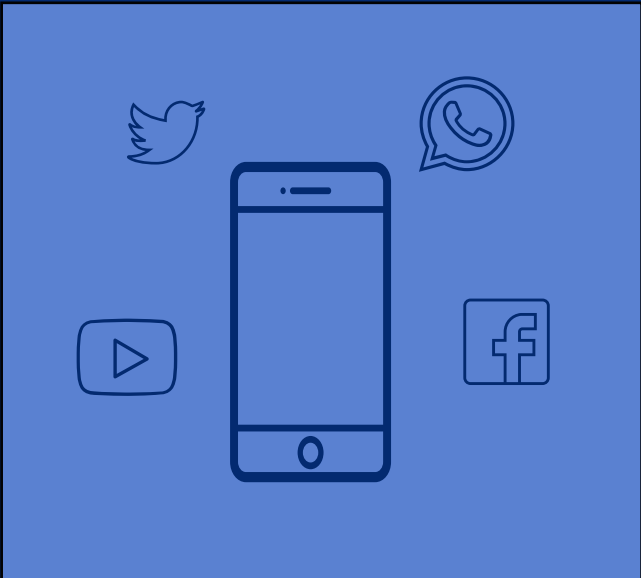


Internet Use in Cultural Practices and Training of High School Students in Costa Rica





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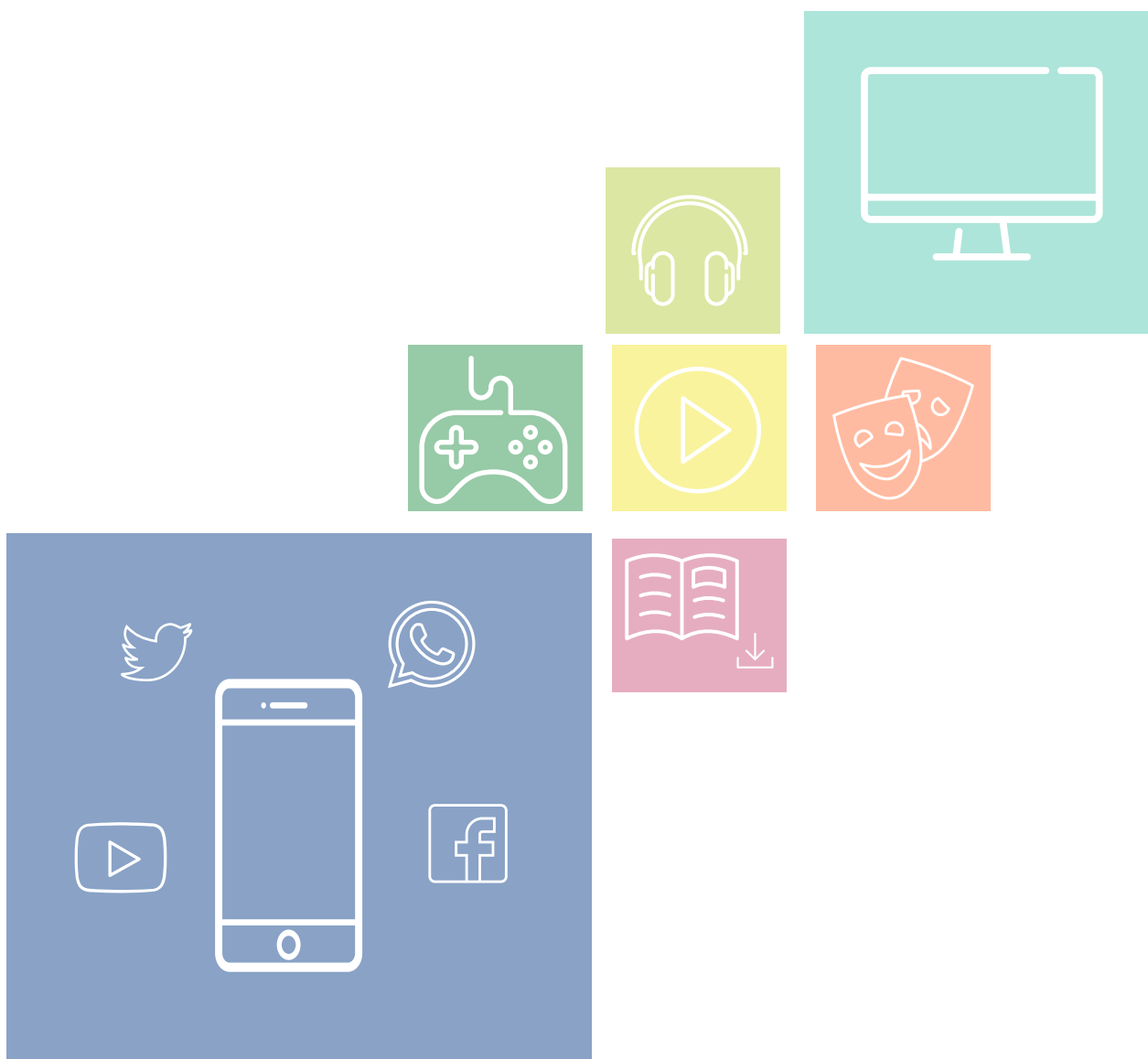
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3. INFORMATION AND COMMUNICATION TECHNOLOGIES
4. CULTURE 5. EDUCATION

Summary





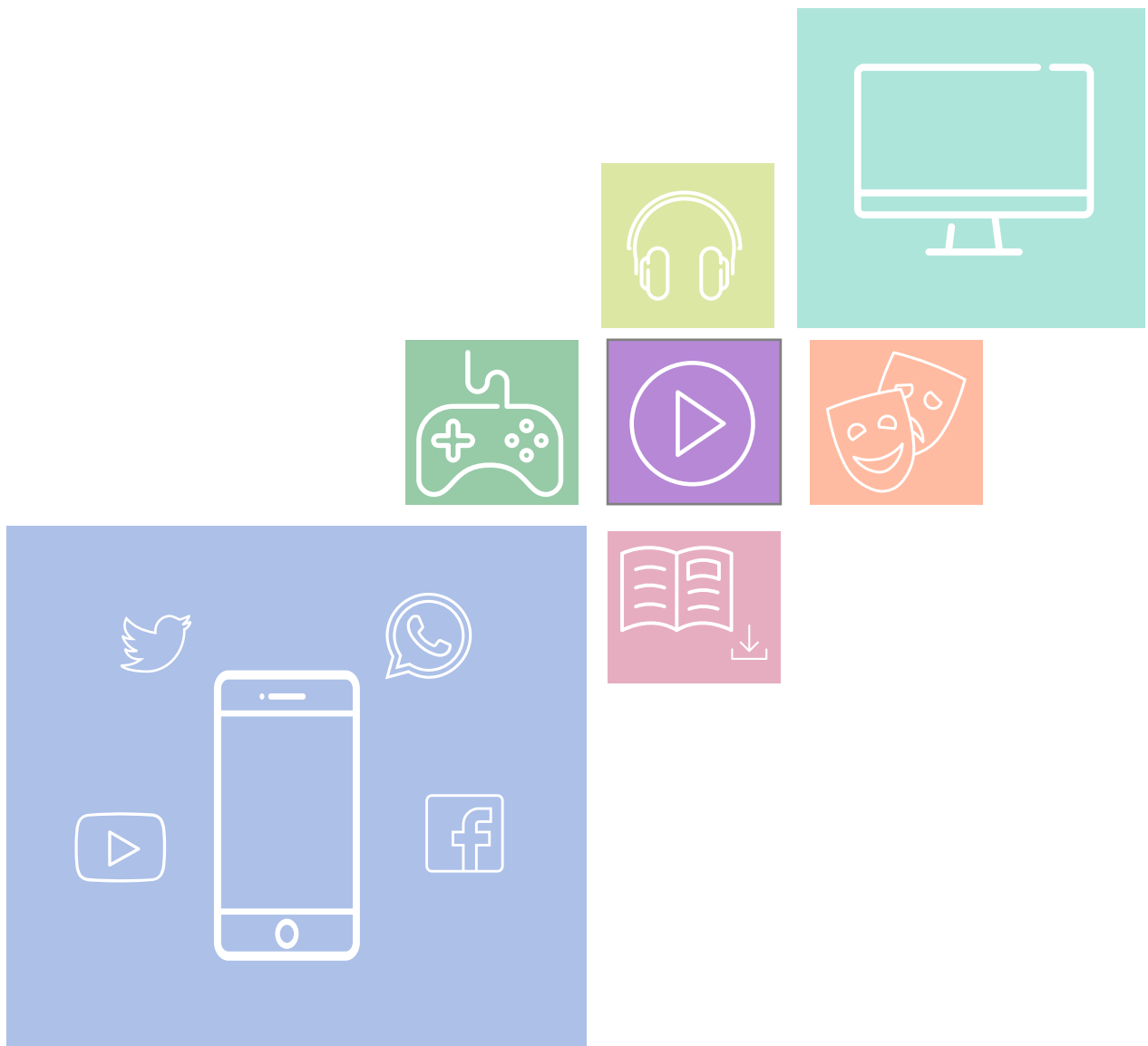
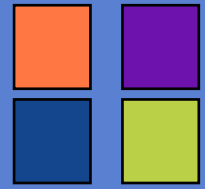
Information and Communication Technologies (ICTs), and specially the Internet, have revolutionized current society. One of the scopes where the influence of new technologies is most evident is in training, especially of younger people, as for them, technology is present across their everyday lives. In this context, the present study analyzes Internet use by high school students in Costa Rica when performing cultural and training activities. As such, an exploratory and descriptive analysis is conducted based on the data from the National Culture Survey 2016 [ENC, in Spanish]. The main results of this research study are the confirmation of the intensive use of the Internet by digital natives, although not necessarily for training or engaging in cultural practices; and the identification of socioeconomic factors that could potentially determine the use of the Internet by young persons.



