for example communicating with other users while competing in online games. Currently around 90% of the European children between 9 and 16-years-old have access to internet at their homes (Hasebrink et al., 2011:22).

Internet enable children to relate in a new way with peers and the world, as they can have popularity at a fast pace and beyond people, they know by sharing videos or pictures online. The more contents you upload, the more popular you can become, as a research among Argentinian teenagers showed, the users who shared more photos and updated more frequently their information, were the ones with more 'friends' (RELPE, n.d.:13;32). Popularity or acceptance among peers can also be measured by children considering the amount of positive comments or 'likes' they receive in their posts or pictures. In the study among Argentinian children, girls proved to have more friends than boys, and at the same time share more pictures: 25% of the interviewed girls aged 13 to 15 years old said to have published more than 500 pictures on Facebook (RELPE, n.d.:13;32).

Many actors are also interested in children going online as for instance, public administrations and schools have been investing in education technology and ICT skills training since the 1980s. It is a means of helping students fulfil their civic engagement and build the capabilities

for tomorrow's workforce, as well as it is believed that improves the student's academic development (Anderson, 2010; Gasser et al., 2010).

From the IT industry perspective, children are a section of the market that they have become increasingly interested in, as on one hand what children and teenagers do online tend to be the next trends (Madden, Lenhart, Duggan, Cortesi, & Gasser, 2013). Attracting this audience is also used as a strategy for generating customer fidelity from an early age. Also as governments and schools have been increasingly investing in educational IT, this has become a billion-dollar market which is expected increase significantly (Ingham, 2015).

Particularly in developing countries as it was stated before, these education technology initiatives have also been encouraged by international aid organisations such as UNESCO, IDB and WB, among others. Latin American examples, besides Uruguay, such as 'Colombia Aprende', 'Proinfo' in Brazil, 'ENLACES' in Chile and 'Conectar igualdad' in Argentina.

Identifying risks and the relevance of context

Although online risks are also a concern among the adult population, children are in a more vulnerable situation. They can be more easily deceived, and it is hard for them to imagine the damages or unwanted situations they might be facing by sharing their personal information, as also some of these adverse effects might come in the long term (i.e. for instance when applying for a job). For children, it might be harder to imagine the consequences, and audience that their personal information online might have, as it can be shared worldwide and in a highly fast pace, sometimes losing complete control after posting it (van der Hof, 2014: 1-6).

Research showed that between 15% to 20% of European teenagers declared to have felt 'distress', 'discomfort' or being 'threatened' online (Staksrud & Livingstone, 2009:368). Similar results have been found in the US, as a 2006 national survey indicated that among the population between 10 to 17-year-old, around 30% had been unwantedly exposed to sexual online. At the same time, 14% said they had received unwanted sexual requests, and 9% felt distressed because they received unwanted sex-related materials (Wolak et al., 2006).

Children have been defined as ‘digital natives’ or ‘net generation’ because of the significant appropriation and how relevant digital technologies are in their lives (Gibbons, 2007). However, when it comes to online threats and their ability to cope with them, they are usually portrayed as high vulnerable with no abilities to deal with them (Staksrud & Livingstone, 2009:366).

Policy makers, schools, and parents face the dilemma of trying to balance the situation to maximise positive opportunities that using internet brings to children while minimising the threats. As research shows, the more intensive and sophisticated the use of ICT, the higher opportunities, but at the same time, threats increase. For example, chances of being deceived or accessing inappropriate material increase with the more activities the child does online or with the amount of people they engage with on the net (Hasebrink et al., 2011): ‘Risks may arise when children are sophisticated, confident or experimental internet users’ or when ‘children gain internet access in advance of an infrastructure of awareness raising, parental understanding, regulation and safety protection. So, although the popular fear that the web endangers all children has not been supported by evidence, there are grounds for concern and intervention’ (Hasebrink et al., 2011:15).

