

# A Decade of Youth Behavior Studies regarding ICT's Impacts: notes on the experience of School of the Future Research Laboratory at the University of São Paulo - Brazil

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## ABSTRACT<sup>1</sup>

School of the Future Research Laboratory at the University of São Paulo – USP is 32 years old and since 2010 has been devoted to map and discuss new behaviors among different virtual communities seeking of media and information literacy (MIL), new ways of learning and producing contents on digital platforms. On order to do so we have been developing surveys, virtual ethnography and netnographic studies to map new attitudes and behaviors of contemporary networked actors. This article brings a summary of several findings in the research conducted in the last ten years, demonstrating how the pioneering work of School of the Future researchers points out indicators on the behavior of young communities that are valid to this day and still raise contemporary discussions. In order to do so we will focus on our most extensive netnographic studies developed with young students throughout Brazil in 2012-2014.

**Keywords:** Brazilian Youth digital literacies, media and information literacy – Brazilian youth, netnographic studies among Brazilian youth, School of the Future Research Lab netnographic studies.

## 1. INTRODUCTION

The Research Center for New Communications Technologies Applied to Education –School of the Future at the University of São Paulo - USP began its activities in 1989 and turned into a Research Center in 1993 linked to the Dean's Office. Since the inauguration, it seeks to improve education in Brazil through the introduction of digital culture within formal and informal learning. NACE EF-USP proposes innovations using Internet and multimedia resources to enhance learning and teaching experience. The commitment to theoretical research and to applied strategies for education, communication and

information are the core principles guiding its operational activities.

New ways of learning, teaching, and producing knowledge requires out-of-box studies regarding the impacts of ICT on contemporary life. NACE EF-USP so developed partnerships model involving university, society, and different research funding agencies and government spheres in order to fund action-research projects. Also, the Digital Culture Observatory was created in 2007, focusing on emerging literacies, social practices, individual and collective production of knowledge in network environments and new forms of authorship inspired on digital collectives [1], producing an extensive literature regarding this scenario [2, 3, 4].

Surveys, virtual ethnography and netnographic studies are methods used to map new attitudes and behaviors of contemporary networked actors [5]. Concepts raised by authors like Turkle [6], Van Dijck [7] and Morozov [8] are usually the basis of our studies' theoretical framework. In the following lines, a summary of several findings in the research conducted in the last ten years will be presented and discussed, demonstrating how the pioneering work of this Brazilian research center points out indicators on the behavior of young communities that are valid to this day and still raise contemporary discussions. In order to do so we will focus on our most extensive netnographic studies developed with young students throughout Brazil in 2012-2014. The References section at the end of this article presents our main academic production on the last ten years.

## 2. NATIONAL SURVEYS OVER YOUTHS' DIGITAL BEHAVIOR

NACE EF-USP's expertise in both theoretical and applied research on ICT impacts stimulated the Brazilian Telefonica Foundation to invite us to partnership on a national survey about youth behavior. Based on previous experience of Spanish Telefonica Foundation in association with the University of Navarra, data was collected regarding gender equality, technology penetrability and national challenges towards democratic