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Introduction





ICTs and specially the Internet have brought about a general social and economic change in a very short period¹. Accordingly, the web went from having 400 million users in the year 2000 to 3500 million in 2017 (ISOC, 2017). Furthermore, young populations have been found to be the most “connected” and are thus known as native speakers of the language of interactive television, computer, video games and the Internet. This has also caused the web to be young people’s first source of reference, before any physical resource (Sunkel, Trucco & Espejo, 2013).

Worldwide, 71% of young people between the ages of 15 and 24 are online, in relation to 48% of the world’s population. Moreover, children and adolescents under the age of 18 represent approximately one in every three Internet users in the world. Empirical evidence also reveals that people are accessing the Internet at increasingly younger ages; in some countries, children under 15 years old are equally likely to use the Internet as people over 25 (UNICEF, 2017).

The intensive use of ICTs by young people has sparked a discussion around their leveraging in different social and cultural contexts and in accordance with the capacities, motivations and interests of this population. The essential topic of discussion is whether ICTs are a tool for local and global content appropriation, while bringing better opportunities for decent employment and ample personal development (Sunkel et al., 2013).

A topic related to the use of ICTs and specially the Internet that has been studied in depth is education, for long conceived as the privileged link articulating cultural integration, social mobility and productive development. Presently, as part of the transformation caused by the use of the Internet in nearly every area of daily life, education systems are called to undergo paradigm shifts in their current configuration. This is where the net is recognized as a tool for developing competencies and skills in students, fostering more flexible, personalized and ubiquitous education systems (Sunkel et al., 2013).

¹ The terms Internet, web, and net are used interchangeably.



The relevance acquired by the Internet in young people's education is evidenced in the data from the OECD Programme for International Student Assessment (PISA) 2012, which reveals that 90% of student respondents accessed the Internet for the first before turning 13.²

In this regard, a consideration raised is whether digital technologies are speeding up learning in class rooms, a picture that remains blurry. It is certain, however, that ICTs have led the way for children and young people to develop, learn, participate and improve their own conditions and context. Nevertheless, the discussion also highlights that these benefits are far from being enjoyed equally (UNICEF, 2017).

An example of inequality in access to ICTs is posed by Sunkel et al. (2003), who find that young people with a high socioeconomic status use this tool between 10% and 40% more than those from lower socioeconomic strata. In addition, the authors emphasize that the differences between these populations in Latin American countries are significantly greater than those found in OECD member countries, especially Chile and Colombia.

The ECLAC (2016) illustrates the state of education and its relationship with the use of ICTs in Latin America: over 150 million people aged between 5 and 19 (50% of the population) in the region are not part of formal education systems and hold a level of schooling that is insufficient to fully enter the economy, which leaves them at risk of joining population segments under the poverty line.

In the case of Costa Rica, performance in education continues to show weaknesses. Results from PISA tests in 2015 revealed that most students earn low scores. However, positive results include underprivileged students showing good performance thanks to access to ICTs (Programa Estado de la Nación, 2016). This finding evidences the high potential of ICTs as aids in the training and development of the country's young.

In this context, the present study aims to identify cultural and training activities in which high school students in Costa Rica use the Internet, as well as to explore the major socioeconomic factors that determine differences in Internet use. The goal is that these findings may serve as input to reflect on the use of the Internet by students in the country, specifically to guide actions

² The OECD PISA is an assessment conducted in every OECD member country and in an increasing number of partner countries. The Programme general objective is to determine whether students under 15 years of age are prepared to face the challenges posed by the knowledge society. Rather than mastering study plans or programs, the assessment focuses on measuring the young students' capacity to apply their knowledge and skills in real-life problem solving.



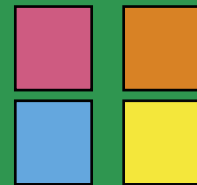
from public, private, academic and civil society actors seeking to promote young people using the net in a way that contributes to their training.³

³ Ley General de la Persona Joven 8261 [Young People General Act, in English] provides in article 2 definitions of “young people”:

[...] *Adolescent*: Person over twelve years of age and under eighteen years of age [...].

Young people. People aged between twelve and thirty-five, including adolescents, youngsters and young adults; the foregoing notwithstanding what other acts provide in relation to the benefits of children and adolescents [...].

Review of literature





Digitalization and interconnection through ICTs are considered the two major pillars of the current digital economy, the Internet being the main means for the different actors in the global society to interconnect with each other (OECD, 2017). Today, ICTs are immersed in people's daily life: work, school, leisure and exercise –even sleep and eating patterns.

The transcendent nature of ICTs in daily living is such that it has modified what is traditionally known as cultural capital, incorporating a new concept: informational capital. This refers to access to information, particularly to how to use it (Drabowicz, 2018). The author believes that the convergence of both capitals is expressed in the theory of social uses of the Internet, which states that the social differences are reflected in differentiated uses of the web.

Studying the differentiated uses of the Internet is relevant specially when conducting a generational analysis, where significant differences are observed depending on the generation (Prensky, 2001). Digital natives (such as adolescents) find incomprehensible to perform most daily activities without the help of the Internet (Palfrey & Gasser, 2008).

Education is one of the fields where the resources offered by the net are most important for digital natives. There, uncountable sources of information, communication, teaching and learning complement conventional formal and informal education methods. An example of the importance of the Internet in education is project *UK Children Go Online* implemented in the United Kingdom's education system in 2004 as a government policy (Livingstone & Bober, 2004).

Learning institutions have increasingly incorporated in their curriculum and didactic materials the use of the net, especially in the case of children and young people born in the digital era. Likewise, society has become aware of the contribution of non-formal education to human capital training, which represents a paradigm shift that recognizes it as a complement to conventional formal education methods (Schuller, 2001).



Cultural practices are one of the areas of informal education with outstanding potential for contribution to human capital training.⁴ According to Greenfield (2009), these practices involving technology have a high potential for developing cognitive skills such as visual intelligence.

In the new information age, the role of ICTs is becoming increasingly transcendent for the spreading of knowledge. Specifically, the Internet allows for content access, irrespective of where the content is produced and updated. Dominguez (2003) quotes Giddens (1993) and states that because of technological breakthroughs, physical and cultural distances fall irrelevant. Moreover, one of the greatest benefits offered by the Internet is increasing the interaction of those who use it (Wellman et al., 2001), further magnifying the dissemination of knowledge. Among others, access to the net allows for the sharing of audiovisual and written content that transfers the knowledge that is constantly created in different areas, such as cultural practices.

The transcendent nature of the web as a means for human learning has caused the scientific literature to recognize the importance of having strategic digital skills for the use of technological resources to improve one's social, labor, and academic status, as well as in the performance of cultural practices (Van Dijk & Hacker, 2011). The authors also emphasize that lacking strategic digital skills is only one of the barriers that hinder Internet use, among which are mental, material, strategic informational and instrumental, and use-related barriers, as well as the person's socioeconomic context.

Of the barriers to Internet access, determining socioeconomic factors have been the most widely studied globally (Bimber, 2000; Howard, Rainie & Jones, 2001; DiMaggio et al., 2004; Hargittai, 2010; Drabowicz, 2017). A higher socioeconomic status is observed to be positively related to productive uses of the Internet (Howard, Rainie & Jones, 2001). Another factor that is positively related to the use of the net is the level of schooling, as showed by Hargittai and Hinnant (2008) in a study performed with adults between the ages of 18 and 26 in the United States.

Drabowicz (2017) analyzes the effect of social status on Internet use patterns of 15-year-olds from Germany and Norway. The author concludes that no significant differences are observed in the frequency and way adolescents use the Internet. Also, sex, immigration status, family structure, parent's education, Internet access, and number of books in the home do not affect Internet use patterns significantly, either. The author claims that his findings support Prensky's

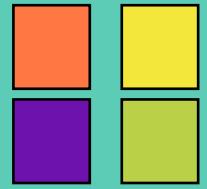
⁴ The National Institute of Statistics and Census (2017: 30) defines cultural practices as "cultural and artistic practices such as taking pictures, recording videos, singing, and dancing carried out by people individually or collectively, for recreational purposes, personal development or as pastime. Generally, they are non-professional, unpaid activities."



(2001) theory of digital natives with empirical evidence, in the sense that Internet use patterns are more the result of the generation than of the socioeconomic status.

While this section presented the major elements of analyzing Internet use by digital natives, the following one explains to the methodological approach applied in this study, covering the topics suggested by the review of literature.

Data and Methodology





Data from the ENC 2016 conducted by the Costa Rica National Institute of Statistics and Census was used to assess Costa Rican high school students' Internet use when performing education activities and cultural practices. The ENC is administered to a sample of 6276 dwellings and 8033 people, with representativeness at national, area, and planning region levels.⁵ This exploratory study involves a subsample of 309 people between the ages of 13 and 18 who attend high school.