Some of the most commonly used strategies to address these situations range from ignoring it or establishing restrictions in the utilisation of the internet, both of which are proved to be unsuccessful (Staksrud & Livingstone, 2009: 365). Governments dealing with IT companies trying to regulate the internet to create a safer environment for children goes back the 1990s, as, for instance, the United State’s Federal Trade Commission elaborated the Children Online Privacy Protection Act (COPPA). Aiming to ‘protect children from predatory marketing, physical safety risks such as stalking or kidnapping, and other abuses that may result from others’ access to children’s private data’ (Hargittai, Schultz, & Palfrey, 2011), users under age 13 need their parent’s permission to use online services. This is the reason why many social media, such as Facebook and Twitter, restrict the service for users aged 14 and over. However, this does not prevent younger children from using social media as many of them lie about their age, sometimes with the consent from their parents, normalising the practice of violating ToS (Hargittai et al., 2011). This shows how ineffective government actions to try to control children’s use of the internet can be, as even parents help the children not follow the established regulations.

Currently, most scholar work in this area of interest is from North America and Western European countries (Livingstone & Haddon, 2009; Gasser et al., 2010). In 2006, the 'EU Kids Online' project was funded by the European Commission for Safer Internet, and coordinated by the London School of Economics (LSE), with the aim of generating knowledge towards creating a better internet for children (Hasebrink et al., 2008).

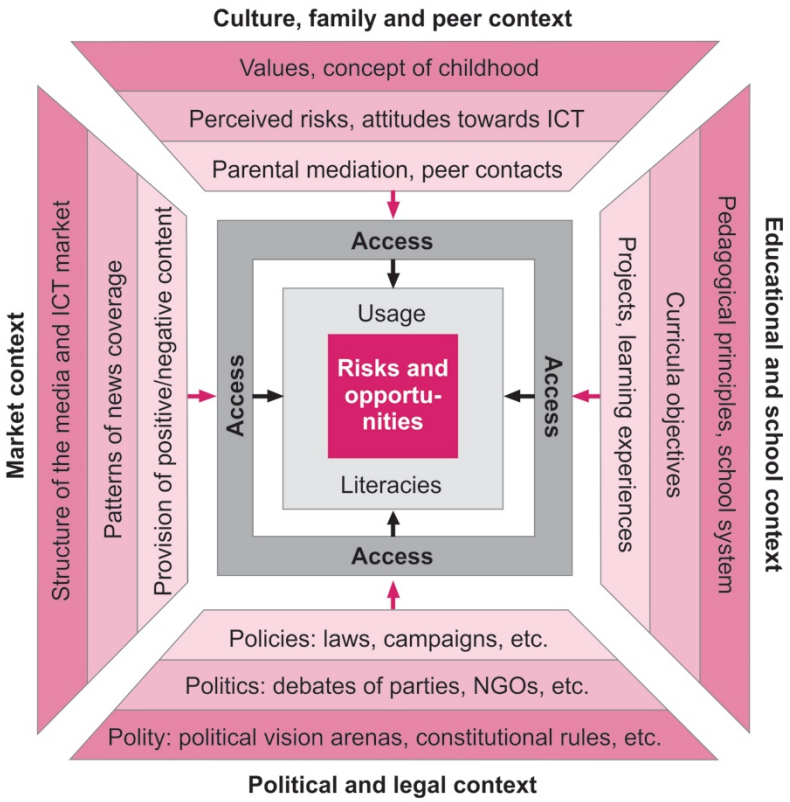
Children online risks are complex to define as they can regard a broad range of subjects regarding internet and 'that are directly or indirectly related to the physical and psychological wellbeing of children who use digital media, focusing not on a particular access technology, such as an internet connection, mobile phone or some other means, but on the broader characteristics of digital media' (Gasser et al., 2010:7). They are also complicated to identify as their delimitations might not be exact: they might change over time as the internet is very dynamic and are highly context-dependent (Gasser et al., 2010:7). The relevance of context regards the fact that children's online safety and opportunities are influenced by a wide variety of intertwined variables which are defined broadly as 'micro-factors', considering for example which technology the child access and how is being used. At the same time, the –micro-factors' are being influenced by 'macro-factors' such as social, political, and economic dimensions that shape the environment in which the child is going online (see Figure 12). For instance, the SES of the child's family is a relevant dimension, as it is likely to predict the different types of digital devices that the child might access (home personal computer, school computer, smartphone, etc.) and related to the digital literacy of the child's parents (Gasser et al., 2010:9).

