Salud, Ciencia y Tecnología. 2025; 5:1913 doi: 10.56294/saludcyt20251913

#### **ORIGINAL**



# Digital divides and youth cultural participation in rural contexts in Ecuador

# Brechas digitales y participación cultural de los jóvenes en contextos rurales en Ecuador

Felipe Arévalo-Cordovilla¹ □ ⋈, Kerly Palacios-Zamora¹ □ ⋈, Luis Rosero C¹ □ ⋈, Guillermo Del Campo S¹ □ ⋈

<sup>1</sup>Universidad Estatal de Milagro, Fascecyd. Milagro, Ecuador.

Cite as: Arévalo-Cordovilla F, Palacios-Zamora K, Rosero C L, Del Campo S G. Digital divides and youth cultural participation in rural contexts in Ecuador. Salud, Ciencia y Tecnología. 2025; 5:1913. https://doi.org/10.56294/saludcyt20251913

Submitted: 28-01-2025 Revised: 01-04-2025 Accepted: 30-06-2025 Published: 01-07-2025

Editor: Prof. Dr. William Castillo-González

Corresponding author: Guillermo Del Campo S ⊠

#### **ABSTRACT**

This article examined digital gaps and their impact on the cultural exclusion of Ecuadorian youth aged 20 to 24 in Zone 5, composed of the provinces of Guayas, Los Ríos, Bolívar, Santa Elena, and Galápagos. Using a quasi-experimental design and a quantitative approach, data were collected and compared between two groups differentiated by their level of connectivity and pedagogical mediation. The sample consisted of 400 young people, equally distributed between both groups. A structured questionnaire was applied to assess dimensions such as digital cultural capital, participation in online cultural practices, use of platforms, and barriers to cultural digital appropriation. The results showed that the group with stable connectivity and training in digital skills presented higher levels of technological self-efficacy, participation in digital cultural communities, and production of symbolic content. In contrast, the other group exhibited limitations in both access (unstable mobile connections and basic devices) and the ability to leverage cultural opportunities in the digital environment. Statistical tests revealed significant differences between the groups in all measured dimensions (p < 0,01), with moderate to high effect sizes. It was concluded that digital exclusion among youth is not only technical but also symbolic, cultural, and educational. Furthermore, it was proposed that public policies should incorporate critical training, territorial support, and cultural inclusion, moving beyond a merely infrastructural paradigm.

Keywords: Digital Divide; Digital Cultural Capital; Symbolic Exclusion; Ecuadorian Youth.

#### **RESUMEN**

Este artículo analizó las brechas digitales y su impacto en la exclusión cultural de jóvenes ecuatorianos de entre 20 y 24 años en la Zona 5, compuesta por las provincias de Guayas, Los Ríos, Bolívar, Santa Elena y Galápagos. A través de un diseño cuasi experimental y un enfoque cuantitativo, se recolectaron y compararon datos de dos grupos diferenciados según su nivel de acceso a la conectividad y a procesos de mediación pedagógica. La muestra estuvo conformada por 400 jóvenes distribuidos equitativamente en ambos grupos. Se aplicó un cuestionario estructurado que midió dimensiones como el capital cultural digital, la participación en prácticas culturales en línea, el uso de plataformas y las barreras para la apropiación cultural digital. Los resultados evidenciaron que el grupo con conectividad estable y formación en competencias digitales presentó mayores niveles de autoeficacia tecnológica, participación en comunidades culturales digitales y producción de contenido simbólico. En contraste, el otro grupo mostró limitaciones tanto en el tipo de acceso (conexiones móviles inestables y dispositivos básicos) como en la capacidad de aprovechar las oportunidades culturales del entorno digital. Las pruebas estadísticas revelaron diferencias significativas entre ambos grupos en todas las dimensiones medidas (p < 0,01), con tamaños del efecto moderados y altos. Se concluyó que la exclusión digital en contextos juveniles no es solo técnica, sino también simbólica, cultural y educativa.