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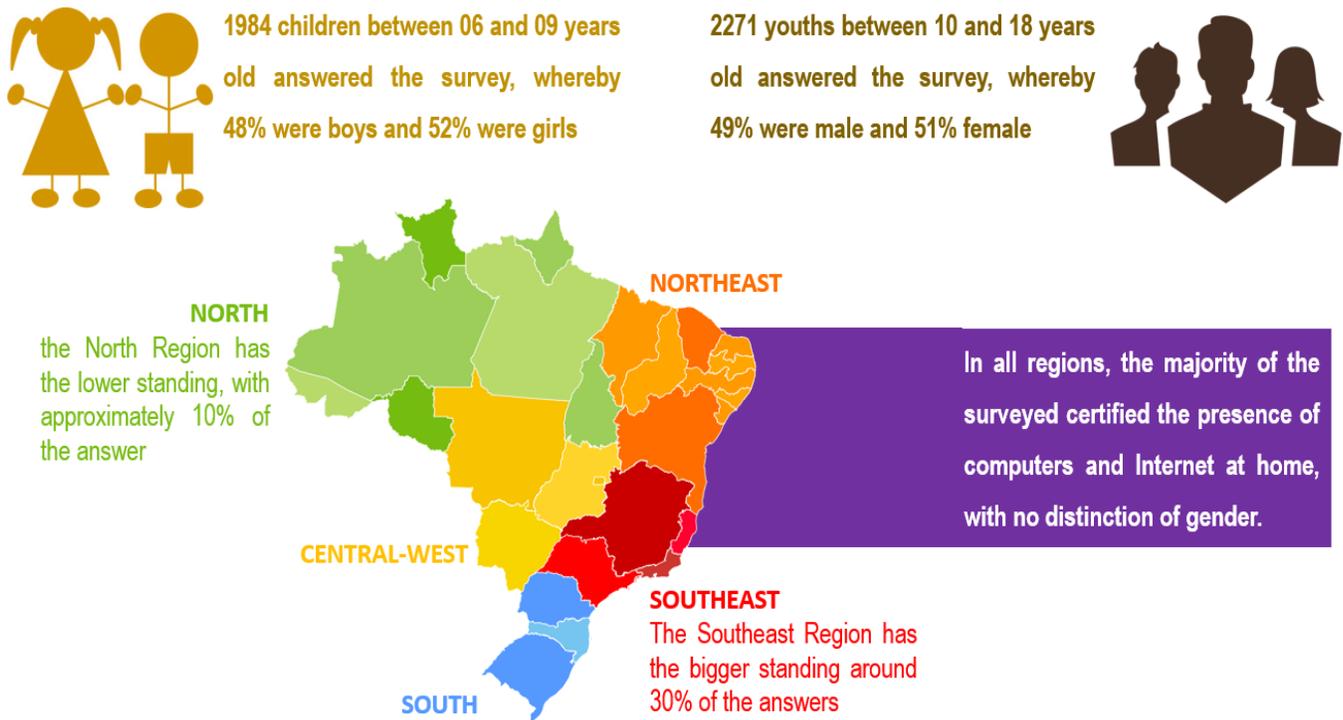
empowerment for this age group. “Interactive Generations Brazil” (2012) and “Connected Youth Brazil” (2014) main results are presented as follows.

**Interactive Generations Brazil research**

In 2010, 73 million people were connected to the Internet. Also, at that time, 4.6 million households with computer had no Internet access. This number increased 52% until 2015. At that time, a national investigation on

uses and appropriation of screens by youths was imperative. For Passarelli [2], NACE EF-USP distinguished two waves in the networked society. The first is related to the central need of digital inclusion. In the second one, it is evident the presence of digital natives, when the concern is no longer how they learn to use the basic digital tools, but how they apply and create knowledge online. What was the Brazilian’ state of art in this issue?

Figure 1: Research General Overview



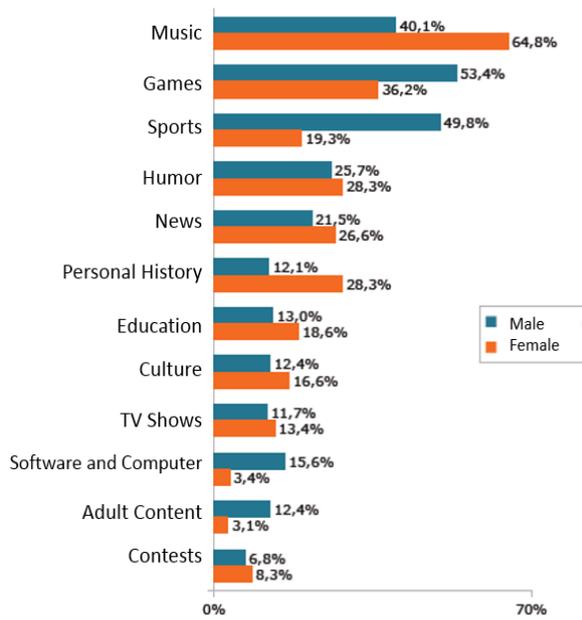
Source: Authors

The use and value involved in four screens – television, games, computer, and mobile phone – among kids and youths (6 to 18 years old, named the interactive generation) were the basis for measuring penetrability in the school and family environment. The data collection was performed between 2010 and 2011 with a sample of 18,000 respondents among children and teenagers in the five Brazilian regions. Figure 1 summarizes the general sociodemographic profile.