For data analysis, descriptive statistical methods were applied through two sets of questions from the ENC questionnaire: Internet uses emphasizing education activities and cultural practices. The survey defines Internet use as a cross-cutting theme, which provides interesting data for analysis from an approach related to the contribution of telecommunications to training and development of strategic digital skills.

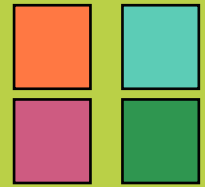
Survey data also allow for the socioeconomic characteristics of the population under study to be defined, whereby the analysis focuses on the major contributions suggested by the review of literature available in the database, namely: area, planning region, sex, age, and high school attended (public or private).⁶ These characteristics are analyzed in a cross-cutting fashion together with Internet uses by young people for educational purposes or for engaging in cultural practices.

A limitation posed by the data analyzed was that working with a complex survey as basis and applying filters to obtain a subsample contributed to loss of observations, at the expense of the validity and reliability of the results obtained. Nevertheless, it is believed that, for an exploratory study, the information available was sufficient for meeting the objectives.

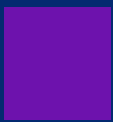
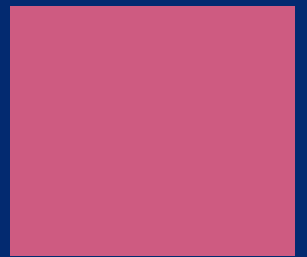
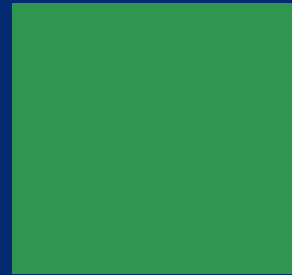
⁵ The areas are rural and urban, "as per the parameters used in the 9th National Population Census and 5th Housing Census (2000)" (INEC, 2017: 24). The planning regions pertain to six territories in which the country is divided, defined by the Ministry of National Planning and Economic Policy [Mideplan, in Spanish] of the Republic of Costa Rica, pursuant to "Executive Decree 7944 of 1978, amended by Executive Decree 37735-Plan, article 57 of 2013" (INEC, 2017: 24).

⁶ The review of literature suggests income as one of the variables for analysis. However, the data required for such consideration was not available at the time of study.

Results



Internet uses and training of young people

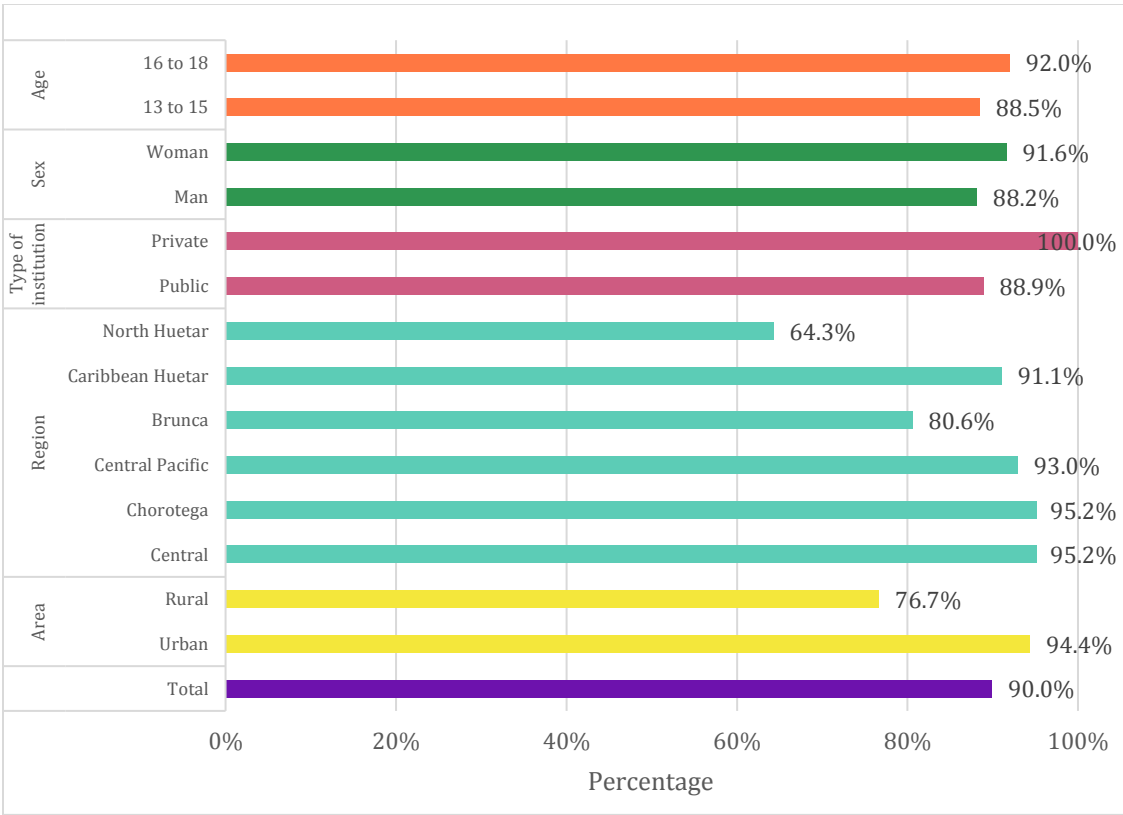




At a general level, nine of every ten young people used the Internet during the last 30 days. In contrast, of the people over 18 years of age, seven in every ten used the Internet during the last 30 days. The results show how the Internet is part of daily life in the Costa Rican society. However, this is even more evident in the case of digital natives, as mentioned in the review of literature.

When analyzing the differences in use by area of residence, it is observed that 76.7% of young people in the rural area and 94.4% of young people in the urban area used the Internet (a difference of 18 percentile points or pp). At a planning region level, the greatest differences are observed in young residents of the North Huetar Region (least relative access) in relation to the Brunca Region (difference of 16 pp) and the Central and Chorotega Regions (difference of 31 pp). The results considering variables of regional nature show that, in accordance with empirical evidence, territorial gaps persist, including a gap in Internet use.

Figure 1: Percentage of young people who used the Internet in the last 30 days, by area, region, type of learning institution, sex, and age. 2016

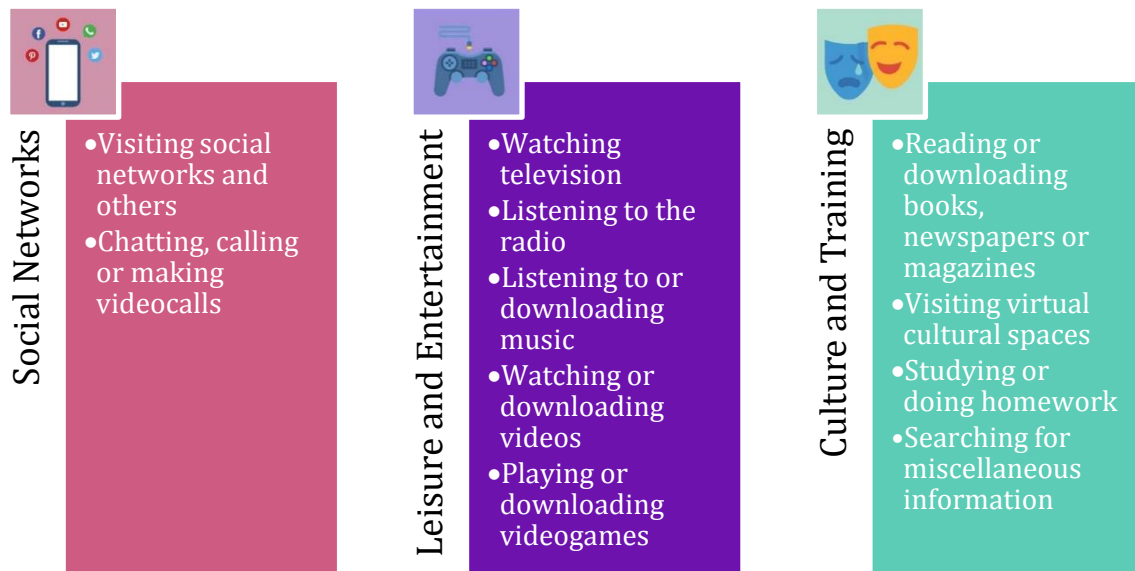


Source: Compiled by authors with data from the National Culture Survey, INEC.

Another outstanding finding on Internet use by young people is that observed according to the type of learning institution attended. It is observed that all students from private learning institutions used the Internet in the last 30 days, with 88.9% of the students from public learning institutions having used it. The numbers evidence a gap in the access to this important resource and match the differences in the education results for both types of learning institutions (Giménez et al., 2014). Although no correlation can be established between quality of education and Internet use, the net today is certainly an essential resource for access to knowledge.