© 2025; Los autores. Este es un artículo en acceso abierto, distribuido bajo los términos de una licencia Creative Commons (https://creativecommons.org/licenses/by/4.0) que permite el uso, distribución y reproducción en cualquier medio siempre que la obra original sea correctamente citada

Asimismo, se propuso que las políticas públicas incluyan componentes de formación crítica, acompañamiento territorial e inclusión cultural, superando el paradigma meramente infraestructural.

Palabras clave: Brecha Digital; Capital Cultural Digital; Exclusión Simbólica; Juventud Ecuatoriana.

#### INTRODUCTION

Over the last two decades, the rapid advancement of Information and Communication Technologies (ICT) has profoundly transformed the social, educational, and cultural landscapes at the global level. The expansion of the Internet, the massification of mobile device use, and the proliferation of digital applications and platforms have altered the forms of access to knowledge, symbolic production, citizen participation, and economic dynamics in nearly all areas of society.<sup>(1)</sup>

However, this process of digital transformation has been accompanied by the persistence of structural inequalities that limit the equitable use of technological benefits, especially among youth groups that come from socioeconomically vulnerable contexts. (2,3) This situation has made it evident that digital inclusion is a multidimensional challenge that exceeds the physical dimensions of access to infrastructure and requires an understanding of the social, educational, and cultural components that shape it. (4)

In this scenario, the concept of the digital divide has undergone a significant conceptual evolution. Initially conceived as a gap in coverage or in the availability of connectivity equipment and services, (5) it is now understood that digital inequalities also include the quality of the use made of technology, the digital skills that users possess, the type of content they consume and produce, and the real possibility of transforming these capabilities into meaningful results for their social and cultural participation. (6,7)

As Warschauer<sup>(8)</sup> argues, the digital divide is a tripartite phenomenon encompassing access, use, and outcome and should therefore be approached from a comprehensive perspective. This view has been expanded by studies that have incorporated the concept of digital cultural capital to refer to the knowledge, dispositions, and symbolic competencies that individuals accumulate, facilitating their agency in virtual environments.<sup>(9)</sup>

The notion of digital cultural capital, inspired by Bourdieu's contributions, (10) has made it possible to understand that participation in digital spaces depends on cognitive, pedagogical, and cultural resources that are not distributed equally among young people and that affect their ability to produce content, express their identity and exercise citizenship in the virtual sphere. (11)

In Latin America, where marked socioeconomic and territorial inequalities persist, studies have documented that the mere increase in Internet coverage and the distribution of digital devices has not been sufficient to close the gap between those who can take full advantage of digital opportunities and those who face multiple restrictions to exercise full communicative citizenship. (12,13)

Reports, such as those of ECLAC, have warned that, despite progress in expanding Internet coverage, this progress has been uneven, leaving behind specific youth sectors that lack pedagogical support and symbolic resources to take advantage of the technology<sup>(13)</sup> fully. UNESCO has emphasized that only media literacy that integrates reflective and creative components can ensure that young people are not only users but also critical agents who produce and circulate their cultural content.<sup>(14)</sup>

Díaz and Salas demonstrate that, in rural Peruvian communities, the type of Internet use adopted by adolescents is primarily influenced by educational spaces and local digital inclusion projects. Likewise, a study in Chile (2023) on digital cultural participation among young university students showed that, despite their apparent hyperconnectivity, the consumption of cultural content was intensely concentrated in mass entertainment platforms, while the production and dissemination of local content remained marginal. This reinforces the idea put forward by Livingstone and Helsper on the difference between being connected and being included in a broader cultural and symbolic sense.

In Ecuador, despite government efforts to expand national-scale connectivity and reduce the costs of technological services, progress has been heterogeneous. It reveals limitations in the pedagogical, cultural, and symbolic spheres. (14,15) Reports by the Ministry of Telecommunications and the Information Society of Ecuador have highlighted that although 4G coverage and the number of Internet users have grown, significant disparities persist between urban and rural areas, between different provinces, and, above all, between socioeconomic strata that prevent broad sectors of young people from using ICTs for educational, cultural or participatory purposes beyond basic entertainment consumption. (16)

Albornoz (19) and Feixa (20) have documented inequalities in access between rural and urban areas, highlighting the shortcomings in pedagogical support and the lack of strategies to strengthen digital cultural capital. However, most of these studies have been exploratory or descriptive, and few have established causal relationships between the conditions of the digital environment and outcomes related to cultural appropriation.

