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Artículos científicos

Diagnóstico del uso de las TIC en una telesecundaria rural de Yucatán, México

Diagnosis of the Use of ICT in a Rural Middle School in Yucatan, Mexico

Diagnóstico do uso de TIC em uma telesecundaria rural em Yucatán, México

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Resumen

El objetivo de este diagnóstico fue identificar y analizar el uso de las tecnologías de información y comunicación (TIC) que hacen los jóvenes de una telesecundaria en una comunidad rural del estado Yucatán. Este estudio tuvo un enfoque cuantitativo con un alcance descriptivo de tipo transversal y contó con la participación de 28 estudiantes. Se utilizó un instrumento de ejecución típica cuya confiabilidad se calculó mediante el alfa de Cronbach (0.751). Los resultados se discuten dentro del marco de los documentos oficiales: Encuesta Nacional sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares (2020) y el 17º Estudio sobre los Hábitos de los Usuarios de Internet en México (2021). Entre los hallazgos importantes están que los adolescentes de la comunidad utilizan el teléfono celular como tecnología por excelencia para su vida diaria y el acceso a internet lo obtienen a través de tarjetas de prepago. Asimismo, la red social más utilizada para ellos

es Facebook. También se pudo comprobar el desconocimiento que tuvieron los encuestados respecto a cuestiones éticas al navegar por Internet y en cuanto al ciberacoso.

Palabras clave: brecha digital, comunidad rural, Internet, TIC, telesecundaria**.**

Abstract

The aim of this diagnosis was to identify and analyze the use of the information and communications technology (ICT) of the young students from a remote teaching Middle School situated in a rural population in the state of Yucatan. This study had a quantitative research focus with a cross-sectional descriptive scope and a participation of 28 students. A typical performance instrument was used whose reliability was calculated using Cronbach's alpha (0.751). The results are discussed within the framework of the official documents: Encuesta Nacional sobre Disponibilidad y Uso de Tecnologías de la Información en los Hogares (2020) and the 17º Estudio sobre los Hábitos de los Usuarios de Internet en México (2021). Among the important findings are that adolescents in the community use their cell phone as the technology par excellence for their daily lives, and access to the Internet is obtained through prepaid cards. Likewise, the most used social network by them is Facebook. It was also possible to verify the lack of knowledge that the respondents had regarding the ethics in the use of the Internet and cyberbullying.

Keywords: digital gap, rural population, internet, ICT, middle school.

Resumo

O objetivo deste diagnóstico foi identificar e analisar o uso de tecnologias de informação e comunicação (TIC) feito por jovens de uma telesecundária em uma comunidade rural no estado de Yucatán. Este estudo teve abordagem quantitativa com escopo descritivo transversal e contou com a participação de 28 alunos. Foi utilizado um instrumento de execução típico cuja confiabilidade foi calculada pelo alfa de Cronbach (0,751). Os resultados são discutidos no âmbito dos documentos oficiais: Pesquisa Nacional sobre Disponibilidade e Uso de Tecnologias da Informação em Domicílios (2020) e o 17º Estudo sobre os Hábitos dos Usuários da Internet no México (2021). Entre os achados importantes estão que os adolescentes da comunidade utilizam o celular como a tecnologia por excelência para o seu dia a dia e o acesso à internet é obtido por meio de cartões pré-pagos. Além disso, a rede social mais utilizada por eles é o Facebook. Também foi possível verificar o

desconhecimento que os entrevistados tinham sobre questões éticas ao navegar na Internet e sobre cyberbullying.

Palavras-chave: lacuna digital, comunidade rural, Internet, TIC, telesecundária.

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Introduction

Currently, information and communication technologies (ICTs) play a very important role in economic development, productivity growth, organizational restructuring and digital democracy (Grazzi and Vergara, 2011; Palvia, Baqir and Nemati, 2017; Torero and Von Braun, 2006). Without a doubt, the digital age is changing the way we work, organize ourselves and communicate globally (Galperin, Mariscal and Barrantes, 2014).

During the 2019 coronavirus disease (covid-19) pandemic, many countries saw technology as a solution to keep going and not interrupt work and communication. During the lockdown, Amsterdam distributed around 5,000 laptops to members of communities in need so they could access plays and operas online. In this way, the Government demonstrated its support for culture, social interaction and community participation. In New York, in order to keep the population informed and communicated, updated information on the state of the spread of the pandemic was offered through social networks. In Dubai, meanwhile, through the Dubai Mobile application, access to public and health services was maintained. Barcelona increased by 30% the allocation of laptops and online communication services for municipal employees with the aim of providing a better service to the community. Likewise, in Ramallah, efforts were made to provide access to the Internet service so that videoconferences could be held between public officials, in order to guarantee public services (United Cities and Local Governments [CGLU]-Metropolis-ONU-Hábitat, 2020).

In Mexico, at the national level, the National Development Plan (PND) 2019-2024 establishes the goal of greater internet coverage by consolidating the telecommunication infrastructure throughout the country. Similarly, among the objectives of the State Development Plan 2018-2024 of the state of Yucatan is to promote the implementation of digital technology for the various economic, social and educational activities; likewise, guarantee free internet access in public spaces in rural and urban areas.