The ENC inquires about 15 Internet uses by young students. To simplify the analysis, the uses were grouped in three categories: Social Networks, Leisure and Entertainment, Culture and Training. Also, the following activities are excluded: sending and receiving emails; purchasing products or services; banking transactions; and working from home, office or elsewhere, as they are activities performed by under 5% of young population, possibly due to their current life stage. Figure 2 details the activities by categories:

Figure 2: Grouping of activities performed on the Internet 2016

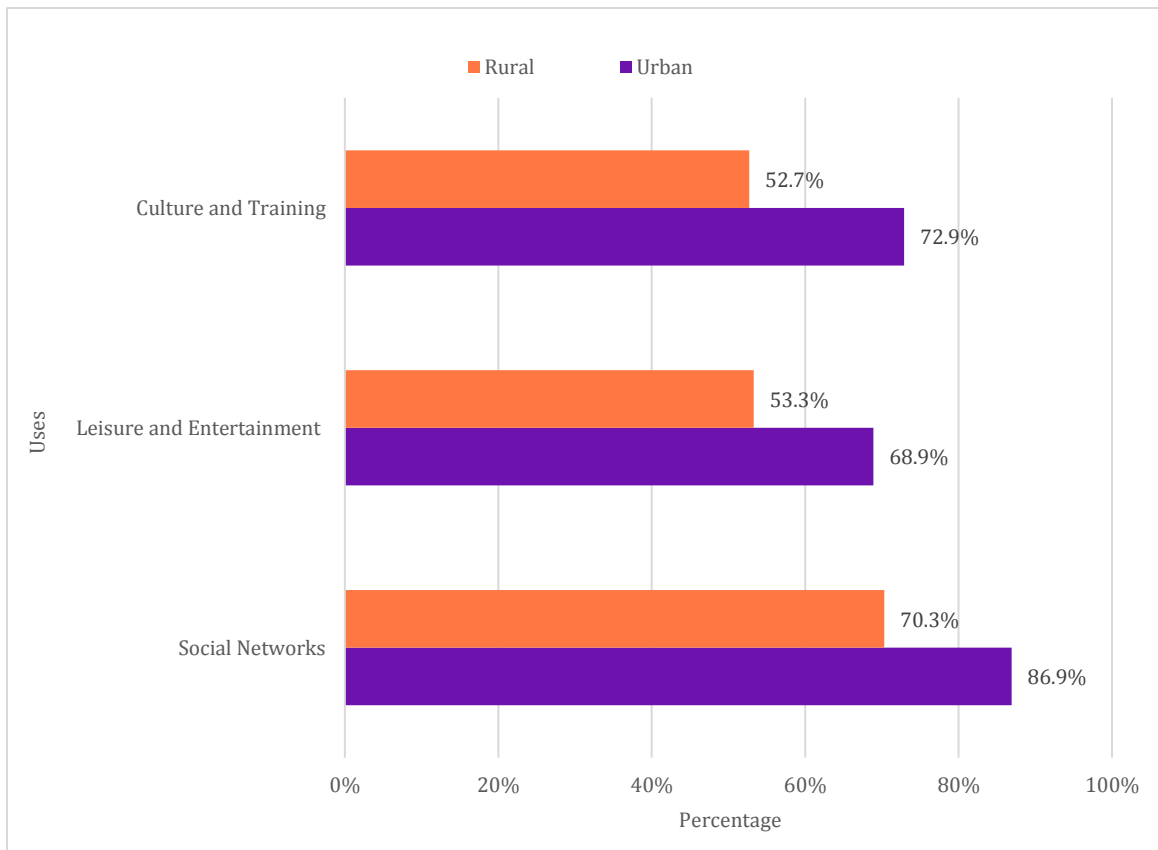


Source: Compiled by authors.

Below are the findings for these categories in relation to the sociodemographic variables area and region of residence, type of learning institution attended (public or private), sex, and age group (13-15 and 16-18). The following figure shows young people in the urban area use Internet more

than those in the rural area, irrespective of the activity group analyzed. The most significant difference is observed in the Culture and Training category, where the difference between young people in the urban area performing an activity in this category and those in the rural area was of 20 pp. The lesser use of the Internet in training activities and cultural practices observed in the rural area evidences that territorial inequalities persist in the country and are reflected as differences in the acquisition of strategic digital skills.

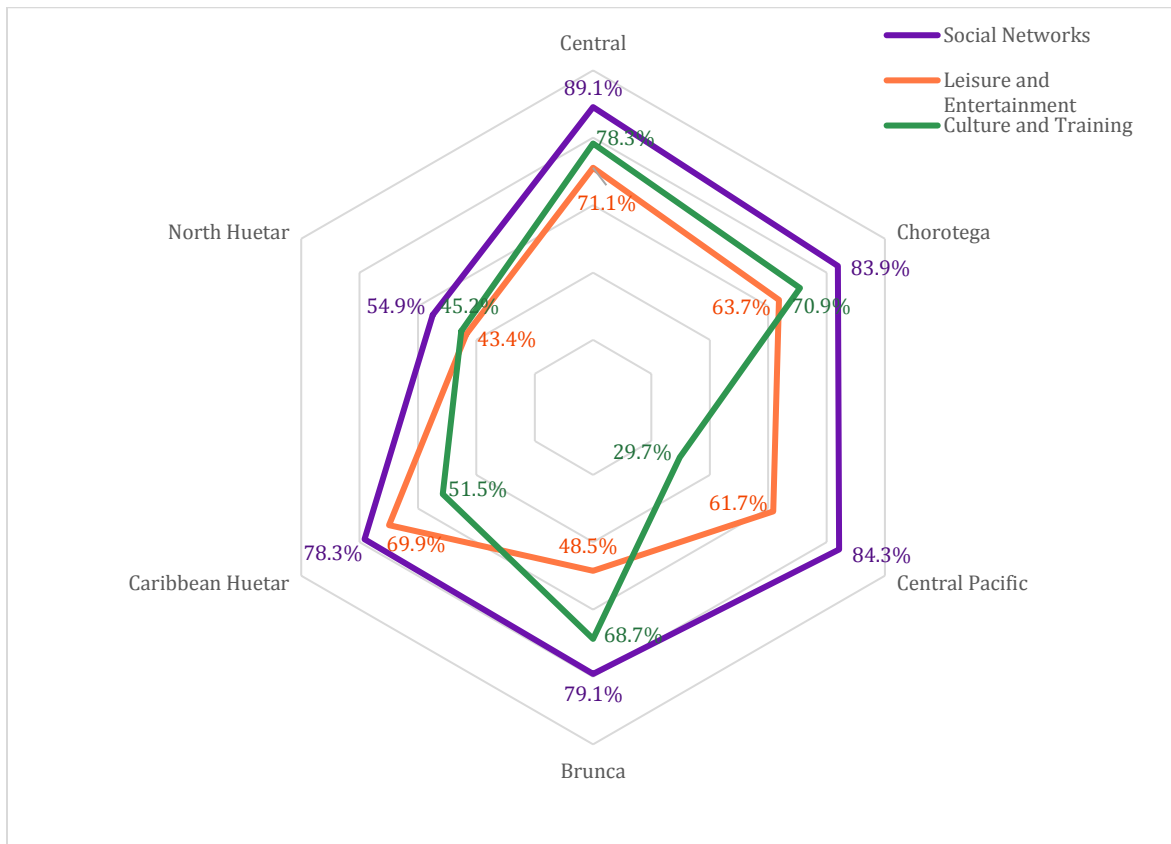
Figure 3: Percentage of young people who used the Internet in the last 30 days, by area and Internet use category. 2016



Source: Compiled by authors with data from the National Culture Survey, INEC.

When analyzing the differences by planning region, it is observed that young people use the Internet mainly for social networks. Culture and Training remains as the second Internet use category with the highest frequency observed, except in the Central Pacific Region and Caribbean Huetar Region, where only 29.7% and 51.1% of students engage in it, respectively. In this regard, particularly noteworthy is that while young people in Costa Rica use the Internet intensively, such use pertains mainly to ludic and recreational activities, and to a lesser extent to acquiring strategic digital skills by engaging in cultural practices.⁷

Figure 4: Percentage of young people who used the Internet in the last 30 days, by planning region and Internet use category. 2016



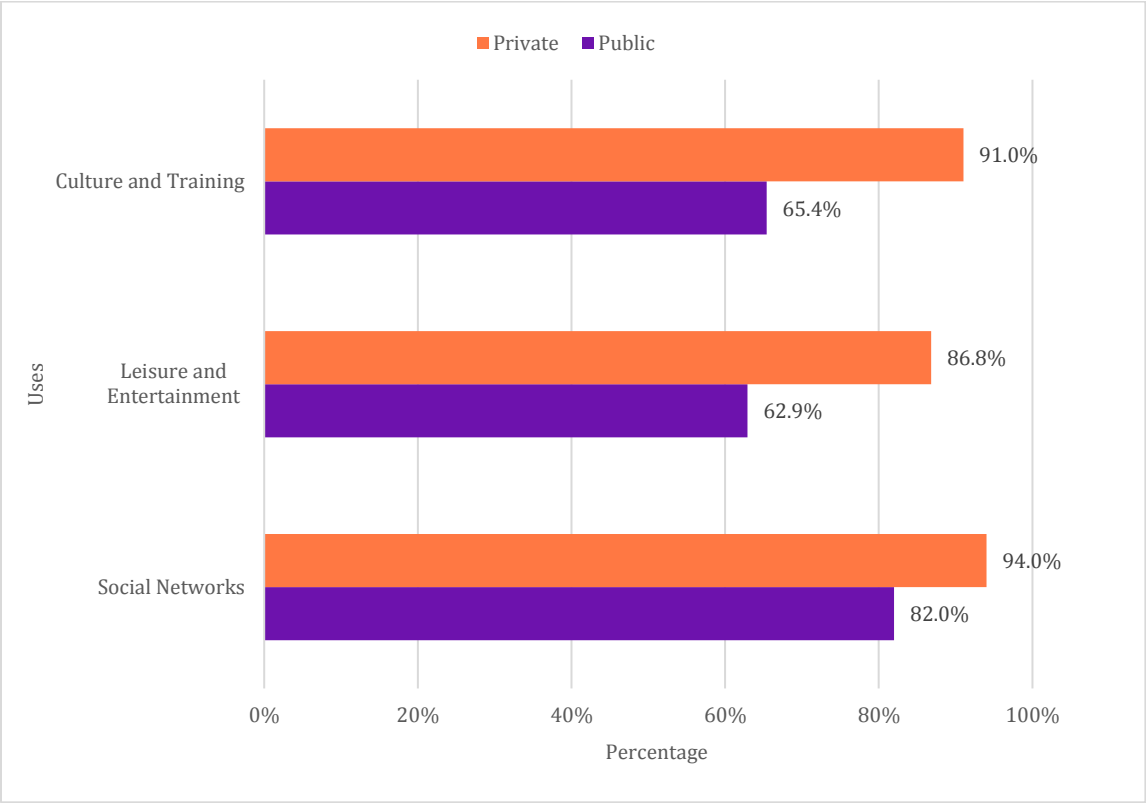
Source: Compiled by authors with data from the National Culture Survey, INEC.