In particular, studies that have addressed the digital divide from a cultural perspective have shown that

#### 3 Arévalo-Cordovilla F, et al

rural and peri-urban youth face restrictions on engaging in online cultural practices that extend beyond passive consumption. (17) As Livingstone and Helsper (18) argue, digital consumption is a necessary but not sufficient condition for meaningful participation; that is, the possibility for young people to be symbolic producers and agents in the construction of narratives depends mainly on the educational and family environments that accompany and enhance their digital appropriation.

Selwyn<sup>(19)</sup> argues that technologies are not neutral and that their appropriation depends on sociocultural conditions that determine which digital uses are valued and socially legitimized. This is particularly relevant in youth populations that, lacking educational opportunities mediated by technology or social networks that allow them to understand digital languages critically, often reproduce patterns of cultural exclusion on the network.

In this sense, differentiated participation in digital culture—a concept proposed by Jenkins et al. (20) to describe the different ways in which users contribute to or benefit from digital practices—is key to understanding the symbolic dimension of the gap. Young people who regularly access the Internet from their cell phones but have never received guidance on using online educational resources or expressing their creativity through their content may be as culturally excluded as those who lack connectivity altogether. (27)

Therefore, understanding the multiple determinants that shape the digital divide is essential for designing effective public policies that transcend infrastructural expansion and target the development of digital cultural capital among traditionally marginalized sectors. (21)

The lack of sustained media literacy programs, the almost exclusive dependence on social network consumption, and the economic difficulties in accessing quality devices are just some of the barriers that limit the potential of young people in this area to take advantage of digital opportunities in educational, social and symbolic terms.<sup>(24)</sup>

Despite the wealth of international and national studies on the digital divide, a gap persists in the literature regarding the understanding of how access conditions and pedagogical mediation impact digital cultural participation among youth in Zone 5. Most studies have employed descriptive designs that do not enable us to infer causal relationships between the type of digital environment accessed by young people and the outcomes in terms of cultural appropriation, symbolic authorship, and participation in digital communities. This limitation restricts the possibility of generating public policy recommendations based on solid empirical evidence to guide strategies that are both effective and sustainable over time. (25)

In response to this need, the present study aimed to analyze, through a quasi-experimental design with a quantitative approach, the digital divides affecting young Ecuadorians aged 20 to 24 in Zone 5 of the country and their impact on digital cultural exclusion. This research compared two groups of young people with differentiated conditions of connectivity and pedagogical mediation to understand the effects that these conditions have on their digital cultural capital, participation in online cultural practices, and production of symbolic content. (25)

Thus, this study not only seeks to confirm that the digital divide is a multidimensional and structural phenomenon but also to provide evidence for the construction of public policies that go beyond a merely infrastructural vision and promote genuine cultural inclusion in the digital environment, with a critical and contextualized view of Ecuadorian reality.

The study aims to provide a solid empirical basis for understanding the multiple nuances that shape the digital divide in a population segment crucial to the country's development and that have traditionally been underrepresented in research. Likewise, its findings provide input for those responsible for educational, cultural, and technological policies to adopt comprehensive strategies that foster the construction of communicative citizenship among young people from an inclusive and sustainable perspective, one that recognizes the symbolic, pedagogical, and social dimensions of digital inclusion. (29)

#### Critical digital citizenship

The multidimensional conception of the digital divide proposed by Warschauer (2004) serves as a key starting point for understanding the inequalities faced by youth in their use of technology. Warschauer argues that access to technology is only one visible dimension of the problem, as the gaps in use and the results that people obtain from the digital environment have a more profound impact on the construction of social and cultural opportunities.<sup>(4)</sup>

This vision is fundamental for this study, as it recognizes that the difference between the two groups compared in the resea rch -young people with stable access and pedagogical mediation versus those who lack them- can only be understood from a perspective that considers what type of use is made of technology and what symbolic benefits are derived. From this position, the author of the present study assumes that it is necessary to measure both the levels of digital skills and the impacts on cultural participation in coherence with the taxonomy proposed by Warschauer. (28)

Along the same lines, Livingstone and Helsper introduce the concept of "gradations in digital inclusion," demonstrating that merely being connected does not guarantee productive, reflective, or participatory use.