Thus, society needs to develop and strengthen digital skills for the use of ICTs, especially when, in the educational field, the teaching-learning process has moved from face-

to-face to online as a result of the COVID-19 pandemic. the covid-19. This process brings with it the work with platforms for the management of online courses, the use of virtual repositories of digital documents, the sending of course materials via email and synchronous meetings using videoconferencing applications (Torres et al., 2020). .

As can be seen, the evolution of technology, the constant acquisition of new electronic devices, as well as their use, are involved in reducing the digital divide and achieving democratization in access to various technological services. regardless of whether it is an urban or rural area. In this way, taking into account what has been mentioned so far, this paper aims to diagnose the use of ICT by young people from a telesecundaria in a rural community in Yucatan in order to identify and analyze the current state of this practice. and propose recommendations according to the context for responsible management.

Information and communication technologies

It is undeniable that, in recent years, ICTs have caused economic, political and sociocultural changes: the way of interacting with others, of producing, transforming and circulating information and knowledge.

Dussel and Quevedo (2010) list two major concerns regarding the expansion of new technologies. "The first concern refers to digital inclusion, and has to do with reducing the gap between social sectors and between generations in access to and use of new technologies" (pp. 10-11). In this way, they allude, among other things, to equipment and connectivity policies, as well as programs to grant each student a computer or projects to promote skills in the use of ICT. However, socioeconomic factors or the geographical location of the populations hinder connectivity coverage and, therefore, the restriction of Internet access.

Although it is true that ICTs are a great benefit by themselves, it is also true that, in order to enhance their qualities, the user must learn to use them correctly, since this will allow them to access them more easily, as well as encourage the development of digital competence in both a formal and informal way (Mumtag, 2005, cited in Gómez and Macedo, 2010).

It is key to keep in mind that ICTs are not only simple tools, but also constitute an important means of knowing and understanding the new ways of being and thinking of the diverse people who live in the world. When an individual is excluded from the access and use of ICT, he falls into what we know as the digital divide. It is vital that the new generations can access and use ICTs; thus, they can actively participate in the information society,

communicate and insert themselves effectively in the labor market (Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura [Unesco], 2013).

For the vast majority of young people in Latin America and the Caribbean, social centers and educational institutions are one of the main places where they can access knowledge, values, socialization, as well as technological means (computers and the Internet). For this reason, they are an ideal space to project the efforts and results of public policies and promote and achieve the reduction of the digital divide (Unesco, 2013).

In addition to the above, it is important to bear in mind that ICTs are not effective by themselves, and that much remains to be done to reduce the digital divide. For this reason, the challenge for government institutions must be to provide the population with technological resources and training that support young people in acquiring knowledge, skills and values that contribute to their integration and development in this digital age.

Internet

The Internet is a tool whose information storage capacity is enormous, one of the reasons why it is one of the most widely used resources. In fact, its impact is such that it has displaced more traditional information methods. The Internet has provided new ways of distinguishing, thinking and representing knowledge. Its application in everyday life increases interaction scenarios, which has resulted in new entertainment formats, new forms of socializing, mass information searches, dissemination of own content, interaction with interest groups, systematization of processes and communication speed. In addition, the advances that have been achieved thanks to the use of the Internet and its multiple applications have triggered the emergence of an increasingly digitized world, so that everyone, especially the new generations, are constantly faced with the challenge of developing skills that allow them to insert themselves in said context (Domínguez, Cisneros and Quiñonez, 2019).

As can be seen, the Internet has been a phenomenon that, since its conception, has maintained a constant evolution. We could even say that its growth is vertiginous and few societies are unaware of the benefits it brings in terms of development. However, currently, although it may seem impossible, there are populations that do not have access to the services provided by the Internet and, therefore, are unaware of the impact that it could bring to their lives.

In Mexico, without going any further, 65.5% of households in urban areas are connected to the Internet; The situation worsens even more when it turns to rural areas, where only 23.4% of households have this connection. It should also be mentioned that households with a low socioeconomic status may have a computer, but lack an Internet connection. The reasons why they do not have access are due to lack of economic resources (60.2% of the population) and because there is no such service in their locality (26.1%). As can be seen, the difference that can exist between urban and rural areas regarding the acquisition and use of technological resources and internet connection is very evident. This gap is more noticeable if each household is taken as a reference, since only 2 out of 10 rural households have an internet connection (Zamora, 2020).

On the other hand, thanks to the fact that today mobile devices can be purchased more easily, 9 out of 10 cell phone users have a smartphone (National Institute of Statistics and Geography [Inegi], 22 June 2021). Even more, between 2019 and 2020 there was a growth of 3.5 percentage points (from 88.1% to 91.6%). The smartphone is the device through which 95.3% of Internet users in Mexico access said network (Inegi, June 22, 2021). Based on this, we can affirm that it is a reality that the different populations are, to a greater or lesser degree, immersed in cyberspace.