About 64.2% of youngsters assumed they navigate online on their own, higher level than “learning from a friend” (11.2%) or even “parents” (5%). Parents usually did not

follow up their online behavior regarding knowledge production, awareness, and transmission. Teacher at school was actually the main mediator for learning at a low rate (11%). Distinctions between male and female behavior were noticed (Figure 2), being games and music their more similar preferences.

Figure 2: Content production on the web (Youth, Gender)



Source: Authors

About virtual friends, 51.3% of male and female respondents argued not having anyone. For the ones with online friends, 30% had met them, while 18.4% did not have the chance to do so. Concerning content by gender (Figure 2), male tended to prefer games, sports, software, and adult content. Females were more inclined to music and personal history. The other themes presented a low inequality regarding gender.

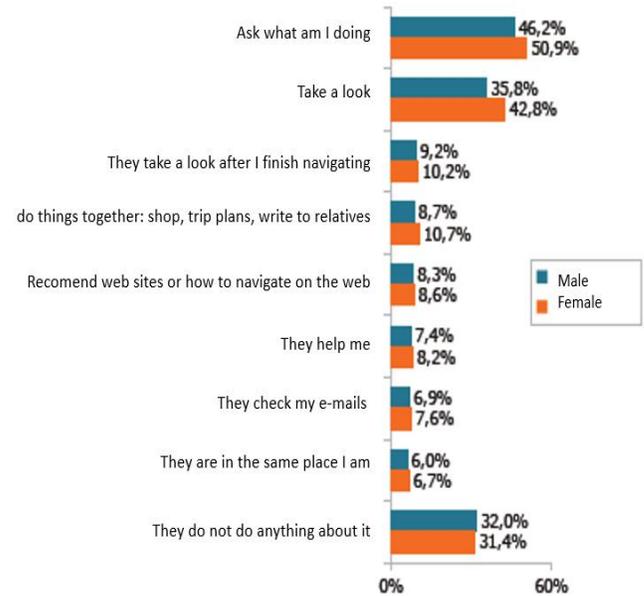
Despite their low penetration, mobile phones were a growing trend in the beginning of 2010s and represented the higher level of youth activity when compared to the other screens. Brazilian youths were onto media convergence (analogical and digital) and were starting to develop their mobile literacies by sending text messages, listening to music or to the radio, using the alarm function for waking up in the morning and gaming, among others mobile activities.

It is interesting to observe that the mobile phone emerges, for young people, as a convergence platform where they are able to explore many media channels and vehicles, social networks, browsing, and apps for radio and television, games, photography, watches, calculators, and phone book. Female respondents showed more experiences using mobile phones than the male ones. Girls are also more active about the day life organization

using mobile apps. Boys usually perform downloads, games, web navigation and video recording.

These activities data come along with another critical issue: the surveillance indicator (Figure 3). According to the research, the level of surveillance performed by parents or guardians, friends and partners was higher for female individuals than male. When watching television, for example, girls are much more surveilled than boys in every pointed scenario.