(3) Their findings on the different degrees of use among young people, influenced by their socioeconomic and educational environment, reinforce the idea guiding this research: the digital divide is a gap in results, where those who do not receive pedagogical mediation tend to develop use restricted to interpersonal communication and entertainment consumption. Therefore, this study assumes Livingstone and Helsper's premise and takes it to the empirical field by comparing youth groups differentiated by their level of educational accompaniment to show how deep the inequalities in digital cultural consumption and production are.

Bourdieu is, for his part, the unavoidable reference point for understanding the digital divide from a symbolic perspective. His concept of cultural capital has been recontextualized by studies, such as those of Lazo, who argues that digital cultural capital encompasses the competencies, skills, and dispositions that enable individuals to perform successfully in digital environments. (11) Lazo demonstrates that this capital is not equally distributed among young people: those who come from privileged social environments achieve greater symbolic mastery of technology and, consequently, greater educational and cultural benefits. (32)

This research begins from that premise and operationalizes it by measuring variables such as technological self-efficacy, participation in digital environments, and creation of symbolic content in two comparable groups. The position taken by this study is that differences in digital cultural capital between groups are not merely a variable dependent on access but instead arise from a broader social process that educational interventions themselves can transform.

In Latin America, Díaz and Salas conducted an exploratory study in rural Peruvian communities that showed that adolescents with greater educational support in Internet use were able to transform their online time into cultural learning opportunities. (18) Their findings indicate that the digital divide can be reduced through pedagogical mediation that fosters cultural participation and critical thinking. However, unlike Díaz and Salas, who focus exclusively on cultural consumption and information search, this study also incorporates the components of symbolic participation in networks and content creation, which are central indicators of digital cultural capital according to Bourdieu, and which are quantitatively measured here among the compared

Jenkins et al. argue that digital cultural participation depends on environments that foster peer-to-peer collaboration, creativity, and social recognition of content created by young people themselves. (13) They describe "participatory culture" as a sphere where only those with digital skills and spaces that validate their expression can actively contribute to the global culture.

This research adopts Jenkins' notion of differentiated participation to explain why groups without pedagogical mediation remain passive consumers. In contrast, the group with accompaniment manages to engage in digital communities and express their own culture. The author's position is that educational policies should consider this difference so that online cultural participation is recognized as a right, not a privilege.

At the national level, Albornoz and Feixa document that the digital divide between rural and urban areas in Ecuador has resulted in both economic and cultural exclusion, limiting young people's access to digital networks that enable them to express their identity and creativity. (24,25) However, while Albornoz and Feixa describe the effects of this gap, their approach is eminently descriptive.

This study goes a step further by proposing that, through a quasi-experimental strategy, it is possible to estimate the causal effect of connectivity quality and pedagogical mediation on digital cultural participation. The contribution of this study lies not only in describing inequalities but also in empirically exploring the consequences of modifying the conditions that perpetuate them.

In educational terms, Cabero-Almenara et al. propose critical digital citizenship as a competence that combines information literacy, responsible media use, and active citizen participation. (19) Their work emphasizes that schools and other institutions should provide pedagogical mediation to enable students to be active and critical participants in the digital society.

The study adopts this approach and operationalizes critical digital citizenship through indicators of reflective cultural participation, educational content consumption, and symbolic creation in digital environments. Thus, my position is that without mediation that fosters criticism and creativity, the mere expansion of access will not guarantee that young people will become true "digital citizens," as warned by Cabero-Almenara and Rendón & Angulo. (19,20)

Along the same lines, Ruiz and Pérez demonstrate that teachers who accompany the use of ICT with intentional pedagogical strategies can make their students active and reflective users, in contrast to those who only use technology as a means of information dissemination. (21) For this study, Ruiz and Pérez's research is key because it shows that pedagogical mediation has an impact on digital skills and cultural participation, which are precisely the variables analyzed between the groups compared. The difference is that the present study explores this effect in a more vulnerable population, where the impact may be greater due to less favorable baseline conditions.