Digital divide

The Organization for Economic Cooperation and Development (OECD) in 2001 defined the term digital divide as a phenomenon that not only arose from economic and social differences and differences in access to technological resources, but also referred to the use that people make of these in their various activities of daily life, especially the Internet (Dimaggio and Hargittai, 2001; Toudert, 2015). Authors such as Adams (1969), Crovi (2008) and Sunkel (2006) mention that the acquisition of ICTs, along with their benefits, are the privilege of the most developed countries, which causes technological and social gaps to arise, not only among the nations of the world, but also among groups in society.

Cabero (2015) established different types of digital divide. In the first place, that produced by the impossibility of certain people and groups to access technologies, whether for economic or ideological reasons. In second place is the one made up of those subjects who, despite having access to technologies, do not use them for different reasons for their

training and development of digital skills. And the third, those who, having access and training to use them, make very specific, specific and limited uses.

Romero, Domínguez and Guillermo (2010) comment that access to ICTs has not been equal, especially in rural areas. This has caused an increase in social and cultural inequalities and produced a digital divide.

Among the economic investigations on the digital divide in rural areas, the one by Márquez, Acevedo and Castro (2016) and the one by Soto, Moyado and Siliceo (2018) can be highlighted, who conclude that the entities where the digital divide is more large are those with the highest percentages of inequality in economic income and that are in poverty.

Today, due to the pandemic, one of the options used in communication and basic education so that young people can receive and send their homework is social networks and messaging applications, WhatsApp and Facebook, which can be accessed access from cell phones; however, for these services to work in rural areas, users have to pay for a data service and in many cases they do not have the economic resources to pay for it. Likewise, the lack of knowledge in the use of said technologies means that information cannot be accessed correctly, much less being able to interact, this causes great inequality in the educational field and, therefore, in society. Guzmán, Muñoz, Brosin and Álvarez (2017) mention that the digital divide is a process of social transformation that makes it necessary to define new models, strategies and policies so that they contribute to actions that reduce it for the benefit of society.

Based on the aforementioned, we can understand the digital divide as that inequality that is not only present due to the acquisition of updated technology, but also due to the lack of training in its use.

ICT policies in Mexico

In order to reduce digital inequalities, since 2013 the Presidency of the Republic decreed a constitutional reform to article 6 of the Constitution, which consists of citizens having access to ICTs. The National Digital Strategy was also implemented, which included the connectivity project to promote the use and appropriation of ICTs. One of its purposes was to increase the national connection network by 92% using the technological infrastructure of existing telecommunications companies (OECD, 2017). Currently, the National Development Plan (PND) 2019-2024 aims to achieve better internet coverage

throughout the country by installing the appropriate infrastructure and providing wireless internet service to the entire population of the country. All with the aim of combating marginalization and integrating the areas of maximum poverty into productive activities.

In this same sense, the State Development Plan 2018-2024 of the state of Yucatan establishes promoting digital technology in commercial activities, consolidating sustainable digital infrastructure in communities, providing free internet in public places and spaces, carrying out studies to determine the areas with the greatest need for access to the networks to intervene and train on the responsible use of the Internet.

It should be noted that the application of public policies in their instrumental nature does not guarantee the reduction of the digital divide; likewise, technological investment is not enough if the initiatives are not accompanied by training (Galperin et al., 2014).

In addition to the aforementioned, the development of digital skills is one of the central aspects of the national government's policies, since it considers the use of ICTs an important factor for the development of society, for this reason literacy programs were undertaken digital to reduce inequality (see figure 1).

Figura 1. Programas de alfabetización digital que se han implementado en México

Fuente: Secretaría de Educación Pública [SEP] (2016)

However, there are studies that point to the ineffectiveness of these programs in rural and indigenous schools, where, added to the lack of connectivity, there is a lack or

abandonment of equipment and the training of educational personnel is deficient. (Tinajero, 2015).

Method

This study was quantitative. Likewise, given that this work only described situations or events related to the variables to be studied, it was proposed as descriptive. In addition, it is of a transectional temporality, since the measurement and collection of data was carried out in a single moment in time (Hernández, Fernández and Baptista, 2013).

The design of the study was of the survey type, since it allowed describing and analyzing the perception of the subjects participating in the research through the registration and analysis of the data they provided. (Isaac y Michael, 1995).

Context

Santa Cruz Xcuyún is a police station in the municipality of Conkal, Yucatán, a town located 20.9 kilometers from the city of Mérida. Xcuyún presents characteristics that have defined it as urban or new rural, since most of its inhabitants are linked to urban work, from which they obtain most of their economic resources, but also carry out activities related to a rural lifestyle, such as agricultural activities and their respective ceremonies.

Participants

The Republic of Mexico Telesecundaria of the Xcuyún police station, Yucatán, has an enrollment of 58 students; however, due to extracurricular activities, as well as absence at the time of the survey, complete information was only obtained from 28 students, of which 57.1% (n = 16) were women and 42.9% (n = 12) were women. they were men. The ages were between 13 and 16 years old. (M = 14.29; D. T. = 0.976).