The education and cultural context are also relevant macro-factors for example when analysing the extent to which ICT are being used in schools or for educational purposes. Cultural factors are influential, for instance, regarding how childhood is perceived and what are considered as socially accepted behaviours for children in that particular context. In some countries girls are not allowed to pursue an education, which can subsequently affect their use of ICT if that is the main way of accessing the technology (Gasser et al., 2010:10-11).

Also, variables regarding the legal and policy context can play a major role shaping the children's digital risks and opportunities. For example, the existence of risk-awareness campaigns and digital skills training among schools. Also the stability of government institutions, as well as its legal approaches as if it is a strong welfare approach, intervening and controlling, opposed to a more liberal one with the industry being self-regulated. A more liberal

situation could amplify online risks as in cases of child pornography, where the government and international organisations might require the cooperation from internet services to access online materials and user's identity (Gasser et al., 2010:12-13).

Figure 12: Contextualizing children's internet use



Source: Gasser et al. 2010 with EU Kids Online

The range of children online threats are wide and have different impacts according to the context, depending on the macro and micro factors. As with the case of the 12-year-old from Uruguay, the classmates who shared her picture on Facebook had no consequences for their actions. Maybe this situation in a school from high SES in Montevideo, this issue could have been addressed differently by gathering teachers and parents to talk about the situation.

'EU Kids Online' (Hasebrink et al., 2008) identified the most common threats as sharing personal information, followed by content related risks, where the child is a recipient of inappropriate sexual or violent materials (see Figure 13). The least common threats are conduct related, with sexual harassment and meeting in person online strangers being the less likely,

and bullying, the most frequent within these type of threat. It is important to state that also the different risks identified above represent various types of impacts on the child's wellbeing, as it might not affect in the same way being a recipient of spam or virus than being cyberbullied. The impacts that the online threats can have on the child's well-being also depend on how they cope with them of resilient they are.

Even though sharing personal information is identified as a risk by itself, it is also a precondition to most of the other online threats. Among European children users of social media, 43% have their profiles private (only for network friends to see), 28% have some information public and other private, and 26% have their profile open so that anyone can access the information (Hasebrink et al., 2011:8).

At the same time, different forms, within each of these categories, were identified regarding how the child could be exposed to the online threats but from a different role they play. In the case of 'content risks', the child is presented as a recipient of inappropriate materials (i.e. violent or pornographic); within 'contact hazards', the child is a participant sharing personal information; finally, in 'conduct risks', the child is a subject who is actively involved (Hasebrink et al., 2008). This means that the child is also exposed to online risks by having an active role, as not being aware of the consequences of being a bully, or as with the case of the 12-year-old girl from Uruguay while sharing illegal contents.

Figure 13: children online risks defined by EU Kids Online

	Commercial	**Aggressive**	**Sexual**	**Values**
Content (child as recipient)	Adverts Spam Sponsorship Personal information	Violent/hateful content	Pornographic or unwelcome sexual content	Bias Racist Misleading info or advice
Contact (child as participant)	Tracking Harvesting personal information	Being bullied, harassed or stalked	Meeting strangers Being groomed	Self-harm Unwelcome persuasions

Conduct (child as actor)	Illegal downloading Hacking Gambling Financial scams Terrorism	Bullying or harassing another	Creating and uploading inappropriate material	Providing misleading information/advice

