Interdisciplinarity and Mexican Interactive Generation. Variables Associated with Communication and the Risk of Mexican Youth to Use Smart Portables Devices with Internet Connectivity

Gustavo Adolfo León Duarte[1*]

[1]*Integral Postgraduate in Social Sciences, University of Sonora, Mexico.*

Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

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ABSTRACT

The article is the result of research that has received public funding via the University of Sonora and the Secretariat Public Education of Mexico. The registration number of the financing received is PROMEP-IDCA 8837 UNISON.CA-149. The text seeks to characterize to the Mexican Interactive Generation based on the identification of variables associated with communication that presenting young Mexicans to the use of digital technologies and smart portable devices with Internet access. The study also aims to identify significant predictors of risk, their reaction to it and habits or security measures adopted for the youth or their parents and teachers in the use of these technologies. Use the critical multiplism as interdisciplinary approach and methodological strategies that become an integrated mixed model that allows data analysis and cross temporarily results.

Corresponding author: E-mail: gustavoadolfoleon@gmail.com, gustavol@guaymas.uson.mx;

1. INTRODUCTION

In recent years there have been changes in education in developed countries and emerging in different systems and educational levels. These changes occur within the context of globalization and the emergence of information and communication technologies (ICT) and public policies aimed at basic education system, mainly implemented to communities of teachers and students linked to improving the quality of educational processes. Impacts of changes have been observed in teaching and training profile of students enrolled in an educational process. In Latin America, there are few countries that have been caught in tensions and challenges that have blocked the ability to respond to a new context.

Therefore, one of the main challenges in educational system of Latin American is adapting to the changes and innovations that enable the development of the role of education in society. The impact of ICT is a phenomenon that is closely linked to the emergence of various modes of interaction, which come to challenge the very role of educational institutions, which includes the student and identity. The student is considered the central agent of any educational institution, so that the generation of comprehensive policies for training in the educational system is necessary. The design of public policies, programmes and plans in the field of basic education as guidelines and proposals influence the use, development of skills and knowledge of habits of ICT [1]. Designing government policies aimed at developing information systems, initiatives to advance the use of new media content and format as facilitators of construction, transfer, exchange and dissemination add new knowledge.

Particularly in Latin America, another challenge is the increasing levels of digital literacy through education institutions increasing the improvement of policies, infrastructure and equipment of schools and community. One of the main changes in education is the incorporation of skills development on knowledge and use of ICT into the curriculum. So on stage formed by globalization-society-education, manifested in a new generation of educational reforms primarily focused on issues of quality in education. The technology is now the backbone of culture, tools,

services and applications; to the extent that it makes people's daily life, and are leading to large-scale social transformations.

This new technical rationality also challenges the school in its alleged monopoly of knowledge, because outside, on TV, film, radio, video games or internet, circulate multitude of valuable knowledge. Meaning run out and dissemination of knowledge outside the school and explains that off shoring becomes knowledge when young people come to school with multiple knowledge questioning counsel model [2]. However, despite the implementation of educational policies forefront in Mexico that consider the incorporation of ICT in educational environments, such as the Comprehensive Reform of Basic Education, proposed in 2011 by the Ministry of Public Education (SEP), even there is little awareness of the benefits of this resource to educational level.

It was detected [3] that a persistent problem is the lack of ownership of the practice and the language of the media for use in the level of basic education in Sonora by teachers. This is what has determined a tendency of not using these tools as mediation in their teaching and provide an environment for the safe navigation in minors. There are many evidences at an international level on the advantages generated by technologies and the Internet in the classroom. Digital literacy also implies that the teacher develops a set of socio-cognitive abilities by which you can select process, analyze, and report the process of transforming information into knowledge.

