

# Ibero-American Minors: How Are They Accessing and Using Information

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**Abstract.** The presence of the Internet and all kind of digital devices is clear in developed countries, especially among youngsters. But technology access and usage is also growing in developing societies, where minors are in most cases at the forefront of the adoption of these new services, exploring the opportunities. The present proposal intends to analyze how and for what reasons are minors of four Ibero-American countries (Brazil, Colombia, Mexico and Ecuador) are accessing the Internet, specially the kind of services and the types of contents they are consuming online.

**Keywords:** Internet access, Internet usage, young users, web content, web services.

## 1 Introduction

The intensification of people's digital life is a fact in developed societies [1], [2], [3]. It is enough to take a look at the remarkable development and spread of Information and Communication Technologies (ICTs) in our societies in recent years. In June 2012, almost 361 million people worldwide accessed the Internet, what supposed 34% of the total population<sup>1</sup>; according to the International Telecommunication Union (ITU), in November 2011, there were 5,981 million mobile telephone lines worldwide, which represented a penetration of 86.7% of the total population. All these data confront us with a reality of where Internet penetration is high, such as in North America (78.6%), Oceania (67.6%) or Europe (63.2%), where it is medium, such as in Latin American/Caribbean countries (42.9%) and Middle East (40.2%), and where it is low, such as in Asia (27%) and Africa (15.6%) [4]. The differences in mobile phone usage are not so remarkable: according to ITU (2011), while in developed nations mobile penetration reached 117.8% of the population it reached 78.8% in developing countries.

But the incidence of ICT is higher among young people that, following Prensky [5] could be considered *digital natives*. In this particular case, the future, which has turned already into present, is drawn by millions of minors with a screen in their pockets, which gives them global and interactive access to countless contents. Research confirms that, despite socioeconomic and cultural differences, in most

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<sup>1</sup> Data gathered by [www.internetworldstats.com](http://www.internetworldstats.com)

countries it is possible to find high levels of ICTs penetration among young people who seem to be at the forefront of the adoption of any technological developments that arise [6], [7], [8], [9], [10]. The research work developed by EUKids Online, lead by Sonia Livingstone and financed by the European Commission, has established in the last years how minors are at the forefront of technology adoption [11] [12] [13]. But this also happens in other regions and countries: last Global System for Mobile communications Association's (GSMA) report [14] focused on Egypt, Japan, India and Paraguay, reflected that 69% of children in these countries were using a mobile phone, and this usage was more sophisticated everyday: not only because of the device itself (many kids are familiarized with smartphones), but also because of what they use the mobile phone for. While only 43% of parents in those countries report using their mobile phones to access social networking sites, 73% of minors declared doing so.

The present proposal intends to analyze how and for what reasons are minors of four Ibero-American countries (Brazil, Colombia, Mexico and Ecuador) accessing the Internet, specially the kind of services and the types of contents they are consuming online. According the available data, as gathered by Internet World Stats, Internet usage reached in June 2012 42.2% of Brazilian population, 55.9% in Colombia, 27.2% in Ecuador and 36.5% in Mexico.

To do so, we use data gathered by the Interactive Generations Forum<sup>2</sup> during 2010 that involved 24,320 children between 6 and 18 years of age from eight countries, Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, México and Peru [15] [16]. For our purpose, only the data referring to minors 10-18 years old from Brazil, Colombia, Mexico and Ecuador are taken into account.

## 2 Methodology

In order to carry out the study "The Interactive Generation in Ibero-American countries" an online questionnaire was developed by the Interactive Generations Forum. The questionnaire for the sample group (10-18 years old) included 126 questions regarding their possession and usage of the Internet, mobile phones, videogames and television.

In order to determine and select the sample, the researchers defined a stratified sample with proportional affixation according to different regions and school ownership (public or private). An invitation to participate in the study was send to all the

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<sup>2</sup> Interactive Generations Forum was born in December 2008 founded by Telefónica, the University of Navarra and the Inter-American Organization for Higher Education Organization. Its mission is to build, together with all the people concerned, a framework, which will allow the proper use of new and old screens that are so appealing to children. This involves combining both scientific knowledge and educational activities, including the study of challenges, problems and opportunities hitherto unknown, and quickly transferring these findings to governments, institutions and social agents. The vision of the Forum is based on a global and international view, thus it is already carrying out projects in countries such as Argentina, Chile, Ecuador, Brazil, Uruguay, Guatemala, Mexico, Colombia, Venezuela, Peru and Spain.

schools of the selected areas. As an incentive, the schools were offered with a customized report on how their students were using ICTs. Each school decided which students were taking the survey. From the total gathered data (74,250 valid surveys received), the cases were chosen following a convenience sampling taking into account the distribution by sex, age and the prior variables of region and school ownership. The final total sample was of 18,768 school children.