Source: Gasser et al. 2010 with EU Kids Online

Main variables influencing children's online safety

Although as it was stated before risks are highly contextual, 'EU Kids Online' research (Hasebrink et al., 2011) has identified a series of variables that in different countries proved to be associated with higher risks such as:

Age and gender

Older children (between 13 to 16-years-old) are more likely to encounter different types of threats than younger ones (9 to 12 years old) as the use of internet becomes higher and more sophisticated. Risks are also higher among older boys, as they tend to establish more contacts online and are also more likely to experience sexual content online. Regarding 'contact' risks, there are not significant differences among gender, contradicting what could be expected as girls being more prone to be victims in this regard. However, when it comes to analysing the impacts of encountering online threats, girls are more vulnerable, as they are more likely to feel upset. For example, when encountering sexual content, also when it comes to receiving sexual messages, the amount of children that feel upset because of this experience is marginally higher among girls (Staksrud & Livingstone, 2009:375; Hasebrink et al., 2011:10).

Socio-Economical Status

The Socio-Economic Status among the child's household plays a significant role around many factors that can enable the opportunities and risks as well. The educational level of parents is associated with their digital skills, which is associated with the adult's online risks awareness and actions regarding the establishing rule the child's online behaviour. Also the higher the

parent's digital skills, the more intense and diversified use of the internet (Hasebrink et al., 2011:8;27).

Regarding types of risks, children from lower SES families in Europe tend to have more probabilities of being bullied. Regarding sharing personal information online, girls and higher SES children tend to have their profiles private (Hasebrink et al., 2011:8-9).

SES might enable greater threats as it seems to influence where children access the internet and the level of privacy with which they can do it. As in the case of higher SES, they tend to go online at home and also in their bedroom, the later is associated with riskier situations, as it tends to be away from adult's supervision. At the same accessing from outside their households might also be enabling the same type of risks (Hasebrink et al., 2011:22).

Digital skills, use intensity and type of activities

As it was stated before, the higher the use of ICT, the higher the risks that the child might encounter. As the amount of activities, variety and frequency with which they engage them are also related to the likeability of encountering threats. As literature shows, use and expertise increase with age and is higher among boys (Hasebrink et al., 2011:27).

At the same time, higher skills among children are related to an enhanced self-confidence concerning the expertise they have within the use of internet and how much they know about it. Research from Brazil shows that around 70% of the children fell they have more knowledge about the internet than their parents and in Europe, it is around 30%. In all cases, this was registered regardless of the children SES (Barbosa,2013:4). This scenario reduces the probability of them reaching for adults in case of encountering a threat, as they might consider that adults are not able to understand or help them with the situation (Hasebrink et al., 2011:30).

Online and offline risks are closely related

Many of the online risks are highly related to offline behaviours, which ultimately are amplified through the internet given the speed of sharing, wider audience and lack of awareness that online behaviour can have impacts on real life. For instance, when analysing the characteristics of children that tend to meet offline strangers that they only know through internet, they tend

to have higher psychological conditions which make them more prone to have offline riskier behaviours (Hasebrink et al.,2011:10). Also regarding bullying, there is an association between online and offline world, as 56% of cyberbullies have already have done 'face-to-face' bullying (Hasebrink et al.,2011:42).

Key agents of mediation

Regarding technical solutions to help create a safer online environment for children, there are a variety of filters to prevent them to accessing websites or contents considered inappropriate. There are also digital devices that provide a service called parental control that allows the adults to monitor what the child does online and enable or restrict websites or downloading apps. In Europe, three-quarters or parents use these types of technological solutions with their children. (Hasebrink et al., 2011:57).

Parents addressing online risks with their children and giving them advice and restrictions in the use of internet is a strategy that proves to be relevant in this regard. Children that have addressed in some way online threats with their parents reach 9 in 10 in Europe, while this rate decreases when the child gets older. The SES of the household influences also parent's behaviour towards this issue, as within families from lower SES the restrictions and advice regarding online risks prove to be less than in the case of higher income families (Hasebrink et al., 2011:57-58).