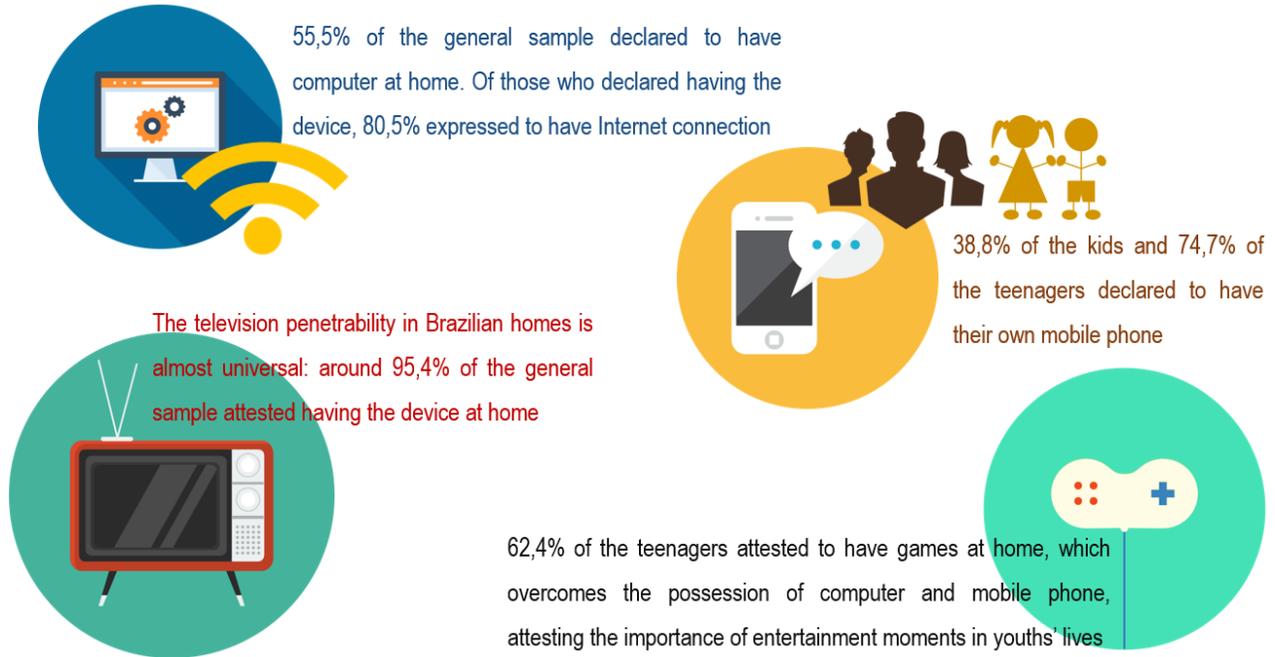
Figure 3: Behavior and surveillance (Youth, Gender)



Source: Authors

Youth invested and continues to invest a great amount of time on the studied screens in order to enjoy learning and leisure. Therefore, they revealed being equipped with access devices, which allow them to interact with other people and media and fulfill their relationship, consumption and learning needs. Much of the data confirm this scenario in Figure 4.

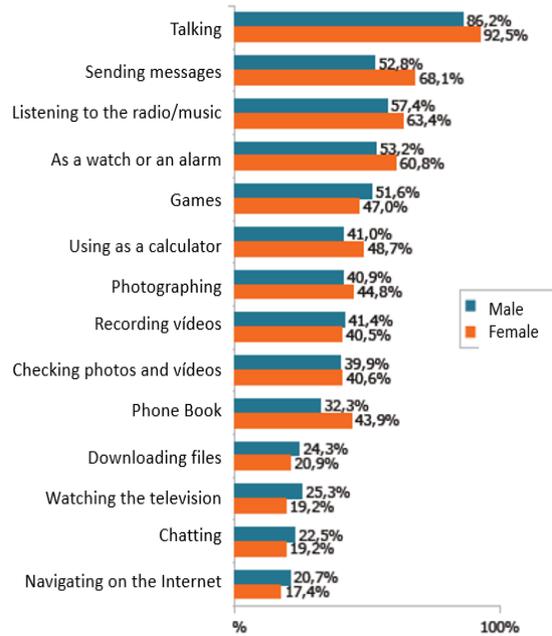
Figure 4: Youths and kids' connection rates



Source: Authors

As foreseen by this research in 2011, the national research “ICT Kids Online Brazil” published in 2015 states that kids and youths were depending much less on desktop computer from their school or home to get connected: they have been empowered and becoming autonomous through mobile communication devices, establishing networks and relationships in a web logic. This has been making them prefer the mediated interaction of screens to the face-to-face social interaction or traditional learning. This scenario was just slightly different in low-income communities or in rural areas, where computer in schools still plays a significant role. Regarding mobile phones use, female respondents were more eager to use them for relationships activities than the male ones – which were more focused on action-driven activities (Figure 5).

Figure 5: Mobile phone activities (Youth, Gender)



Source: Authors

Nevertheless, both game and Internet entertainment dimensions were part the youths' daily life during week and weekends. In this respect, the research revealed that the number of hours reserved for leisure mediated by the four screens is hardly distinct between the days on the week, prevailing a 1-2 hours of usage per day, and males' users reported using more than female ones.