As this article only takes into account minors aged 10-18 years old, the sample size of this age group was of 8,416 minors. 51% of these were boys vs. 49% of girls. 68.3% were enrolled at a public school vs. 31.7% who were on a private one. 80.1% of the sample lived in an urban area. 63% of them lived in two-parents households, while 26% lived in a one-parent household and 11% did not live with their parents.

The surveys were available on the webpage of Interactive Generations Forum [17] and data collection was conducted at the computer science classrooms of each educational center taking part in the research; in some occasions, when the Internet access was not available, paper questionnaires were handed out in the classrooms.

Each center had a unique username and password to access the questionnaires in a controlled way. Identity of the participants was protected: the survey was anonymous and participants were never asked about their personal identifiable information.

### 3 Results

First we asked about their Internet usage. We found that 60.25% of them were Internet users, clearly higher figures than the national ones according to Internet World Stats. There were interesting differences per country: Colombians and Mexicans were using the Internet at higher levels than the Brazilians and Ecuadorians.

**Table 1.** Are you an Internet user?

Brazil	Colombia	Ecuador	Mexico
58%	73%	45%	65%

Then we asked: *"Where do you access the Internet from?"* Their home was the most popular point of access, but it is also interesting to point out how Mexicans and Colombians, the ones with higher access to the Internet at home, were also the most avid users of other locations such as cybercafés. Access from the school was a frequent option for Ecuadorians.

**Table 2.** I access the Internet from...

	Brazil	Colombia	Ecuador	Mexico
Home	65%	67%	43%	72%
Cybercafé	30%	36%	28%	35%
School	21%	31%	29%	27%
Public place (like a library)	6%	11%	25%	10%

According to their level of Internet usage and their point for Internet access we asked: *"Which Internet services do you use?"* We found that these youngsters were using the Internet mainly for social interaction, in a private way (email, sending SMS, VOIP) or a public one (social networking sites), and for entertainment: online games was one of the most popular activities, followed by downloading content from the Internet (supposedly music, films and games). There were differences by country: VOIP is less popular among Ecuadorians that were using the chat services more than the others. While Social Networking Sites were the most popular service in all the four countries Brazilians and Colombians were almost 15 points ahead Mexicans and Ecuadorians.

**Table 3.** Which Internet services do you use?

	Brazil	Colombia	Ecuador	Mexico
Email	60%	69%	44%	64%
VOIP	39%	32%	13%	23%
SMS	22%	34%	27%	22%
Chat	4%	8%	26%	13%
Visit web pages	60%	70%	57%	70%
Forum	7%	11%	8%	11%
Downloading pages	58%	58%	42%	55%
Social Networks	84%	82%	61%	69%
Blogs	24%	14%	8%	18%
Online games	53%	68%	56%	61%
Ecommerce	5%	5%	3%	5%
Listening radio stations	8%	8%	6%	6%
Watching TV	6%	11%	7%	12%

While surfing the web was also a popular activity that could match in both previous categories (social interaction and entertainment) it could also have a broader scope.

In order to clarify this point, we asked them *"What kind of pages do you visit when surfing the World Wide Web?"* Music and games were the most popular online content for this age group. Sports attracted a third part of these youngsters and humor/comedy content was appealing to all of them except of the Ecuadorians. News content was the third most popular option for Brazilians but not appealing for the others.

**Table 4.** Types of content visited on the web

	Brazil	Colombia	Ecuador	Mexico
Music	75%	78%	65%	73%
Games	55%	60%	45%	55%
Sports	39%	29%	30%	32%
Humor/comedy	32%	30%	18%	23%
Educational	22%	25%	31%	19%
News	42%	21%	19%	20%
Cultural	19%	18%	13%	15%
TV programs	24%	17%	11%	14%
Software	14%	15%	16%	13%
Adult	12%	7%	5%	5%

## 4 Discussion

Regarding the Internet usage minors from Brazil, Colombia, Ecuador and Mexico were leading the way in their countries toward universal access to the Net as happening also in other societies. School access to the Internet could be one of the reasons explaining this strong trend. As these youngsters got accustomed to use the Internet at early ages it is easy to guess that they will be using it also when growing up: the fact that they were also accessing the Net from cybercafés was a clear indicator of their willingness to use the Internet.

Regarding the reasons why minors in Brazil, Colombia, Ecuador and Mexico were using the Internet social interaction, communication and entertainment emerge as the main factors. While the Internet offers a wide range of opportunities, minors aged 10-18 years old in these countries used it to satisfy some specific needs related mainly to their age: to interact with friends and colleagues, to entertain themselves.

The type of online content preferred by these minors revealed that while there was a high concentration of interest in four types of content (music, games, sports and humor) there was also an important diversification for the rest of the options.

While it was possible to identify common trends across the four countries there were also some particularities among them: Brazilians preferred news content, Ecuadorians were much chat oriented, Colombians and Mexicans had higher rates of access to the Internet. Being young in a global and digital society equals somehow to all of them but cultural and national particularities must be also taken into account to understand their usage patterns correctly.

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