Besides parent's actions and use of technical solutions to provide the children with a safer environment and help them build resilience, teacher's role has proved to be fundamental as agents of mediation. Concerning restriction actions within schools, 62% of European children have stated that their teachers established rules regarding the use of internet at the school. When it comes to helping in case of an actual situation, 24% of the European children said that their teacher assisted them when they encountered contents that distressed them (Hasebrink et al., 2011:58). Cross-country research in Europe showed that there are significant differences among countries on how often teachers address this issues. Encouraging governments to create awareness among the educational system is important as data shows that 83% of children from the UK have reached teachers regarding online safety advice, while the figures in France and

Romania reach 40%. The role of teachers is particularly relevant among low SES children and older ones, in some cases overtaking one of their parents. Although there is no strong link between teachers or peer mediation to reduce the child's probability of encountering online threats, research shows that peers are more likely the ones that children reach to in case of experiencing harms, and teachers in less frequent occasions (Hasebrink et al., 2011:12-13).

Finally, research shows that peer support in these situations is often an option considered by children and highly relevant: 73% of children in Europe have stated that they have been supported by peers regarding online issues, increasing this behaviour with age. This means that when it comes to situations related to online risks, children tend to seek for peers help instead of adults, which makes very pertinent policies for empowering children in this regard (Hasebrink et al., 2011:59).

Specificities among developing

Although children's access to digital devices and internet in developing countries might be significantly lower than in industrialised nations, the impacts of online risks are amplified. One of the main reasons is the lack of research in this area within these countries. Threats might also be exacerbated as in these particular contexts teachers and parents tend to have lower digital skills about their children and compared to industrialised countries. Where children access the internet is relevant as it is outside their homes, frequently in cybercafes or at school without much adult supervision. Another set of factors that could be amplifying the children's online threats is the fact that governments might lack strong legislations in this regard, are not aware or fully understand the possible risks or strategies for working in these situations. These variables are contextualised in societies with low financial budget and at the same time lack of human resources with the expertise to work within this area. This might end up with governments conducting sub-optimal policies in this regard or not even addressing it, amplified by the fact that this is one particular concern among many other matters considered more relevant for their policymakers (Gasser et al., 2010:4).

Issues that have been identified in industrialised nations as risk enablers is especially common among developing countries, such as poor digital skills among parents and teachers, low access

to internet from home, and a low inclusion of technology within the educational system (Gasser et al., 2010:16).

In countries where there was a fast access to internet among children such as Belarus, Moldova, Russia and Ukraine, many opportunities were enabled. However, also online risks were amplified as cases of sexual exploitation increased about the use of ICT. According to research, this is one of the most prevalent risks regarding children online safety in developing countries, followed by ones related to aggressive behaviour, and in a less extent human trafficking related. This is also influenced by what is considered child pornography and who is penalised developing countries. Among 187 countries members of Interpol, 29 have enough legislation to prevent child pornography, and 93 have no regulation in this regard at all. At the same time, ICT has enabled a wider and faster access and creation of illegal material of this type (Gasser et al., 2010:13-24).

Discussion

Uruguay is facing significant changes regarding a broad and fast access to ICT produced by public policies regarding of e-inclusion and e-government since 2007. Government actions range from providing access to digital ICT to every citizen, as well as programs to teach the population digital skills, to increasing the availability of online services, among many other strategies included within the country's 'Digital Agenda' (Rivoir & Lamschtein, 2012; AGESIC, 2011; MEC, 2010).

In order to provide access to internet and computers targeting those families who could not acquire one because of their SES, the government launched the OLPC inspired program called Plan Ceibal. Within 4 years, around 80% of the school aged students in Uruguay received a personal computer and could go online at schools and different public places all over the country. This program was addressed as a social inclusion policy, as it was meant to have an impact not only at an educational level, but to also provide with access to this technology to the student's family members. Unlike most of these IT-Education programs, the Uruguayan case is also unique as all students owned the devices and could take it home. (Rivoir & Lamschtein, 2012; Plan Ceibal, 2015a).