Some features of digital literacy learning environments can be: A) The ability to make informed value judgments about the information obtained online, which equals the art of critical thinking, the key to balanced assessments that distinguish between content and presentation. B) The reading and comprehension skills in an environment of dynamic hypertext and not sequential. C) The skills of knowledge construction. Build a set of reliable information from different sources, with the ability to collect and evaluate both fact and opinion, if possible without bias. D) The development of research skills essentially based on Internet search engines. E) The multimedia flow management, using filters and agents. Creating a personal

strategy of information, source selection and distribution mechanisms. F) The generating awareness about the existence of others and willingness provided mainly through social networks to contact them and discuss issues or ask for help. G) Develop the ability to understand a problem and follow a set of steps to address this need for information. H) Rating system tools to support traditional formats of content. I) Caution to judge the validity and completeness of the material accessible through hypertext links. The historical evolution that has been the subject of digital literacy applied to educational settings is related to the demands of the information society at the same time with the characteristics and skills that has acquired the curriculum and the prevailing educational model. In short we are facing a convergent set of treatment processes and transformation of information, through the development of socio-cognitive skills that present the formal school procedures and, more importantly, with deep applications to educational practice local, national and global levels.

In addition to digital literacy, we have been saying the case of digital technologies and mobile devices with connectivity also raises an issue of particular relevance in schools: the so-called digital divide. As you may recall, the term is used to talk about the differences between different groups of people, in their knowledge and mastery of new technologies. These differences can come marked by socioeconomic factors (for example, there is strong contrast between the developed countries and third world), or other issues such as age. The young generation has been born immersed in the development of digital technology known as the digital natives generation or generation gigabyte.

This is a generation where social networks, online video games, the Internet, cell phones and instant messaging are an integral part of their lives. In addition, as a result of these uses, the mindset of this generation has changed and is different from their elders. By contrast, people who are not born immersed in this environment of digital technologies but are forced to use them are called technological immigrants. This is a generation that, as it were, naturally not speaks the language of ICT. For digital natives these digital technologies are their mother tongue for the digital immigrant is a foreign language.

The differences between the native and digital immigrant pose a challenge from an educational point of view and protector, because often

parents and teachers are overwhelmed by smaller in handling new media. As noted above [4], the Interactive Generation of Mexican youth is characterized by the high degree of possession of screens and digital technologies. Young people are growing up in a radically different social, cultural and educational context to which ushered to us, their parents and teachers. The "old" educational models do not fit their "way of being". This has been causing frequent tensions, both at school and in the family. Young people today are born immersed in a period of economic expansion, and high material welfare consumerism. Mexican minors today have a great facility to process information quickly. Receive much information and acquire by many different channels.

The selection of both the information and the channel responds to a rapid momentum has not always been thought not necessarily imply an afterthought. It is not difficult to imagine in continuous action because they tend to think it's more important to do well, so it takes a lot to reflect on their own attitudes and behaviors. Therefore, it is difficult to imagine a young Mexican who has as standard practice self-criticism.

They also need to receive an immediate reward instead of bonuses that will materialize in the medium to long term. They need to know what it is for them what they will do in the moment in which they intend to do it. They have the most diversified attention. So they are able to perform several tasks simultaneously, such as: listening to music while reading while holding talks on various social networks.

The text serves to illustrate the image: just in case you did not understand it was would come to that. Certainly, they have highly developed visual intelligence. Move in a medium in which the information is organized in a quite different to that used in conventional writing manner. Therefore, the books "on paper" they may seem strange and costs them both slow reading of a text.

They are growing in a connected world both synchronously and asynchronously. This has generated the need to be permanently connected. Furthermore, a new way of dealing with problems or meet needs: anyone in the world can resolve them or account for them as long as it is connected to the Internet; any question or request can be answered in the huge

database that offers Google or Wikipedia, the Free Encyclopedia or community of people who are active on Facebook. Consequently, they often think and evaluate the validity or goodness of the response.

Moreover, as we have shown in previous studies, parents and teachers stopped being the only source of knowledge, which can erode us authority. Now, apply and children and know more technology and application of technological devices parents. Something that we have seen, is proving crucial in shaping their "way of being", values and attitudes [5].