#### **METHOD**

The study employs a quasi-experimental design with a quantitative approach, aiming to identify significant

#### 5 Arévalo-Cordovilla F, et al

differences in the level of digital cultural appropriation between groups of young people exposed to and not exposed to differentiated contexts of connectivity and pedagogical mediation. Unlike the previous study, which was conducted under an exploratory-descriptive approach, this research introduces a structured comparative dimension that allows for the establishment of causal relationships.

The target population is made up of young people between 20 and 24 years of age belonging to Zone 5 of Ecuador (Guayas, Los Ríos, Bolívar, Santa Elena, and Galápagos), with an approximate demographic projection of 240 000 inhabitants in that age range. (18) For the present research, a purposive sample of 400 young people was selected and divided into two comparative groups: 200 students with regular access to stable connectivity and formative mediation (e.g., institutional literacy programs) and a total of 200 young people with access to the Internet. (18)

The study variables were grouped into three dimensions: 1) digital access conditions (type of device, connection quality, usage environment); 2) level of digital cultural capital (technological self-efficacy, participation in digital cultural environments, content creation); and 3) cultural practices linked to the digital environment (attendance to online cultural events, digital art consumption, engagement with content of educational or heritage value).

A standardized data collection instrument was employed, comprising a structured questionnaire with 35 items that included Likert-type scales, dichotomous questions, and multiple-choice questions. The instrument was validated through expert judgment and pilot testing, achieving a Cronbach's alpha of 0,87, which ensures its reliability in measuring constructs related to digital competencies and cultural practices.

Inferential statistical techniques were used for data analysis. First, a Kolmogorov-Smirnov normality test was applied to verify the distribution of the variables. Subsequently, Student's t-tests for independent samples were used to compare the means between the two groups, and analysis of variance was used to contrast subgroups according to geographic environment and educational level. Cohen's d coefficient was also calculated to measure the effect size of the observed differences. All the tests were performed with a significance level of 0,05.

This quasi-experimental design allows us to establish preliminary causal inferences between access conditions and youth digital cultural exclusion. In addition, it will enable us to observe whether pedagogical mediation and infrastructure quality have a significant impact on artistic practices, thereby strengthening the internal validity of the analysis and providing a more comparative and policy-oriented approach.

#### **RESULTS**

The results obtained in this research allowed us to identify statistically significant differences between the comparative groups in relation to their access conditions, digital cultural capital and participation in cultural practices. The most relevant findings are presented below.

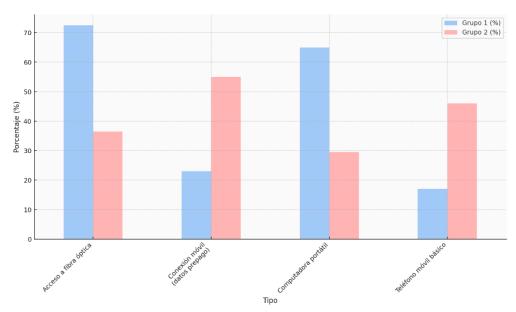


Figure 1. Type of Internet access and devices according to group of belonging

The results show that Group 1 has a predominantly high-quality technological infrastructure, with access to fiber optics (72,5 % compared to 36,5 %) and the widespread use of laptops (65 % compared to 29,5 %). In contrast, Group 2 relies more heavily on prepaid mobile service (55 % vs. 23 %) and the use of basic telephones

(46 % vs. 17 %). This difference is statistically significant (p < 0,01) and suggests that the quality of access and type of device condition the opportunities for participation in cultural digital environments.