### #Connected Youth Brazil research

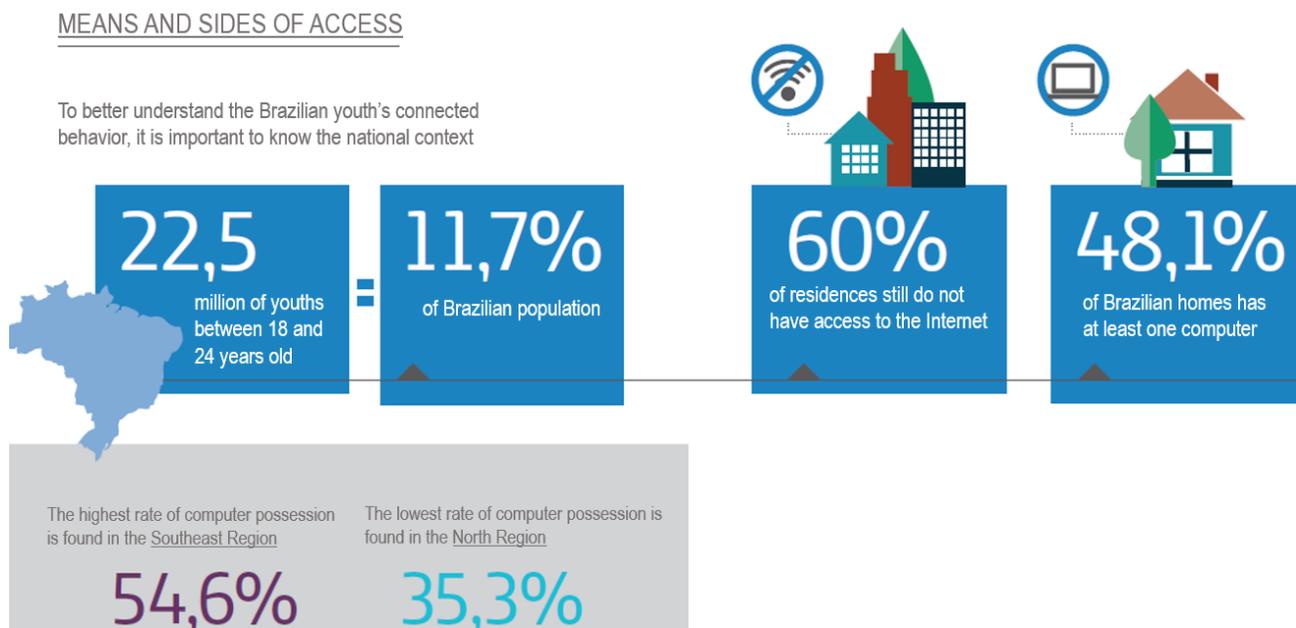
In 2014, the continuity of the research was structured over four strands: youths' behavior, education and learning, entrepreneurship performance and activism, but the following lines will focus on data concerning gender

equality, educational and behavior trends, and activism performance.

Regarding technologies for accessing the Internet, Figure 6 gives an idea of how the access is distributed and how unequal this provision can be between north and southeast region.

For the surveyed youths, no matter the gender, age, or socioeconomic class: both desktops and smartphones are means to access the Internet – and 42% consider the smartphone the main one (Figure 7). For youth from low-income communities, the smart phone role is even higher.