Instrument

A structured response questionnaire was designed with the objective of analyzing the availability and use of ICT by young people from a rural community in the state of Yucatan. At the same time, information was obtained regarding the risks that can arise when a person surfs the Internet (cyberbullying). The instrument was made up of a general section, in which

they were asked for age, sex and grade. It also included 14 questions with a closed selection option through which it was intended to inquire about what type of social networks the participants use, days of the week and time they use the Internet, as well as to know what they use their cell phone. , among others. And finally, the instrument had 11 open questions that were raised to inquire about the way in which the Internet is used and their opinion regarding cyberbullying through social networks.

The validation of the instrument was carried out through an expert judgment and reliability was performed using Cronbach's alpha: the coefficient was 0.751.

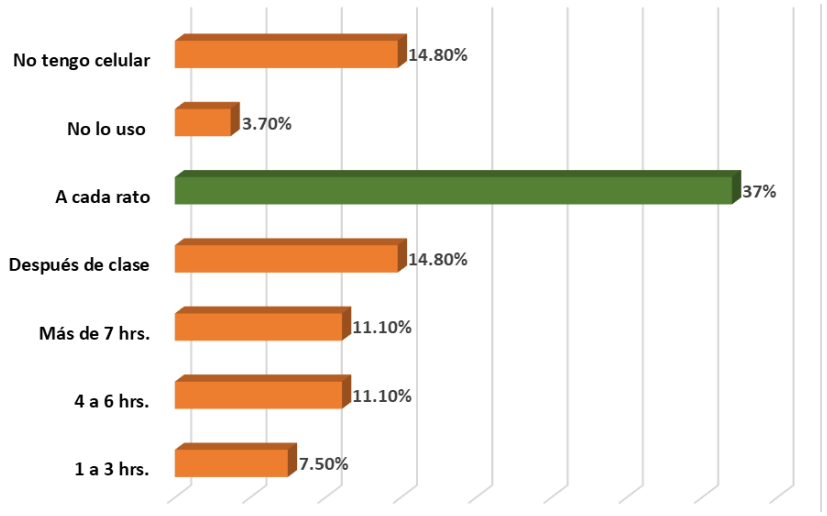
Analysis of data

For the description and analysis of the general data, a descriptive statistical analysis was carried out using frequencies and percentages. Line graphs were also made to be able to compare the use made by men and women with respect to social networks and bar graphs to compare the use at the local and national level of the various internet services. Likewise, the chi-square test was performed to analyze whether there is a significant relationship between sex and the level of use of cell phones, social networks and the Internet.

Results

At first, the results showed that the technological device to which the student community has the greatest access is the cell phone, and those who use it the most are men, with 53.6% (compared to 46.4% of women). The aforementioned reaffirms what was expressed by the authors Mariscal, Benitez and Martínez (2016): the economic situation of the population affects the type of electronic device they can acquire. Indeed, Mariscal et al. (2016) mention that there is a relationship between marginality, poverty and access to ICTs. It was also possible to identify that 53% use it to communicate by WhatsApp, another 29% use it for social networks, these results also agree with those obtained in the National Survey on Availability and Use of Information Technologies in Households (Endutih) (Inegi, June 22, 2021), since the main activities carried out by users with technology are communicating (93.8%) and accessing social networks (89%). In a smaller percentage are playing online (12%) and making calls (6%). Regarding the highest percentage of cell phone use, the respondents answered "every time" and the lowest was the option "I do not use it" (see Figure 1).

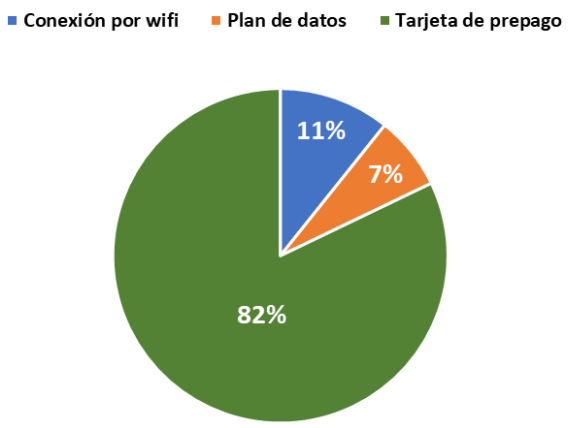
Figura 1. Frecuencia del uso del celular por día



Fuente: Elaboración propia

Likewise, it is presented how the students of the community connect to the Internet. Most of them do it by prepaid card (see figure 2). In this regard, Gómez (2019) comments that one way to obtain internet service is through tickets (purchase of Internet access time in stores in rural locations). The foregoing confirms that limited internet access in rural households is due to the families' low purchasing power and that, in these cases, it is more feasible to enter cyberspace by paying for data (prepaid).