Children and young people claim to be the "technological experts" from home, have learned to manage digital technology autonomously, without the mediation of adult education, recognized to be the most knowledgeable about it and making more use intensive and multifunctional. It is therefore evident that deal with digital technologies and the Internet, interactive generation is ahead in knowledge and use, a fact that places teachers and parents at a disadvantage.

For this reason, today the minor may come to question their authority to exercise any control over such mediation and devices. Young people today prefer fantasy. To be convinced that this is sufficient to note the books they read, movies you see, playing video games or the unstoppable success of virtual worlds that are born in every corner of cyberspace. Your digital identity is as valuable as reality. Therefore, people spend time and attention to what is said about them on the Web, or the pictures or videos that appear. Moreover, they experience new ways of socialization and often express emotions and provide proprietary information or other people, in various formats (text, audio or video), use and even dominate digital media production such as cameras and video, programs for photo processing, video editing or creating web pages.

Youth are not only digital consumers, like many adults, but they also produce [6]. Therefore, this research tests the hypothesis that the use, consumption and production of interactive digital content through mobile devices with Internet connectivity secondary situate minors in unsafe conditions. This condition is directly related to several factors which highlight:

1) The domain parents and teachers have in the use of smart devices;

2) The knowledge and sense of risk prevention parents and teachers have in order to design and implement strategies. The magnitude and direction of their effects depend on the preferences, habits, socialization and personal technological skills that young builds in the world of everyday life and social networks.

Therefore, the study focuses on analyzing the uses, habits, skills and socialization processes and risks of young students from public junior high schools in the city of Hermosillo, Sonora (Mexico) when using portable devices with Internet connectivity. Note that this project has two different objectives requiring different sampling strategies: the first objective is to estimate the prevalence of different variables related to the use and consumption of various mobile devices with Internet access in young secondary. Second, to achieve a representative sample precisely by simple random sampling and from a list of sampling units which can be chosen randomly subjects of interest. For the present study the universe is based on secondary school students aged 12 to 15 years of age and enrolled in any of the 23 secondary schools chosen in Hermosillo, Sonora, Mexico.

2. METHODOLOGICAL FRAMEWORK

The study is based on descriptive research, its implementation required an integrated mixed approach that allowed a cross- sectional research analyzing the period between 2012-2014. It provides two methodological phases and a combination of quantitative and qualitative techniques. Quantitative analysis considered the application of 2907 questionnaires applied to junior high school students that were selected based on the representativeness of a universe of 27, 379 scholars. The sample is exclusively secondary school students from the city of Hermosillo, México. The sample was selected based on the representativeness of this universe and taking into account variables such as gender, age and type of school. The following parameters were established in order to determine the representative sample: Maximum error accepted: 2%; Sample's estimated percentage: 99%; reliability: 99%; Size of the universe: 27,379 students; the final sample surveyed: 2,907 participants.

The qualitative phase of the research design was implemented by using the focus group technique, which was organized as follows: from the

universe and sample applied in secondary schools and the data provided by the Institute of Educational Assessment of the State of Sonora, some public secondary schools from Hermosillo, Sonora were selected. The selection was made exclusively by identifying schools with favorable and unfavorable conditions (from a human and technical point of view). Each institution determined the date, location and support staff that would work with the research group for the implementation of the focus group. Subsequently, the same support staff was in charge to select, students in all three scholar grades, both sex were chosen. The criteria for the selection of participant were: Internet access (accessibility) and the frequent use of a mobile device with Internet stand. Support staff, types, technical support, and audiovisual equipment such as digital voice recorders, digital cameras, and laptops. The moderator was a member of the research group.

3. FINDINGS

Based on the analysis of the results obtained from the quantitative and qualitative tools and on preliminary conclusions upon the variables use, socialization and teacher and parental mediation:

3.1 Use and Preferences on the Internet

Internet use is strongly based on the daily lives of young people: 93% of Mexican youth between 12 and 15 use the Internet at least once a week. 60% use it every day or almost every day for 2-5 hours daily. The access to Internet is increasing on the youngest.