⁷ The National Institute of Statistics and Census (2017: 30) defines ludic activities as “assorted games and toys [...] and recreational activities [...]. To engage in them, physical or mental exercise is required.



Regarding the type of learning institution attended, the following chart shows that 91.0% of those attending private high schools use the Internet in activities related to culture and training, while in the case of public high schools (65.4%) a difference of 26 pp is observed. A gap of 24 and 12 pp in favor of private high schools is observed for Leisure and Entertainment and Social Networks, respectively. The differences are certainly more significant in the uses related to Culture and Training, which are deemed of a more productive nature. This poses the need for deeper explanations of compatibility or socioeconomic context that cannot be included in this study.

Figure 5: Percentage of young people who used the Internet in the last 30 days, by type of learning institution attended and Internet use category. 2016



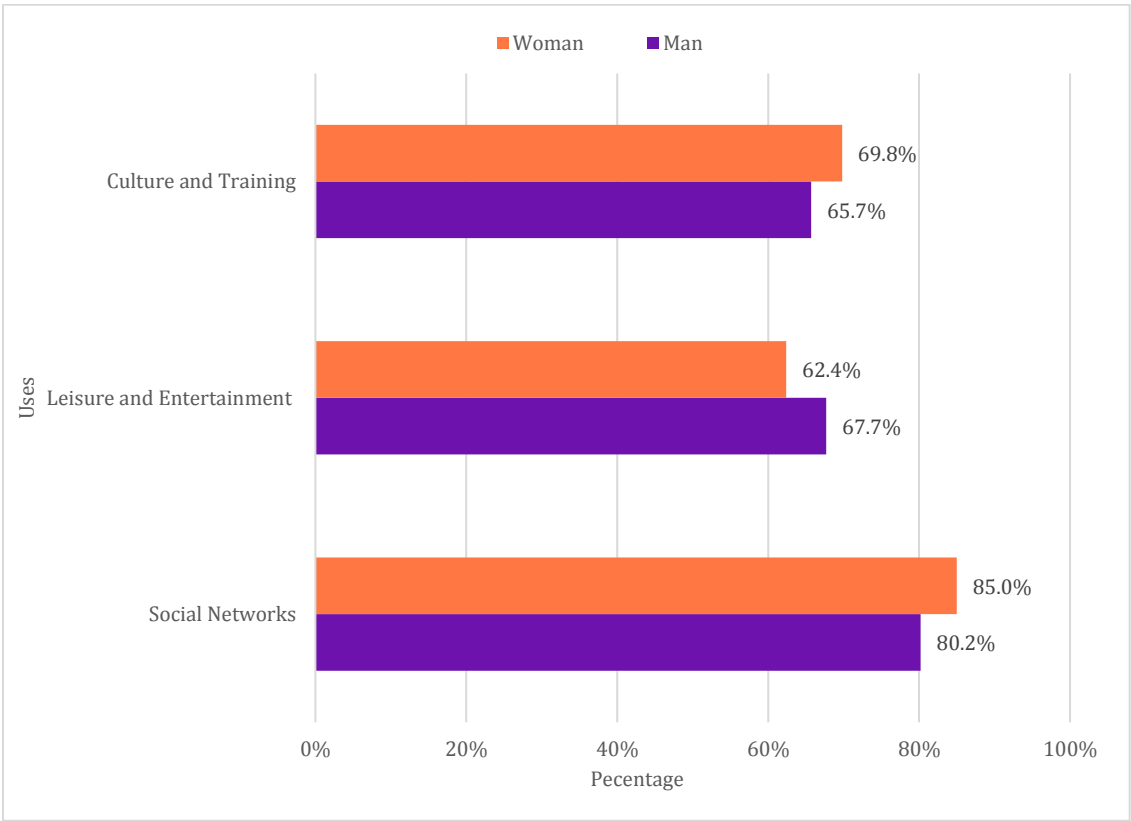
Source: Compiled by authors with data from the National Culture Survey, INEC.

When analyzing by sex the differences in the activities performed by young people on the Internet, it is observed that 67.7% of men use the Internet for Leisure and Entertainment, while the share is 62.4% for women. This shows a greater preference for ludic activities by men (Figure 6). The percentage of women students that performed activities grouped under Social Networks and



Culture and Training is 85.0% and 69.8% respectively, with the men showing a lower percentage (80.2% and 65.7%). Although the difference in favor of women observed in Culture and Training activities is only 4 pp, it is clear that young women make a more intensive use of the Internet as a tool to acquire strategic digital skills.

Figure 6: Percentage of young people who used the Internet in the last 30 days, by sex and Internet use category. 2016



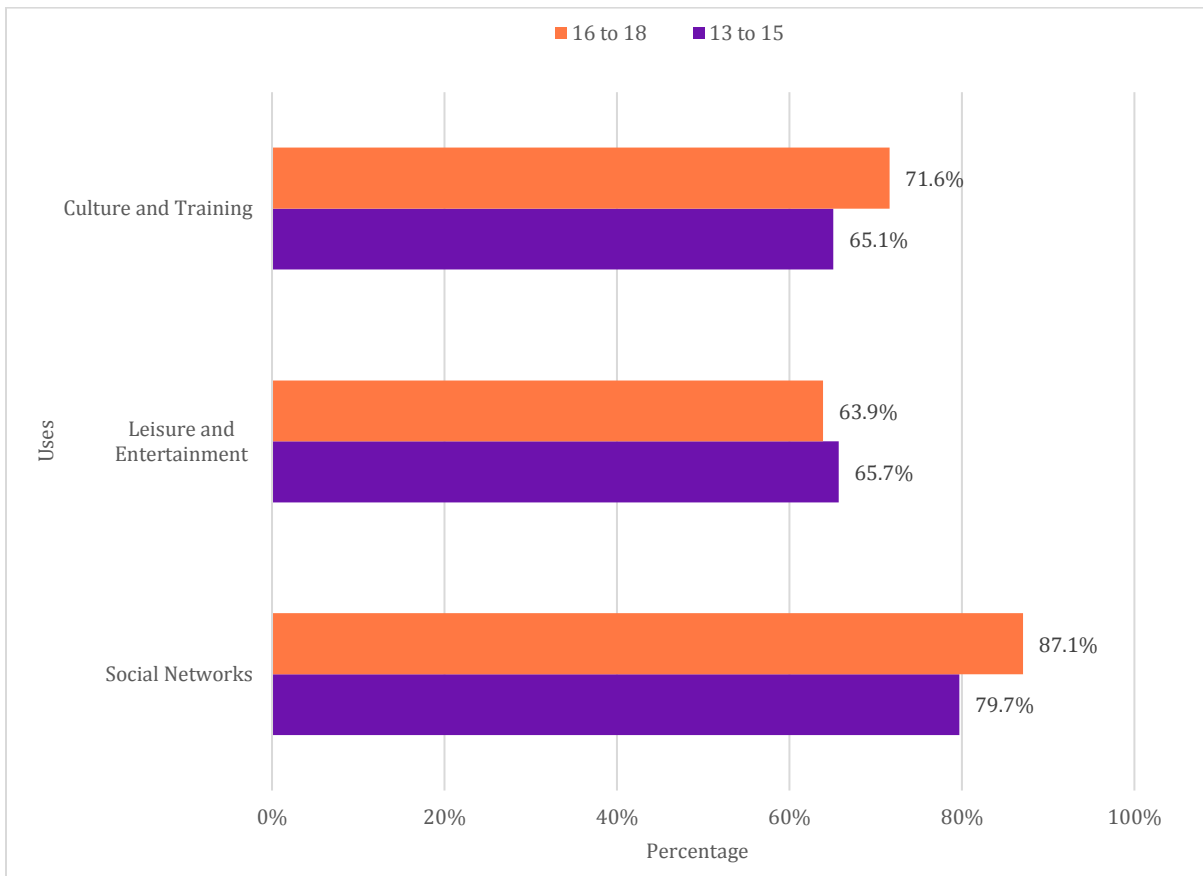
Source: Compiled by authors with data from the National Culture Survey, INEC.

The analysis of Internet use by age shows that the activities most frequently performed by young people are in the Social Networks category (83% on average), followed by Culture and Training activities (68% on average). Leisure and Entertainment is the only use category where young people aged 13-15 show a slightly higher percentage in relation to the 16-18 age group (65.7% and 63.9%, respectively). The results obtained are deemed consistent with the respondents' current life stage: younger people are expected to use the Internet more for Leisure and



Entertainment, while at older ages access to social networks is greater and more time is devoted to engaging in cultural practices.