Figura 2. Formas de conexión a Internet

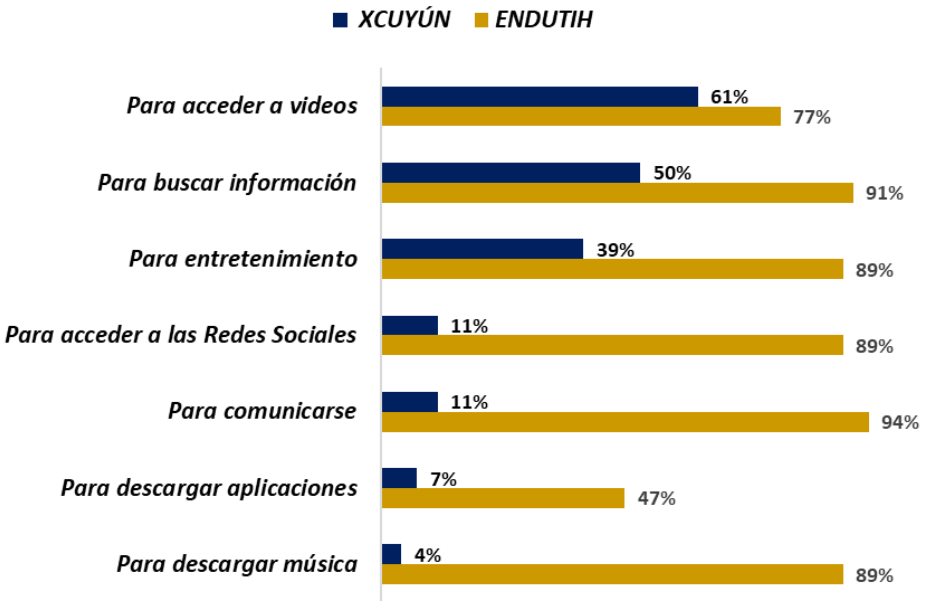


Fuente: Elaboración propia

The use made by the respondents regarding the uses of the Internet was compared with the results of the Endutih (Inegi, June 22, 2021). As can be seen in Figure 3, the services that scored the most were access to videos, information searches and entertainment. On the other hand, the activity that reached the lowest percentage in both contexts was downloading

applications. It should be noted that the participants at the national level considered downloading music to be a high percentage, however, the participants from the Xcuyún community assigned this action a very low frequency.

Figura 3. Comparación del porcentaje del uso que se da al internet a nivel nacional y local

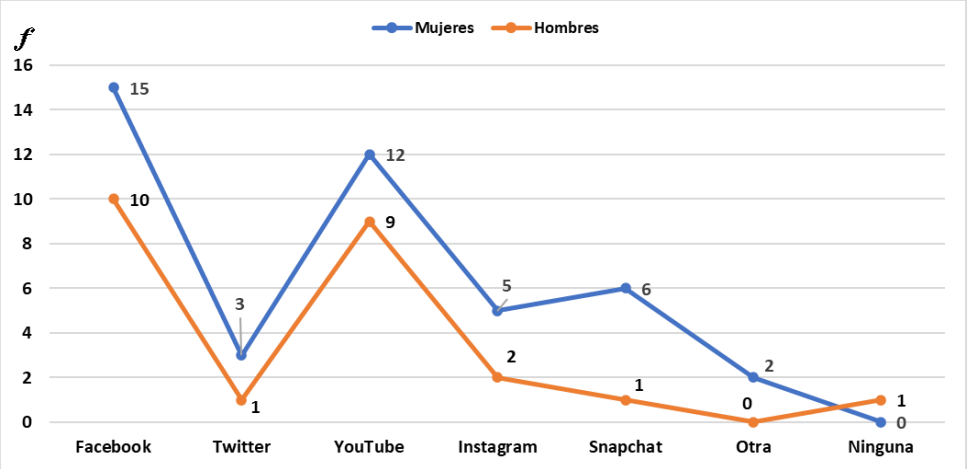


Nota: el porcentaje a nivel nacional se obtuvo de los resultados de la Endutih (Inegi, 22 de junio de 2021)

Fuente: Elaboración propia

Another important aspect to highlight regarding the use that participants make of ICT is that which refers to social networks: the most used is Facebook, with 89.3%, and YouTube is second, with 75%. In contrast, the least used is Twitter, with 14.3%. Now, in a comparison of frequencies with respect to the most used social networks between men and women, it can be seen that there is not much difference between the two, since they score high in preferring Facebook and low in preferring another social network (see Figure 4).

Figura 4. Redes sociales utilizadas



Fuente: Elaboración propia

What is presented in the previous figure is consistent with the data obtained by the MX Internet Association (2021), since there has been an increase in users at the national level regarding the use of Facebook in recent years, especially in the case of the pandemic. The foregoing confirms that this social network is part of the daily life of young people, as presented years ago by the author Crovi (2018). It is in this way that digital culture is being inserted in rural contexts, which has motivated an extended use of ICTs and little by little a democratization of these Internet services is beginning to be seen.

Since Facebook is the most used social network by student participants, more information was inquired about the frequency of use of said social network. Both men and women stay connected to Facebook from one to three hours a day. In contrast, the lowest number of hours of use were those in the range of four to six hours and more than seven hours (see table 1).