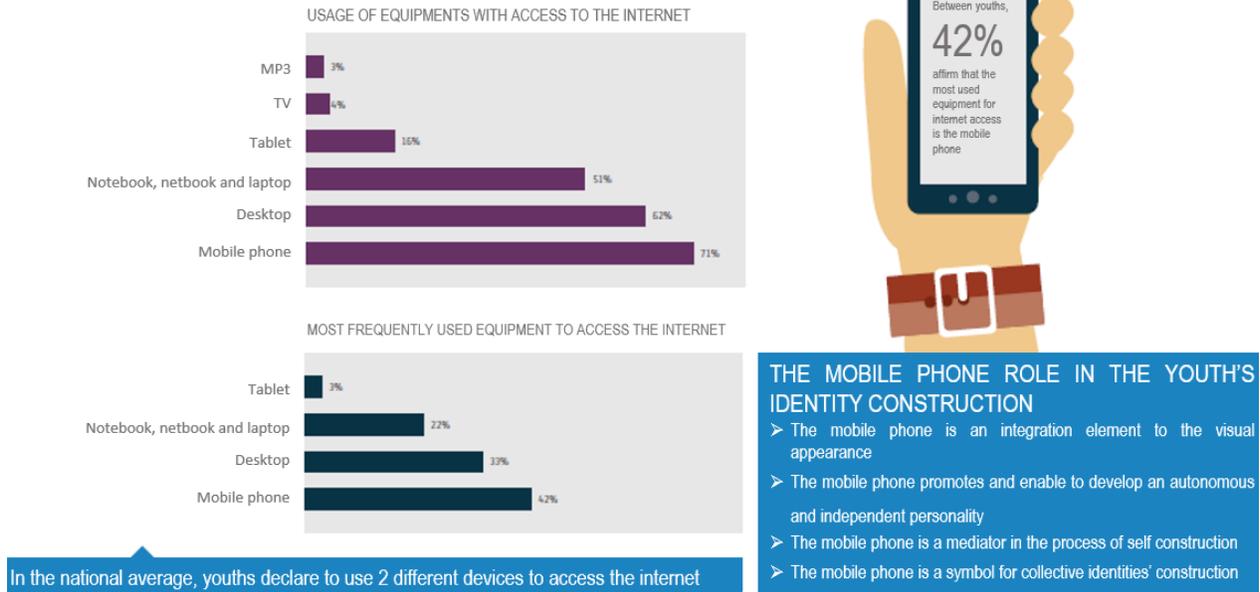
Figure 6: Means and sides of access



Source: Authors

Figure 7: The mobile phone usage for accessing the Internet

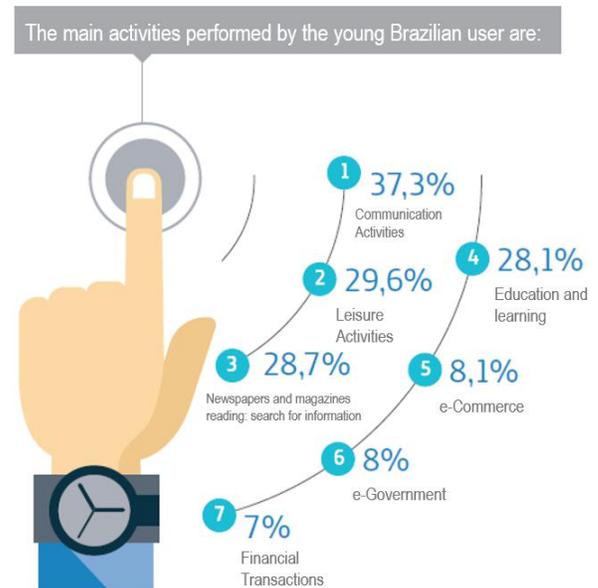
The mobile phone is the main equipment to Internet access. The connection by mobile device is highly used by youths in all socioeconomic classes.



Source: Authors

Brazilian youth were extremely interested in mobile communication for chatting. In a daily basis, 90% of respondents use social network at least one time as a priority – “leisure and entertainment”, “seeking information”, “support and online services” and “education and learning activities” were behind in this order. In relation to schools’ activities, 43% of respondents argued that they use Internet more than once a day and were even more engaged with online courses. Figure 8 summarized youths’ performances by activities.