Figure 7: Percentage of young people who used the Internet in the last 30 days, by age group and Internet use category. 2016



Source: Compiled by authors with data from the National Culture Survey, INEC.

Internet uses and cultural practices of young people

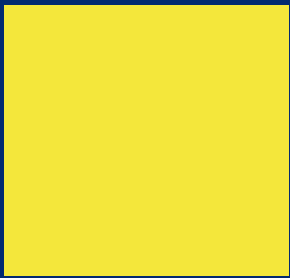


Table 1 shows the cultural practices of high school students in Costa Rica and their Internet use to engage in them. Taking pictures is the most frequent practice: it was mentioned by seven in every ten young people. Other practices mentioned include recording videos (52.5%), going dancing or taking dance lessons (43.3%), playing an instrument (43.2%), singing (37.1%), and painting, sculpting or engraving (28.5%).

The use of the Internet in cultural practices is observed as reduced; only one fifth of young people used the Internet to engage in them. The most common practice is taking pictures; of the total number of young people who engaged in it, only 13.0% used the Internet. Conversely, of those who practiced singing or played an instrument, around a third used the Internet to do so (31.1% and 32.0%, respectively).

Table 1: Percentage of young people by cultural practices and their Internet use to engage in them. 2016

Activities	Percentage of young people who performed the activity	Percentage of young people who used the Internet to perform the activity *
Taking pictures	69.6%	13.0%
Recording videos	52.5%	15.3%
Going dancing or taking dance lessons	43.3%	23.4%
Playing a musical instrument	43.2%	32.0%
Singing	37.1%	31.1%
Painting, sculpting or engraving; drawing or designing	28.5%	27.6%
Doing textile arts and crafts, such as quilting	11.6%	19.1%
Writing literary texts, short stories, novels, poetry	11.6%	5.4%
Making handicraft items	8.6%	29.5%
Participating in theater or opera	7.8%	14.0%
Composing music	6.9%	24.5%
Performing circus, storyteller or puppet show activities	1.9%	37.2%
Participating in radio or television shows or in filmmaking	1.2%	20.8%
No activity performed	13.8%	-

*These values represent the percentage of young people who used the Internet to engage in a cultural practice in relation to the total of young people who engaged in a cultural practice.

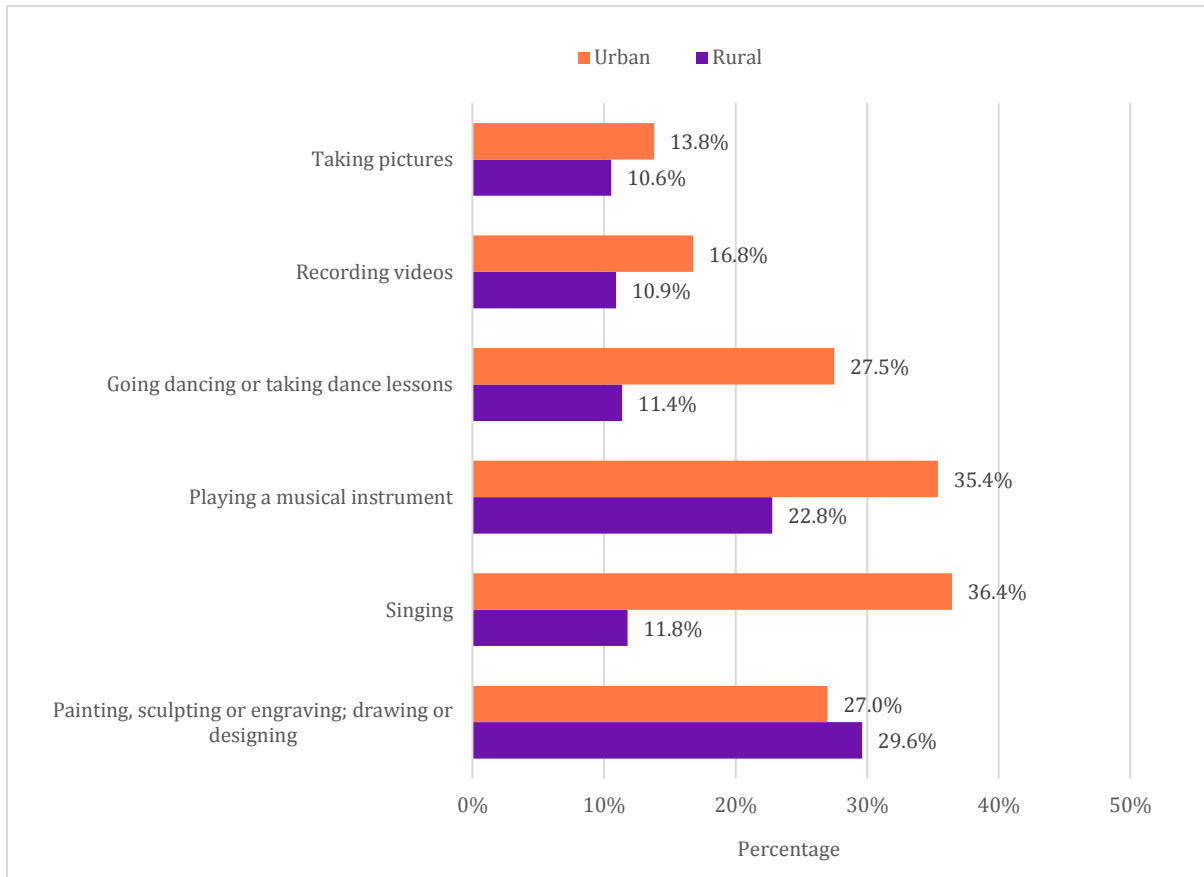
Source: Compiled by authors with data from the National Culture Survey, INEC.



To explore the socioeconomic characteristics of the group of young people who use the Internet for cultural practices, those practices engaged in by over 20% were considered (regardless of whether Internet was used or not). These practices were mentioned at the start of this section.

Figure 8 shows that the majority of young people who engage in cultural practices using the Internet reside in the urban area. The only practice more widely engaged in by young people from the rural area is painting, sculpting or engraving.

Chart 8: Percentage of young people who engaged in cultural practices using the Internet, by practice and area of residence. 2016



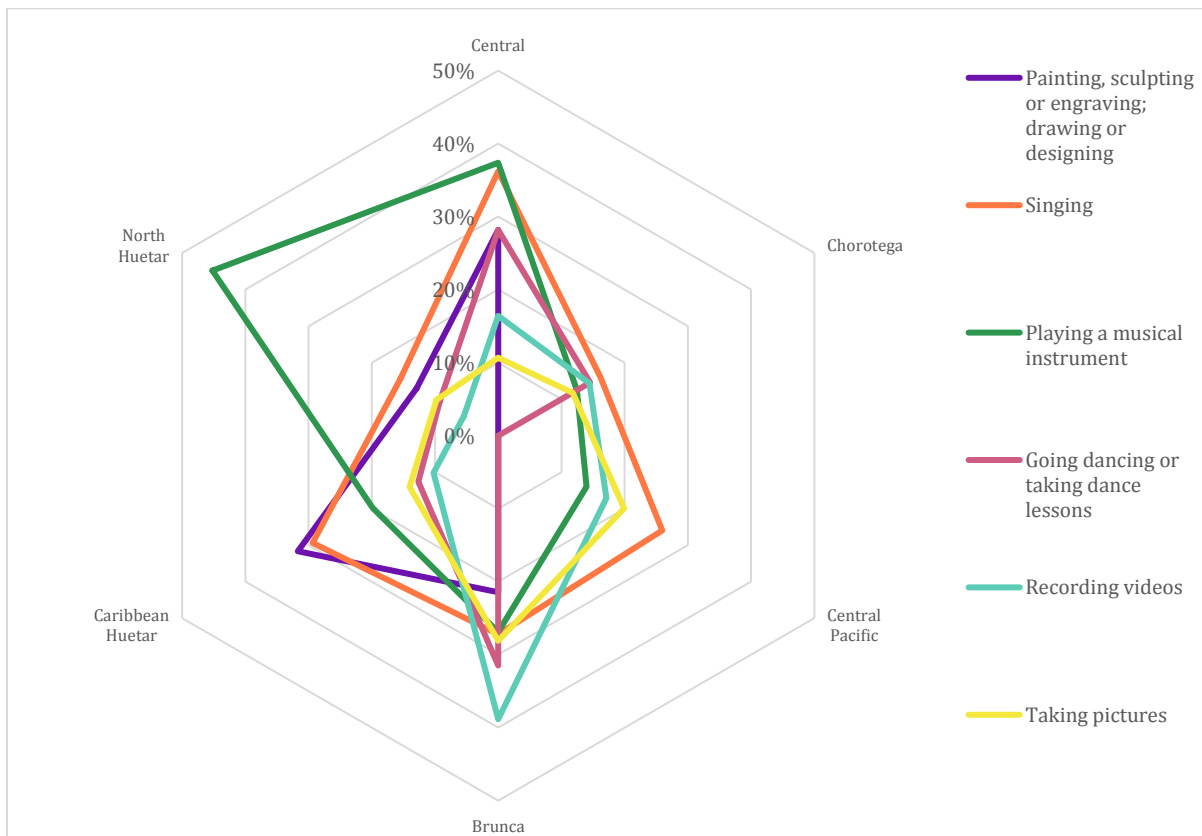
Source: Compiled by authors with data from the National Culture Survey, INEC.