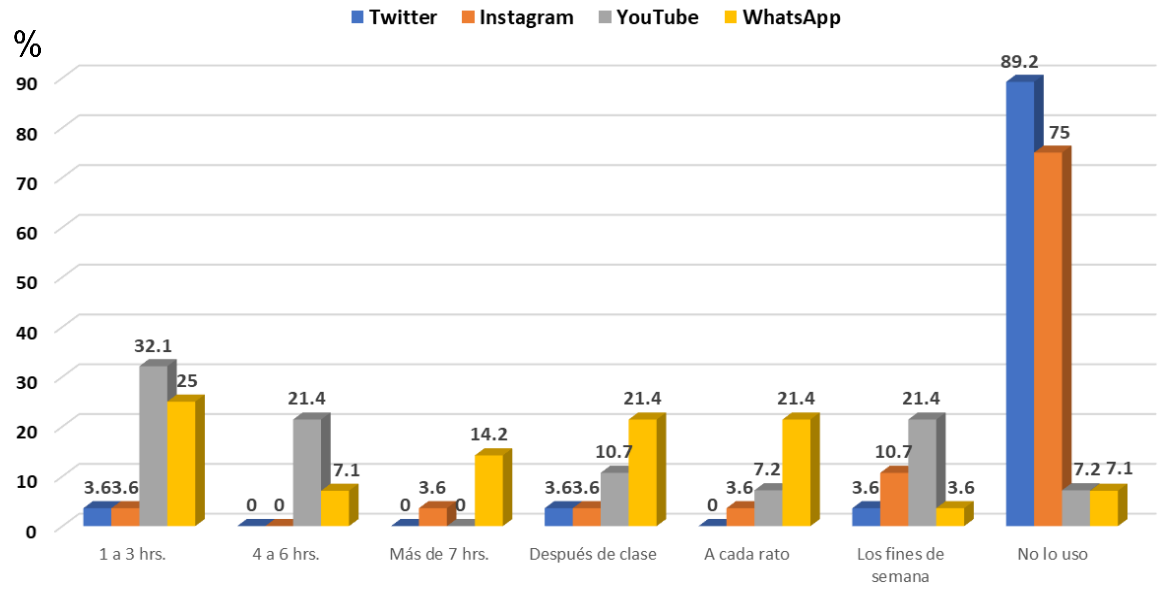
Tabla 1. Frecuencia y porcentaje de uso de la red social *Facebook*

Temporalidad	Mujeres		Hombres		Total	
	f	%	f	%	Σ(f)	Σ %
Una a tres horas	4	25	7	58.3	11	39.3
Cuatro a seis horas	2	12.5	0	0	2	7.1
Más de siete horas	2	12.5	0	0	2	7.1
Después de clase	1	6.3	2	16.7	3	10.7
A cada rato	2	12.5	1	8.3	3	10.7
Los fines de semana	3	18.8	0	0	3	10.7
No lo uso	2	12.5	2	16.7	4	14.3

Fuente: Elaboración propia

Taking into account the other social networks used by the members of the community, a comparison was made based on the percentage of their use (see Figure 5).

Figura 5. Porcentajes de uso en horas de las redes sociales



Fuente: Elaboración propia

As can be seen in figure 5, YouTube and WhatsApp are the most used. Regarding access hours, the range that predominated was one to three hours, the time that the majority dedicate to their social networks; As for the others, they are used in a lower percentage. For example, WhatsApp is used less on weekends, but registers more responses in the range of one to three hours. It is also perceived that the least used social network is Twitter. During confinement, and in response to the need to communicate with family, friends and do school

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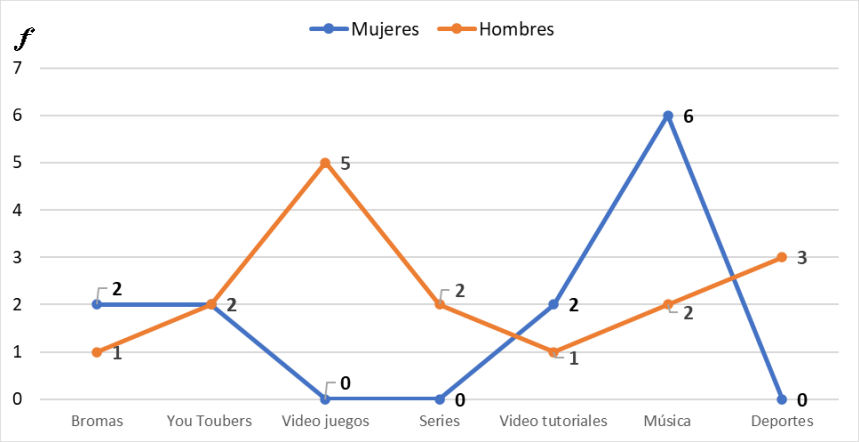
work, young people increased their use of WhatsApp, at the national level it was the most used (57%) (Asociación de Internet MX, 2021).