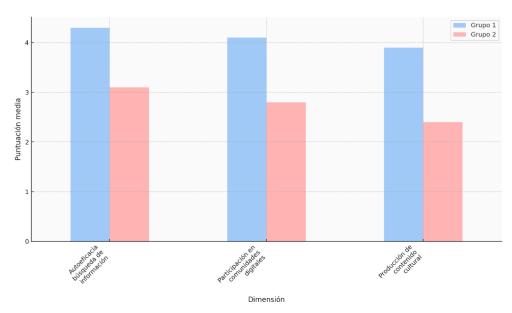


Figure 2. Perceived level of digital cultural capital

The assessment of digital cultural capital reveals that Group 1 exhibits higher levels of self-efficacy in information search (M = 4,3), participation in digital communities (M = 4,1), and the production of cultural content (M = 3,9) compared to Group 2. All differences are statistically significant (p < 0,01), highlighting that exposure to formative environments and greater stability in access favor confidence and competence in actively engaging in online cultural creation and consumption.

Digital cultural capital is significantly higher in Group 1. This indicates that exposure to formative environments and connectivity has a direct effect on confidence, skills, and willingness to produce and interpret cultural content in digital environments.

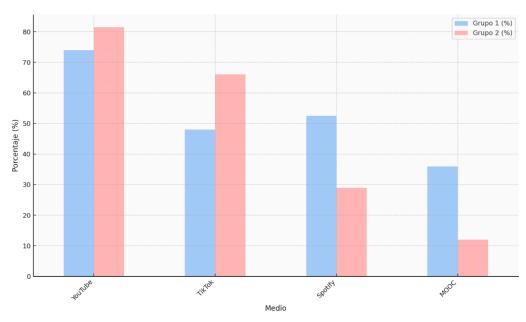


Figure 3. Preferred media for digital cultural consumption

It is observed that while YouTube and TikTok are widely used by both groups, Group 1 more frequently includes selective cultural consumption spaces, such as Spotify (52,5% vs. 29,0%) and educational platforms (36,0% vs. 12,0%). This suggests that the quality of access and greater digital cultural capital allow users to transcend entertainment and access more specialized educational or cultural content.

#### 7 Arévalo-Cordovilla F, et al

Although both groups use entertainment platforms such as YouTube or TikTok extensively, Group 1 leans more towards planned cultural consumption, such as the use of educational platforms or selective music services. This suggests a higher degree of cultural agency.

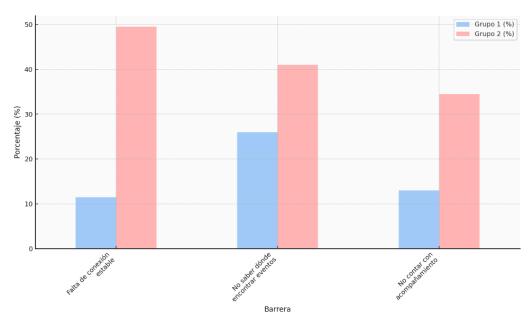


Figure 4. Declared barriers to participate in digital cultural practices

The results show that Group 2 faces greater technical and socio-cultural barriers. The lack of a stable connection is an obstacle for almost half of its members (49,5%) vs. 11,5% of Group 1), in addition to the difficulty in locating cultural events (41,0%) vs. 26,0%) and the absence of accompaniment to guide their participation (34,5%) vs. 13,0%). These findings reinforce the idea that the digital divide is multidimensional and that overcoming it requires not only infrastructure but also pedagogical and cultural mediation strategies.

The declared barriers reflect a structural relationship between infrastructure, access to cultural information, and pedagogical mediation. Group 2 faces limitations that are not only technical but also informational and motivational in nature.

The findings of the inferential analysis reinforce the central premise of the study: the digital divide among young people in Zone 5 of Ecuador is a divide that encompasses both material and symbolic and cultural components. The superiority of Group 1 in terms of access, digital cultural capital, and participation in cultural environments reinforces the need for public policies that, in addition to expanding technological coverage, implement pedagogical strategies for the meaningful and creative use of digital tools. This integrated vision is consistent with the contributions of authors such as Warschauer, Bourdieu, and Jenkins, who emphasize that full digital citizenship is only possible when technical conditions are complemented by critical training and social accompaniment.