As the 'digital divide' in terms of access to ICT among households of lower a higher SES was almost eliminated, the 'digital skills' gap is still not breached in Uruguay, as a wide proportion of the population has low or almost inexistent use of this technology (EUTIC; 2013). The 'digital skills' gap is also prevalent in terms of age, as children are the main internet users and the ones who go online more often, most of them in a daily basis (EUTIC, 2013). Parents or carers generally have less experience and confidence with ICT than children, particularly in families from lower SES. Moreover, teachers also have low expertise with digital ICT. Although the government has been offering different training programs on ICT use, for both teachers and family members, the appropriation has been low and at a slow pace compared to children (Rivoir & Lamschtein, 2012; Plan Ceibal, 2015a). This scenario where the 'adult world' is not seen as ICT users by children could be amplifying the minor's online hazards in Uruguay. As research in other countries has shown that one of the reason why sometimes children do not reach for adult help in case of encountering online risks is because they feel that they might not understand or be able to help them (Hasebrink et al., 2011:12-13).

The use of the ICT provided by Ceibal is not mandatory for teachers, which creates a scenario where the student's appropriation of the technology in an educational environment depends on teachers and principal's digital confidence and willingness to learn and include the new resources (Rivoir & Lamschtein, 2012). As research shows, the teacher's role is highly important as agents of mediation regarding online safety, particularly in a context where parents lack of digital skills (Hasebrink et al., 2011:58). At the same time, in Uruguay, schools seem to have become, referents in terms of ICT, as this technology was first introduced to communities and its use encouraged by Plan Ceibal through the schools. For many parents, as in the anecdotal case presented early, the school is where they are likely to go in case of issues regarding the internet or computer and children (Teacher, 30th July 2016, Online interview).

For Uruguay, analysing and working towards creating a safer online behaviour among children should be a priority, as research shows that digital skills, opportunities and risks are positively associated (Hasebrink et al., 2011:15). Although online risks are a threat also for adults, they can have higher negative impacts in the case of children. For instance, minors are more likely to lack of awareness regarding that what they do online can have an impact in real life, they are more prone to be deceived, and does not realize how their online behaviour can have an impact in their future (van der Hof, 2014:1-6).

At the same time, children online safety has not been studied in depth so far, with most research available has been conducted in Europe and North America, and among older children (Gasser, et al.,2010; Hasebrink et al.,2011). The range of online threats regarding the impacts on the child wellbeing, and the likelihood to be encountered among children is wide. From receiving inappropriate material (i.e. gambling, violent or sexual), to sharing personal information, being groomed or bullied. Online risks also implicate that children can find threats while assuming different roles, from passive receivers of content to producers, from victims also to perpetrators (Hasebrink et al.,2008; Gasser et al.,2010). At the same time, not all threats can be traduced into harms, but can also build resilience among children as they learn how to cope with these situations while coping with them (Livingstone, 2015). Although research is higher among industrialized nations, evidence shows that the threats tend to be generally similar. However, it has been noted higher threats in terms of child pornography and human trafficking in the case of developing nations (Gasser et al., 2010).

It seems that the Uruguayan government has opened 'Pandora's box' in different dimensions with the OLPC program. Intentionally, as creating a change at a fast pace was the government's aim, and having a great impact while providing ICT to lower income households which had never before had access to this technology that it is so relevant nowadays. This great change, we could say 'digital revolution', was expected to bring significant opportunities. At the same time, 'Pandora's box' seem to have been opened in a more threatening way, as within Uruguayan context of high child poverty, adults lack of digital skills and educational system overwhelmed with pre-existing issues (INEED, 2014), and government lack of expertise in terms of children online behaviour, among other factors, might be amplifying the children's vulnerabilities.