On the other hand, the contents that the respondents see on YouTube are mostly music videos (n = 8). In this category, more women watch this type of content, while men watch more content related to video games; The least seen were the series and youtubers (both with n = 2) (see Figure 6).

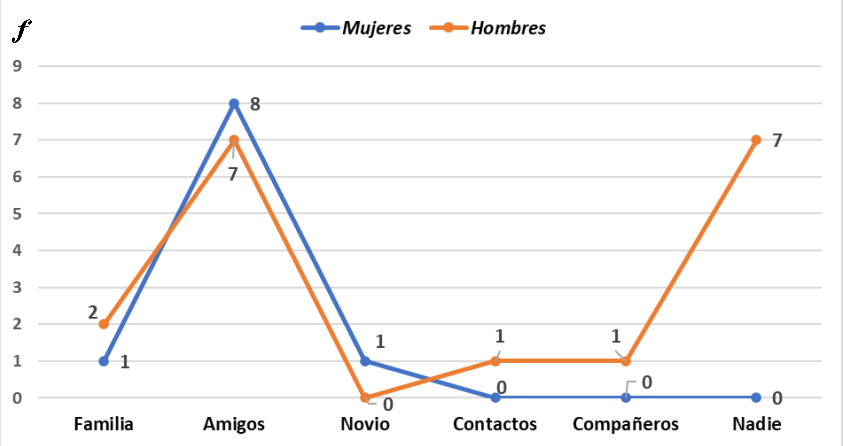
Figura 6. Contenidos vistos en *YouTube* (frecuencia)



Fuente: Elaboración propia

Another aspect that stands out in the presentation of the results is what refers to knowing with whom the participants exchange information on social networks (see Figure 7).

Figura 7. Personas con quienes se comparte contenidos en las redes sociales (frecuencia)



Fuente: Elaboración propia

As can be seen in Figure 6, they are the friends with whom content is shared the most on social networks (n = 15); with the least are the boyfriend, contacts and classmates (in all three the frequency was n = 1).

With respect to the people with whom the members of the community use WhatsApp, women and men mostly do so with their friends (n = 20), the family comes second (see table 2); only two women use it to communicate with their boyfriends and three men confessed that they do not communicate with anyone.

Tabla 2. Personas con quienes los estudiantes usan el *WhatsApp* (frecuencia)

Persona	Mujeres (*f*)	Hombres (*f*)	Σ(*f*)
Mamá	3	1	4
Papá	3	0	3
Amigos	11	9	20
Tíos	1	0	1
Hermanos	1	0	1
Familia	4	3	7
Novio	2	0	2
Nadie	0	3	3

Fuente: Elaboración propia

In order to consolidate the analyzes presented above and identify whether there was a significant relationship between gender and the level of use of cell phones, social networks and the Internet, a chi-square analysis was performed (see Table 3).

Tabla 3. Prueba ji cuadrada para determinar la relación entre las variables del estudio

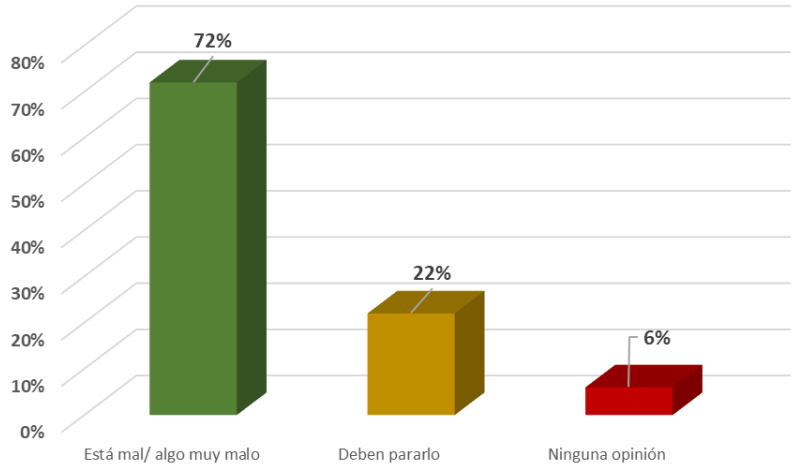
Variables del estudio	X^2	P
Uso del teléfono celular	6.71	0.348
Uso de las redes sociales	8.01	0.091
Uso del internet	4.63	0.462

Fuente: Elaboración propia

As can be seen in Table 3, there is no significant relationship between the sex of the members of the community with the level of use of the cell phone, social networks and the Internet, since the value of $p > 0.05$. This result could be taken into account when designing an intervention for the development of digital competence, since, since there is no significant difference, it is possible to work in the same way with men and women.

Finally, in the instrument used for the study, young people in the community were asked what they think about cyberbullying. And most of the men and women expressed that it is something very bad and that it is wrong (see figure 8).

Figura 8. Porcentaje de respuesta respecto a la percepción del ciberacoso



Fuente: Elaboración propia

Likewise, it was verified that very few women know clearly what cyberbullying consists of: four of them commented that "it is about uploading photos of naked women" and

one of them mentioned that "it is asking for personal and family data"; the rest were not clear about this concept.