Figure 8: Youths' Internet performance

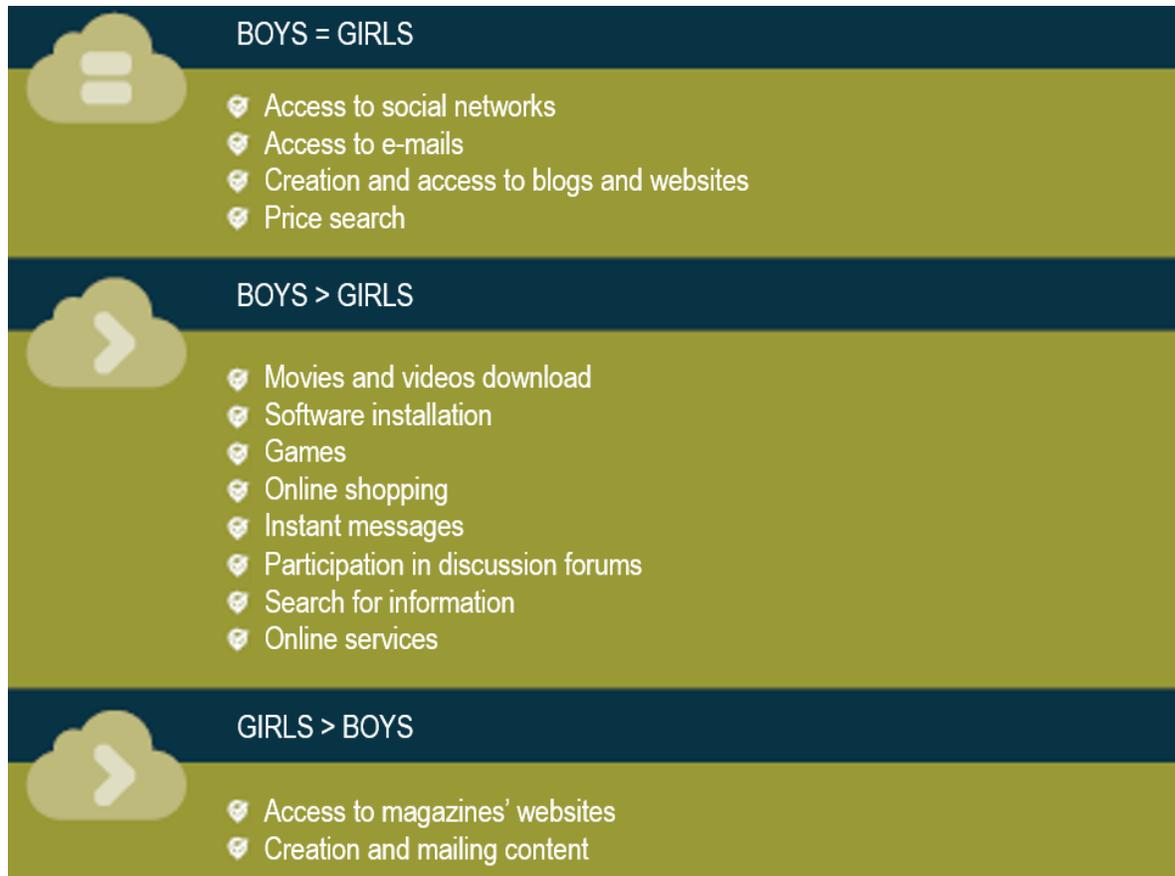


Source: Authors

It is interesting that the collected data tends to reveal new sides of the male youth user that surpass the girls in territories that the female used to dominate, like social relationship and shopping. Also, consider how the female youths are assuming new commands in areas that used to

be for the male, like games. Some of that difference can be regarded in Figure 9.

Figure 9: Youths' Internet performance



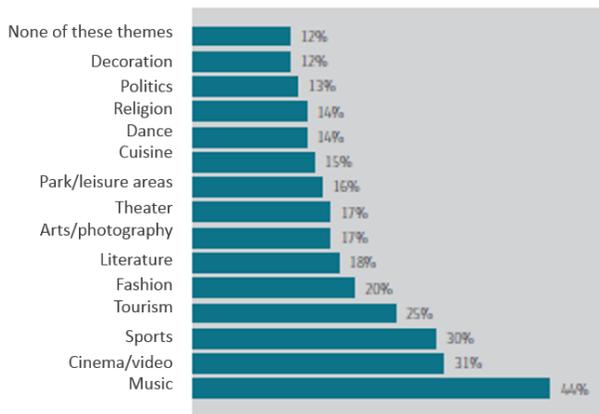
Source: Authors

For all the investigated digital activities, practices, and tools regarding entertainment for the youth, the mediation and educational level was highlighted, confirming that even in leisure, the educational level helps in the apprehension and enjoyment of digital opportunities. For education, capacitation and training performances, it is possible to affirm that the Internet use as a tool for school content research is strongly focused on college education, when the high school level could make a better use of those engines. Educational level is a fundamental characteristic in the youths' literacy, meaning that even for fun, the learning process matters, as mentioned in the related literature [9, 10].

About the seek and creation of online content (Figure 10), in general the most requested themes are the same in an elevated level of production (which can be interpreted like the youths are not satisfied with the available content or inspired by something they have seen) showing a coherent order between the cultural, information and

recreational interests. In addition, religion gains a path in this context if seen the event and content creation when compared to political interests.