Similar dilemmas are facing policy makers from around the world, as it was said that online opportunities and risks are positively related, and in a particular moment of increasing amount of child population going online has increased significantly, and they are becoming internet users at a younger and younger age. How to provide a safer environment for children while trying to promote the use of ICT and hence their opportunities, is currently a complex task for policy makers, schools and parents (Hasebrink et al.,2008). Also government's attempts to regulate the web in order to protect children are not always effective (Staksrud & Livingstone, 2009: 365), particularly as the internet has a dynamic and malleable nature, as users shape it by using it (Castells: 2001). An example of this is how the US government implemented regulations in order to protect children aged 13-years-old and under from online threats. As a result, most social networks decided to restrict access to their services considering that age limit. However, millions of children access social networks such as Facebook, most of the time with the consent and help of their parents (Hargittai et al., 2011).

Literature shows that different variables are intertwined when it comes to analysing the different online threats that children are prone to encounter. It is highly relevant to analyse the micro and macro factors that create the context within which the child accesses the technology (Gasser et al., 2010). As for instance low levels of education among the children families relate to the levels with the digital skills of the students. At the same time, as the use of digital ICT becomes more sophisticated the chances of encountering online threats increase. Age, gender, race, types of technology used, as well as many other factors interrelate amplifying risks in different ways depending on the context.

Analysing the Uruguayan context through current literature regarding children online safety, is a difficult endeavour given the country's particularities. To begin with, Uruguay presents socio-demographic characteristics that locates it between the concepts of developed and underdeveloped nations. Government institutions are strong as well as it has a stable democracy, the economy has been growing for more than one decade and unemployment has reached its lowest rates. However, poverty levels are high and concentrated among the child population and has some of the lowest rates in terms of population with 12 years of formal education completed within Latin America (INEED, 2014; UNICEF, 2016).

Regarding ICT access and digital skills, thanks to Plan Ceibal, access to ICT among children resembles European and North American countries. However, it differentiates from industrialized countries as digital skills and internet use among adults are significantly lower than children (Hasebrink et al.,2011). In terms of ICT in education, as Ceibal was meant to be also an educational policy, this technology was introduced in schools to a higher extent compared to other Latin American countries given the national scale of Uruguay's program.

Uruguay's case is also particular, as the government, while providing most child population a computer with contents specifically selected, has occupied almost completely the market of digital devices for children: computers are provided by Ceibal and smartphones are not very common among children (EUTIC,2013). This scenario could be considered as an enabler of a safer environment, as there are content websites filters among Ceibal's internet spots and in the case of the tablets, delivered to students from 4 to 7 years-old, apps cannot be downloaded without adult permission. However, most threats cannot be avoided, as for instance with the case of sharing personal information or how they relate with other online users.

Uruguay's government decisions in terms of the technology deployed for students has recently been questioned in the media when it was announced that Google was giving for free access to their 'Apps for Education' (Subrayado, 2015). A sector of the academia questioned the decision, as the US IT company has proved to fail in more than one occasion to their promise of not analysing or profiting from the user's data of this particular product (Zetter, 2015), and recent government surveillance accusations towards the US. This unfolded a debate regarding if the country should develop its own 'Apps for education', evaluating the costs involved and budget priorities, given that Google gave the product to the Uruguayan government for free and states it the ToS that is not using the data. The project started by the end of 2015 and

involved joined efforts from the educational system, and the Uruguayan Camera of Information Technologies (CUTI), and the national Engineering Faculty, among other actors (El País, 2015).

Other particularities of the Uruguayan case that might be enabling higher risks is how children use devices is in some way a 'hybrid' with a smartphone, associated nowadays in EU and North America with riskier behaviour (Haddon & Vincent, 2014). The laptops or tablets are their personal devices, which sometimes do not share with parents, they use it outside adult supervision as most of the time they go online through Ceibal's hot spots located in public spaces or outside the school. Research from European countries has shown that different risks and safety issues should be addressed as children use different digital devices, and identify smartphones to be associated with enhanced threats given the personal or more private use, less likely to be supervised by adults, and the common use of images and video sharing (Haddon & Vincent, 2014). Given the particular case of how children appropriate Ceibal's technology, it is another reason why studies in Uruguay regarding children online behaviour are relevant as they differ from most countries experiences.