In relation to the men, seven mentioned that they do not know of cases of this type, one of them mentioned that cyberbullying "is the robbery or assault of a woman from her community"; therefore, the lack of knowledge of this concept is also evident.

It was also possible to show a lack of knowledge regarding the ethical use of the Internet, since they did not identify the minimum age to be able to create their accounts in social networks or other applications. The respondents mostly connect to the Internet for leisure, without taking advantage of the potential of this tool in academic activities; they only use it, as mentioned, before to check their social networks and watch videos.

Discussion

The first finding of the study showed that the device most used by students in the rural community is the cell phone, since it is the most accessible technological device with respect to market prices, this is consistent with what is evidenced in the results obtained from the Endutih (2020) and the Study on the habits of Internet users in Mexico (2021). Given this, authors such as Mariscal et al. (2016) reveal that the economic situation of the population is related to the type of equipment that people can acquire; they mention that there is a relationship between poverty and access to ICTs. For their part, Adams (1969), Crovi (2008) and Sunkel (2006) mention that the acquisition of state-of-the-art or high-end ICTs, together with their benefits, are the privilege of the most developed countries. You are more likely to find a variety of technological devices such as desktops, laptops, tablets, etc., in an urban community than in a rural one. It was also possible to demonstrate that the WhatsApp service is the most used to communicate through smartphones and that the most used social network is Facebook. When making the comparison at the national level, this statement was supported by the results obtained in the Endutih (Inegi, June 22, 2021) and the 17th Study on the Habits of Internet Users in Mexico 2021 (Asociación de Internet MX, 2021).

As a second finding, it was found that the way in which community participants connect to the Internet is through prepaid cards, as Gómez (2019) mentions. In this same sense, Zamora (2020) comments that in Mexico only 23.4% of households in rural areas have internet service, since they do not have economic resources to pay for it or the service does not reach the community.

Another important aspect that is worth highlighting is that it was possible to demonstrate the reality of the knowledge that the respondents have regarding ethics in cyberspace and regarding cyberbullying in particular. Toudert (2015) and Dimaggio and Hargittai (2001) make it clear that the digital divide does not only refer to the lack of access to technological resources, but also to the inappropriate use that people make of these in their various activities in their lives. daily and academic

Taking into account what has been analyzed, awareness must be created by government institutions to guarantee access to the various technological services, since with this the democratization of the use of ICT can be consolidated and the digital divide reduced. Particularly important is also the training and awareness of the student community of the Xcuyún police station, Yucatán, regarding ethics in digital scenarios in order to promote the proper use of the Internet in their personal and professional lives. In this way, dangers caused by misuse of the Internet can be avoided, for example: access to inappropriate content, exposure to aggressive marketing practices and cyberbullying.

Conclusions

This work presents information regarding the access and use that students of the Xcuyún community make of ICT. It is worth emphasizing that we are still in a time of pandemic, the study participants continue their training process remotely. Along these lines, it was found here that the technological device to which there is more access for reasons of cost is the cell phone, and that the most popular way among those surveyed to access the Internet is through prepaid cards, which grant certain number of megabytes to browse the Internet.

On the other hand, the results obtained in the study show that the community participants have a developed ability in the use of ICTs; however, the results show that they implement it more in leisure activities. Hence the need to develop digital skills that allow responsible and effective participation in cyberspace and that what they learn is useful in their academic life.

The results obtained also showed that there are no inequalities between men and women regarding the level of use of cell phones, social networks and the Internet. This consolidates an egalitarian use of ICTs, and should be especially important for all those

efforts that seek to reduce the digital divide, since the training that is designed must be implemented in the same way, without distinction of gender.

Due to what was argued above, it is suggested to train the students of the Xcuyún community in aspects in which competencies such as the following are developed: surf the Internet safely; distinguish risks that can be run when using the Internet; properly use the applications found on the Internet, and the formation of values in the use of the Internet through knowing and internalizing the concept of digital citizenship.

Finally, it is highlighted that this study is relevant because currently all the courses offered at the basic level are being developed in virtual mode and it is vital that both students, teachers and even parents can develop digital skills in order to succeed in this increasingly digitized world.

Future lines of research

Aspects have been identified that deserve to be addressed in subsequent studies, by virtue of not having been foreseen at the time the methodological design of the study was carried out. In the first instance, one of the limitations of the study is that it had the participation of 48% of the students of the telesecundaria in the community of Xcuyún, Yucatán. It is recommended to conduct the study with all students and include a sample that covers other areas of the state of Yucatan (west, northwest, center, northeast, east and south) in order to generalize the results.

It is also important to be able to know the self-perception of the parents of the telesecundaria students regarding the access and use of ICT with the aim of associating the results and being able to verify if there is a correlation between training, knowledge and skills. This could lead to proposing various types of training for the benefit of the Xcuyún community.

Last but not least, in-depth studies using qualitative research designs with community students are recommended to analyze the reasons why a consolidated reduction of the digital divide is not achieved, particularly with respect to access. and professional use of ICT.

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