At planning region level, it is observed that at least 20% of young people from the Chorotega Region who engaged in cultural practices used the Internet. In the Central Region, around four in every ten young people who played an instrument or sang used the Internet to do so. In the North Huetar Region, the cultural practice involving the greatest Internet use is playing a musical instrument (45.2%). In the Caribbean Huetar Region, around 30% of those who painted, sculpted or engraved, or sang, used the Internet.

The territorial analysis of cultural practices engaged in by young people shows a duality in the country where, in general, urban areas show higher levels of Internet use. In addition, this is consistent with empirical evidence findings that point to this socioeconomic variable as determinant in young people’s Internet use.

Figure 9: Percentage of young people who engaged in cultural practices using the Internet, by practice and planning region. 2016

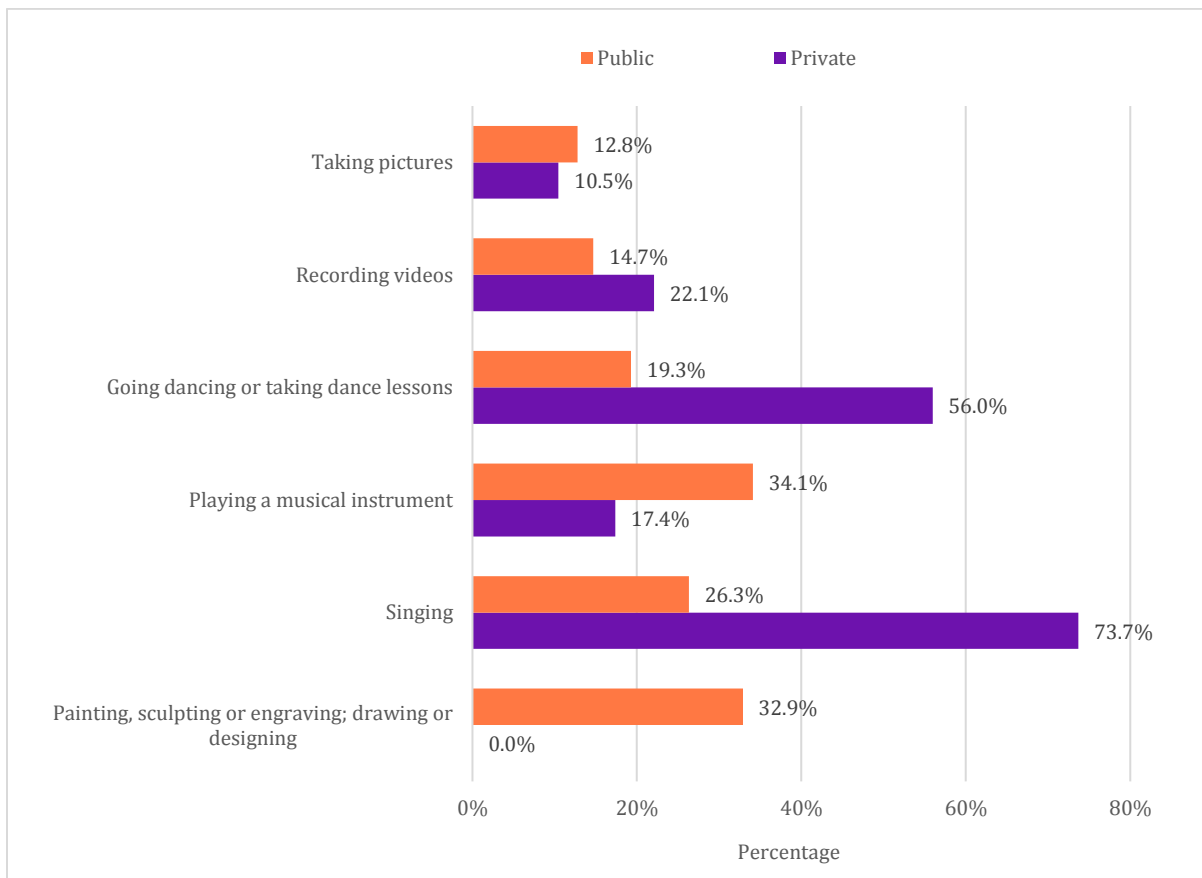


Source: Compiled by authors with data from the National Culture Survey, INEC.



In Figure 10, a difference is observed between young people attending private high schools and those attending public high schools. Accordingly, in the former, the greatest Internet use is observed in singing (73.7%) activities and going dancing or taking dance lessons (56.0%). Of those attending public learning institutions, 34.1% used the Internet to play a musical instrument and 32.9% for activities related to painting, sculpting, or engraving, as the most frequently performed activities.

Figure 10: Percentage of young people who engaged in cultural practices using the Internet, by practice and type of learning institution attended. 2016

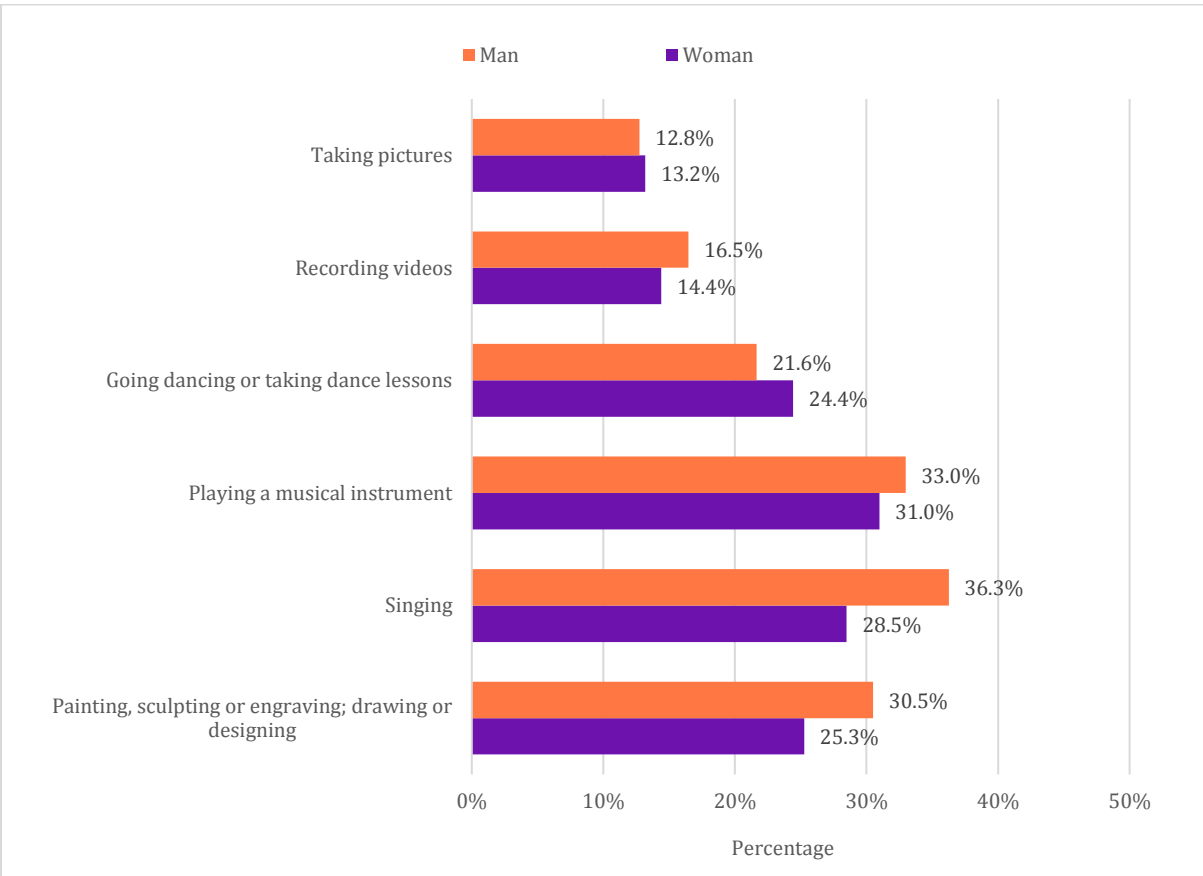


Source: Compiled by authors with data from the National Culture Survey, INEC.



It is observed that Internet use for cultural practices is similar between men and women (Figure 11). This is also consistent with the empirical evidence in that differentiated Internet uses are more the result of the generation than of the person’s sex. This study is not conclusive in this regard. However, it raises the need to study the topic more in depth and employing other methods like, for instance, regression analysis.