Within the Uruguayan context, it is significantly relevant to empower children, not only as they might be less likely to reach for adult's help in case of online risks, as they perceive teachers or parent's skills are poor and hence might not be able to help them. In a context where the 'adult world' does not understand or have digital skills, children are even more likely to be turning to peers in case of online threats (Hasebrink et al., 2011:59). Creating campaigns and working with children towards resilience strategies, how to deal with threats, and the relevance of reaching for adults might be particularly important in the case of Uruguay. Firstly, to create awareness and prevent situations as for example not sharing personal information online, and what to do in case of encountering threats. Secondly, it is also a way of reducing risks as children are likely to be the perpetrators (i.e. with cases of cyberbullying, or sharing or creating inappropriate materials). As it happened with the anecdote of the 12-year-old presented in this research, the risk was a consequence of child's actions because of the illegal material was produced by the victim in the first place and as her classmates become perpetrator when sharing in their profiles the material. Thirdly, the classmates become victims with their behaviour as they show to have no awareness of the severity of their actions and that they have consequences in the real world (Teacher, 30th July 2016, Online interview). Finally, and related to the third argument, the importance of rising awareness among children regarding their 'digital footprint'

and how what they do online can have consequences that might follow them for the rest of their lives, without being able to control it.

Current campaigns and materials regarding children online risks in Uruguay have not been distributed massively, consisting mostly of digital media. This means that they are not likely to be known by many parents or teachers, who tend to lack of digital skills. Moreover, the materials available were designed considering the online risks framework from industrialized countries. Although many of the threats and awareness rising campaigns apply to the Uruguayan situation, it is highly relevant to develop tailor maid campaigns as for instance research shows that in developing countries are more likely to face risks related to child trafficking and pornography, unlike in industrialized nations, and which can have a greater impact in an individual's life, compared to the others. Campaigns should also be designed targeting children and families from low SES. They should be tested with the audience that is meant in order to verify if it is being understood. Also show examples, not only of the threats but how to cope with the situations, which are the resources available. Stronger regulations for people that try to reach minors or defamation. As it is easier to loose control of your data and it spreads in a faster way.

Although many risks concern in the first place issues regarding offline behaviours as in terms of the minor's sexuality and context of violence, they can be then amplified through the use of internet (Hasebrink et al., 2011). Given that schools are struggling to address these issues (Teacher, 30th July 2016, Online interview), in some cases because regard sensible topics that they are reluctant to address such as sexuality, and others because they are overwhelmed with their everyday work. Addressing these macro-factors by Plan Ceibal could be a strategy to consider by the government, as a way of supporting the schools in this regard. Through using technology as an excuse to reach topics that are also closely related to online risks. By these type of strategies, the government could be more effective and have a wider impact. This would not be an exceptional case where the Ceibal considered the use of technology as a way of addressing issues that are exclusively related with ICT. As at the beginning the program's main goal was to provide the students and teachers with computers and internet, with this solved started lead actions related to changing Uruguay's school pedagogy. For example, Ceibal is leading, with the Education Administration, Michael Fullan's 'Red Global de Aprendizajes' looking forward to research and explore different learning and teaching strategies with ICT as an enabler for this change (Red Global, 2015).

Research in terms of how children appropriate the technology, their main uses and behaviours offline that could be amplified online creating wider harms to their wellbeing should be addressed. Not only quantitative data, but in depth qualitative research to investigate how the children behave online without adult supervision. Currently most research are polls regarding indicators used in European or US research. Besides being able to compare Uruguay's current situation to other countries with more experience or different contexts to help understand the local findings is relevant, tailor maid research is needed, as Uruguay's situation is so particular.

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