The most common place to use Internet is home, followed by school. However, the access to Internet is becoming more diverse in their bedroom and through their mobile phone or other portable device. Youth develop a diverse range of potentially beneficial online activities, such as, digital skills. In Mexico, it is highly likely that greater use will contribute to digital literacy concerning security. Their activities become multi-task, multi-functional, and content creators. In addition, most of them, have learned how to use ICT by being autodidact; which may be an indicator to develop future programs that include this skills. As for preferences, there is a marked trend towards the use for leisure and entertainment, in addition to this, the time dedicated to be online, shows an excessive use of ICT compared to the time spent on school activities.

However, this fact is not relevant to young people, because they believe they have not taken their time to any other activity, including school activities. The outstanding findings on content preferences are social networks, videogames, online games, and video and music entertainment. Digital natives enjoy a multi-channel position: they can pay attention to many things. At the same time, they play on the Web, chatting, exchanging SMS, or talking by phone.

3.2 Regulation and Mediation

The use of Internet is increasing in a more private way, and it makes it more difficult for parents to mediate. This implies a great responsibility on industry to manage the risks that children may encounter and to provide tools to avoid or overcome those risks. It also means, it has a great responsibility over their own security, messages about Internet security must be addressed to build confidence, resilience and digital skills among children. Education among digital skills is needed to ensure that all children achieve a minimum knowledge to prevent that some children may become isolated without the ability to cope risks.

This also involves trying to broaden the range of activities that children develop on the Internet, since very few develop creative activities. This interactive generation, at a glance, can intuit the appropriate commands they need to make a device run, while losing awareness of the procedures that are necessary to produce the result.

The language of technologies and school is so different, that this may cause learning problems. Technologies speech is fragmented and instantaneous, while traditional education is lineal. The use of internet and mobile devices has changed completely the real image of the world. For the same reason, interactions have transformed. Years ago, the groups of friends were among schools and work. Nowadays, the group is wider, friends, friends' friends, friends with the same interests in the most diverse contexts. Also, people can migrate without losing friendship. This study has shown that young people have the ability to simulate reality, not only for entertainment but also educational.

In the present study it has been shown that one of the biggest attractions that young people are on the network is the ability to simulate reality, not only for entertainment but also for education.

Likewise, they refer to other benefits related to mass media, such as providing access to alternative messages.

A concern in communicative interactions is the identity of people with whom they interact. It has given more importance to technology equipment than content. This is where the main reason lies for the importance on children's safety. Therefore, it has been invested in providing hardware and software in schools and households. What, by the way, deserves our praise. But it requires a similar effort to get educated on the proper use.

Even though, it is not easy regarding the lack of educational references. It is difficult to educate something for which you have not been educated. To conclude, the main risk secondary students are exposed to, is the illiteracy of grownups, the lack of knowledge on technologies leads to a lack of mediation. Devices that dominate households may have a negative influence on children, and parents have an obligation to know about it.

3.3 Implications for Public Policy and Media Education

Finally, this section encompasses general conclusions towards policies. The priority lies inparents´ awareness to be alert on focusing risks that children may find and to promote a dialogue between parents and children about online activities.

Parents should preferably obtain information on topics about the safety use of Internet through schools. It is necessary to make greater efforts in the field of education. However, the use of tools by parents and children (online information about Internet safety) is relatively low, industry has to promote and improve these tools. To the extent that the use of Internet has become more personal and private, the role of parents and teachers is even more difficult. Over the past decades, ICT have brought radical changes in the acquisition of knowledge, abilities, skills, attitudes and values on students, with the nuances involving the level or degree of training in which they are. At the same time, digital technologies have changed different frameworks and students´ performance transforming sources of information, personal relationships, socialization and coexistence. This implies a great responsibility from industry to manage the risks that children may encounter and to provide tools to avoid or overcome those risks.