Figure 11: Percentage of young people who engaged in cultural practices using the Internet, by practice and sex. 2016



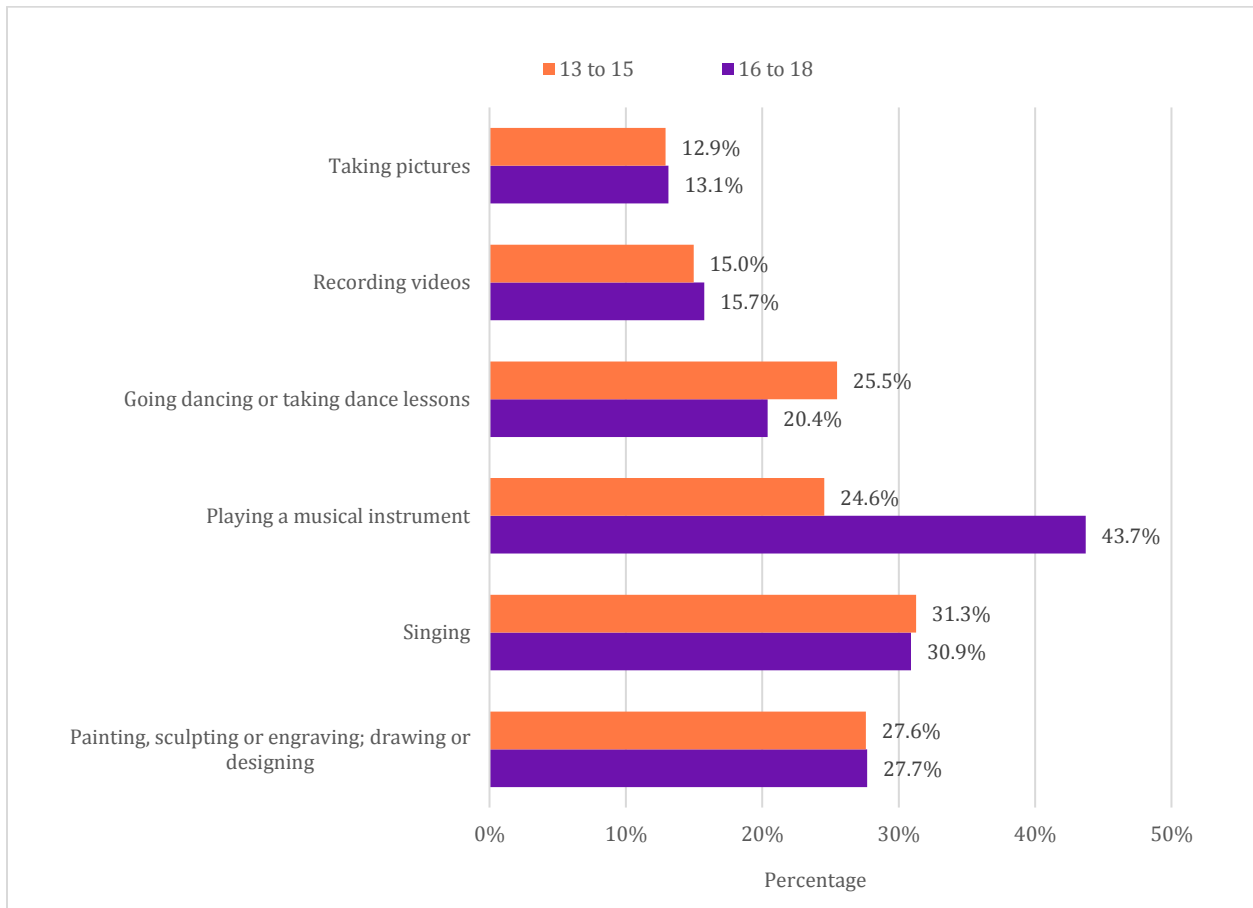
Source: Compiled by authors with data from the National Culture Survey, INEC.

In Figure 12, analysis by age groups shows that 43.7% of young people between the ages of 16 and 18 who played a musical instrument used the Internet; while the share for the group aged 13 to 15 is only 24.6% (a difference of 19 pp). This highlights the need for analysis by age groups, as the single fact that young people attend high school does not entail that they share the same



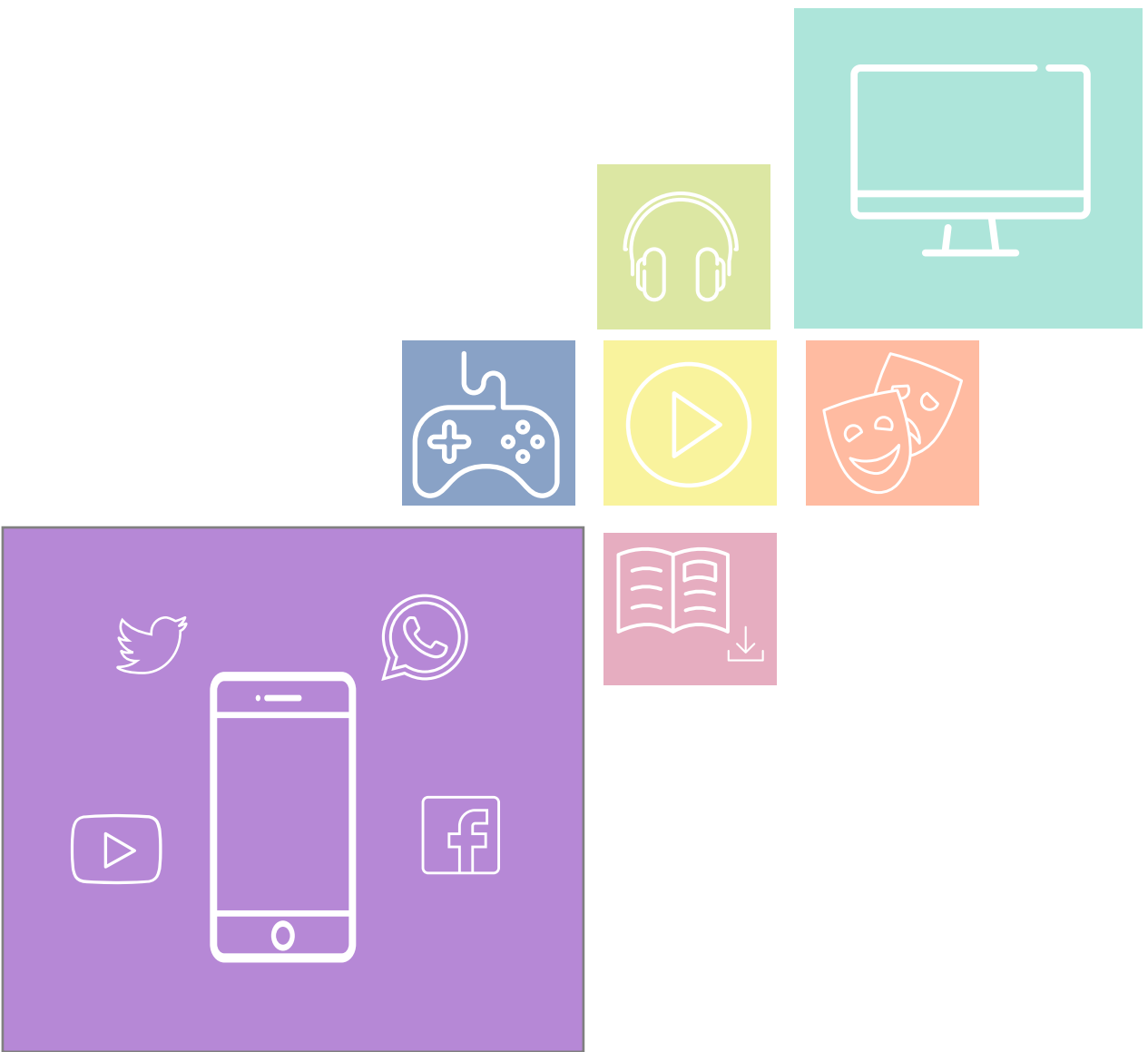
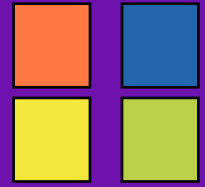
preferences in terms of cultural practices and Internet use. For further studies, delving into the students' preferences by age is advisable.

Figure 12: Percentage of young people who engaged in cultural practices using the Internet, by practice and age group. 2016



Source: Compiled by authors with data from the National Culture Survey, INEC.

Conclusions





This exploratory study is an input for debate and decision-making in the public, private, academic, and civil society sectors interested in the young people's Internet use in Costa Rica. Specifically, of higher interest is Internet use to acquire strategic digital skills that could lead to the bridging of the digital divide and an improvement in the wellbeing of young people and their families.

The results obtained in the study are consistent with the literature review findings in that digital natives use the Internet intensively, which is reflected in that nine in every ten high school students used the Internet during the 30 days prior to the administration of the survey. This demonstrates that ICTs are embedded in people's daily living, particularly in the case of young people.

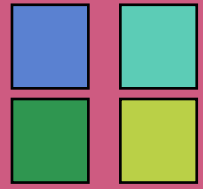
Another highly relevant finding is that high school students in Costa Rica use the Internet more intensively for activities related to social networks and ludic and recreational activities. They use the Internet to a lesser extent to acquire strategic digital skills (activities related to training and cultural practices), the latter of which are more related to narrowing the digital divide from a perspective of appropriation and productive use.

In general terms, the study evidences that variables such as area, planning region, sex, and type of learning institution attended (public or private) are relevant when attempting to explain young people's Internet use for training and cultural practices. For further research studies, delving into a cross-cutting approach to socioeconomic gaps and the digital divide that persists in the country is recommended.

Also, conducting more detailed studies that delve into the Costa Rican students' determining Internet uses—whether socioeconomic or related to preference—is advisable. For this purpose, applying specific instruments for topic assessment as well as additional tools for qualitative and quantitative analysis is necessary.

From a public policy creation standpoint, it is advisable to reflect on what the best strategies are for eliminating the digital divide among young people in Costa Rica, one that cuts across other socioeconomic gaps that persist in the country. To that end, joint work with different stakeholders that contribute to the narrowing of these gaps must be pursued.

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