Figure 10: Online creation, dissemination, and production



Source: Authors

The urban life condition, characterized by the great distances and difficulties in transporting, makes the physical personal contact hard to achieve or even inexistent in some cases. The users considered that with the Internet, people have become lazy. Therefore, it was witnessed that the interviewees (more than once) have evaluated themselves in a critical perspective, even as a bad image, which points to the accommodation and to giving up the physical contact with their friends. According to this logic, the quotidian and P2P contact shapes the user's affection and emotion.

Considering the extensive Internet use declared by the sample majority, for them digital practices is naturalized (common duties), and often they do not see it as over the boundaries. On the other hand, for parents, responsible and teachers – the connectivity compulsion is concerning, and consider the excessive spent time on the Internet a productivity obstacle, jeopardizing social relationships and schooling outcomes quality.

In several opportunities, interviewees expressed to be worried about critics, discussions and misunderstanding over disseminated content in social networks. It can be highlighted the youths' wish of acceptance and almost no tolerance facing a debate or a polemic issue.

Therefore, they usually avoid confrontation with divergent or opposite opinions, and it is a mistake to assume that the generations understand about technology and technical skills to manage it. What they often have is a critical and curious capacities but still do not enjoy the whole potential the web can offer, and to deal with differences and oppositions is a needed capacity in the social skills developing process. The youths have the potential to occupy the Internet and the physical public spaces in order to perform their empowerment capacities for establishing themselves as democratic pillars in the Knowledge Society in the Information Age.

The month of June of 2013 in Brazil was blended by many streets' protests, with expressive participation by the young population, boosted by mobile technologies. In estimation 1,4 million people in 20 Brazilian cities went

protesting. This net-activism occasion was a typical movement that started on the street, migrated to the social networks, and came back to the public space with a huge youth adherence and had main characteristics: disappearance, anonymity, no leader or political party and no seek for power.

We must consider new communication systems enable social movements to new forms of organization, amplifying the space of power, establishing a direct channel towards the mass population and against-power movements. The government institutions systemic crisis – in general parties and trade unions – in answering the citizens' demands rises a communication that emerges by individuals without any censorship by the traditional media. This space offers non-human instruments for emancipation and autonomy and builds a power that crosses a technological transformation in cultural, social, and political context. In this context, the youths have become more exigent by two reasons.

The new Information and Communication Technologies enable actions and activities of social movements. The juvenile world is affected and impacted by this context, including the digital networks dynamic. It is worth saying that for Brazilian connected youth the participation in popular activism, even when restricted to the Internet is considered relevant. However, the physical presence in protests is prominent for 27% of the sample, while 14% declared that the Internet dimension of activism is also valuable. In the 2013 mobilizations, the general sample affirmed to follow the status, presently and online, in all the five regions (in higher or lower amplitude).

The juvenile net-activism was a phenomena not only in Brazil and shows the transformation potential over these initiatives, especially related to the personal and critical perspective foreseeing the social and political issues in the local community, empowering themselves as the protagonists in designing their own future. The net-activism revealed unknown sides of youths' behavior and social practices that enables us to better understand juvenile dilemmas regarding their own net-activism. What is curious is that, in general, the sample showed to be not interested in politics.

### 3. FINAL REMARKS

In this paper, several findings in the research carried out in the last ten years were analyzed pointing out how indicators on the behavior of young communities emerged and are still valid to this day, raising contemporary discussions in the context of Brazilian culture.

When regarded the educational process, the Interactive Generation Brazil research shows new technologies and digital literacies shaping the relations between teachers and students inside the school ecology. This new connected scenario imposes urgency and transformation within educational processes was teachers must act more as mentors and enhance student's discoveries. In this

sense, Connected Youth Brazil research outcomes showed how new pedagogical approaches demand that professors and schools perform critical production on content connections between digital platforms and tools, taking as a reference the students' context: both of them are in constant learning about the technologies' mediation processes.

Another obstacle is that the school institution must prepare their professors and students for new informational resources regarding reliable sources, enlightening the difference between traditional journals' news and online channels. Meanwhile students can access everything they can reach, but they cannot dismiss teachers' mediation for constructing critical thinking.

With the digital benefits there are risks related to the psychological health, beyond ethical and moral values that can be easily dissolved in the connected space (like the social network addiction). The citizen empowerment toward a critical, autonomous, ethical and protagonist development is connected to families and learning environments rich in technologies and genuine mentorship.

#### 4. ACKNOWLEDGEMENT

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