4. CONCLUSION

Digital and media literacy is needed in order to ensure that all children enhance knowledge to prevent them of being isolated with no ability to identify online risks. This also involves trying to broaden the range of activities that children develop on the Internet. The efforts of the industry to provide quality in their contents and measures to provide a secure environment have increased. The technical tools to block, report or filter inappropriate content should also be a keystone of these policies.

A mixed approach research allowed us to get deeper on the comprehension of the process of identity construction among interactive relationships. Statements highlighted confrontations between groups of young people when something did not seem to be well expressed through social networks. It is a crucial practice where each of them uses interaction and communication with others in order to manage their status and roles determined by their community.

The behavior of an individual as a reaction to adapt different situations from their life as a teenager and it is expressed as excessive use or dependence on a smart device. It has increased the acquisition of new patterns of behavior such as anxiety and dependence that affect directly his or her performance.

It is needed to increase knowledge and improve the accessibility of these tools. As a result, parents and children can get more advantages out of them. Likewise, it is important to encourage children to worry about their own safety by encouraging a responsible behavior and a secure digital citizenship. Future policy on Internet safety should direct resources to where they are particularly needed: younger users, to the extent that there is an increasing use of ICT at a younger age. It is the responsibility of these policies a greater amount of quality on online contents appropriate for children.

Schools play an important role to offer literacy opportunities to parents and teachers. Incorporating technologies inside the classroom is an urgent necessity. Get advantage of the knowledge young people have. The challenge would be to take all that knowledge from the academic context and take it to an innovative and creative context where kids develop competences that education and society requires.

Another relevant associated variable with socialization is "on-line peer socialization". It is identified by online conversations and it demands a high level of attention when communication is carried out anonymously. A great concern in this type of interaction is the identity with people they interact with. In our study there is a huge importance on technology and equipment rather than kid's preferences and contents, even in schools. There is where the main reason to protect minors' safety remains.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. León GA. Comunicación y Sociedad en América Latina. Aproximación a las Características Estructurales de la Investigación Latinoamericana de la Comunicación. 1ra. Ed. Verlag: Publicia Editors; 2014.
2. Barbero J. Mediaciones comunicacionales y discursos culturales. Cartografías y estrategias de la "posmodernidad" y la "postcolonialidad" en Latinoamérica: Hibridez y Globalización. 1ra. Ed. Madrid: Editorial Iberoamericana; 2006.
3. León GA, Castillo E, Montes M, Caudillo D. Relaciones interactivas, Internet y jóvenes de secundaria en México. Primera oleada sobre usos, consumos, competencias, y navegación segura de Internet en Sonora. Hermosillo: SEP-Gobierno del Estado de Sonora-Qartuppi Editores-Universidad de Sonora; 2013.
Available:https://www.researchgate.net/publication/259312428_RELACIONES_INTERACTIVAS_INTERNET_Y_JVENES_DE_SECUNDARIA_EN_MXICO_PRIMERA_OLEADA_SOBRE_USOS_CONSUMOS_COMPETENCIAS_Y_NAVEGACIN_SEGURA_DE_INTERNET_EN_SONORA
4. León GA, Moreno D. Problems and challenges of secondary education in Mexico. An approximation to the variables associated of the interactive relationships of young people. Global Journal for Research Analysis. 2015;4(2):64-72.
5. León GA, Caudillo D, Contreras C, Moreno D. Jóvenes de Secundaria e internet seguro en México. Hermosillo: SEP-Gobierno del Estado de Sonora-Qartuppi Editores-Universidad de Sonora; 2014.
Available:https://www.researchgate.net/publication/270159963_INTERNET_SEGURO_Y_JVENES_DE_SECUNDARIA_EN_MXICO
6. León GA, Abril JA. Interactive digital communication and new analysis approaches in cultural practises: The interdisciplinary perspective on the study of audiovisual production. Mediterranean Journal of Communication. 2013;4(1):85-98.