# **DISCUSSION**

The findings provide solid evidence of the multidimensionality of the digital divide in the cultural participation of young Ecuadorians in Zone 5, confirming that digital exclusion is both technical and symbolic, as well as artistic. As stated by Warschauer and Bourdieu, simple access to infrastructure does not guarantee equitable participation in digital spaces. (1,2) The results show that Group 1, which benefited from stable connectivity and pedagogical mediation processes, outperformed Group 2 in self-efficacy, participation in digital communities, and specialized cultural consumption. These differences, supported by moderate to high effect sizes, reflect that digital cultural capital is cumulative and that its distribution is unequal, as proposed by international studies. (3,4)

The situation documented in Zone 5 aligns with regional studies that have demonstrated the persistence of digital divides in Latin America, even in countries that have seen improvements in coverage in recent years. (5,6) For example, Díaz and Salas demonstrated that in rural Peruvian communities, the mere expansion of Internet access is insufficient to ensure that adolescents engage critically with digital content without pedagogical accompaniment. (7)

Likewise, in Chile, Castillo found that, among university students, digital cultural consumption was still limited to massive social networks and ludic content when formative strategies that promoted the exploration

of educational resources were not implemented. (8)

These studies, like ours, emphasize that cultural participation is a situated social practice that depends on mediators—such as family, school, and public policies—to transform passive consumption into critical participation. (26)

The findings are also consistent with the notion of differentiated participation put forward by Jenkins, which suggests that participatory culture only emerges when users have not only technological resources but also the skills to understand, produce, and disseminate digital content that is recognized by their community. (9)

The marked difference in the production of symbolic content between the groups we compared shows that pedagogical support is key for young people to go from consumers to digital prosumers, a condition that, according to Livingstone and Helsper, is fundamental to reducing inequalities in outcomes between those who are "connected" and those who achieve adequate cultural appropriation. (10) Similarly, the barriers declared by Group 2 - such as a lack of accompaniment and a lack of knowledge about where to find cultural events reinforce the idea put forward by Buckingham that digital divides are also educational and symbolic divides that limit communicative citizenship. (11)

From a public policy perspective, the results underscore the need to transcend a merely infrastructural paradigm. As suggested by studies in Brazil and Mexico, (12,13) digital inclusion strategies must incorporate pedagogical components that teach young people to navigate digital environments critically, identify relevant cultural content, and express their creativity autonomously. Likewise, the evidence suggests that policies should incorporate territorial support and inter-institutional programs that reinforce cultural participation as a right, prioritizing the most vulnerable populations that have so far been excluded from the benefits of the digital environment.

The study presents several limitations that are important to recognize. First, despite the quasi-experimental design, the research does not involve strict random assignment; therefore, while it is possible to infer causal relationships between mediation conditions and cultural outcomes, caution is required when generalizing the findings to other populations without complementary studies. Second, the research focuses on a single age range (20 to 24 years) and a particular geographic area in Ecuador, which restricts extrapolation to other age groups or national and international contexts. (29)

Despite these limitations, the study provides evidence that can serve as a basis for longitudinal studies of greater geographical scope, exploring changes over time and incorporating additional variables, such as family support, educational environments, community resources, and local creative economy projects. It is also suggested that the effectiveness of specific programs be investigated, such as media literacy workshops in rural and peri-urban areas or cultural participation initiatives in educational and community centers, which train young people to be active producers of digital cultural content. A mixed study incorporating qualitative methodologies would allow for a better understanding of the subjective experiences that mediate between connectivity, digital cultural capital, and symbolic participation. (28)

Therefore, it is recommended that national and regional strategies incorporate culturally relevant digital content, critical training programs, and participatory mechanisms that involve young people themselves in the design of initiatives. Only based on this holistic and situated approach will it be possible for the expansion of connectivity to translate into full and equitable cultural participation among young people in Ecuador and Latin America.

#### CONCLUSION

The study enabled an understanding, from a holistic perspective, of the digital divides affecting the cultural participation of young people in Zone 5 of Ecuador. The results show that inequalities in the use and appropriation of digital technologies among the groups compared are not only technical but also symbolic, educational, and cultural, confirming that the phenomenon transcends mere access to infrastructure.

Firstly, it became evident that the group with better quality Internet access, together with intentional pedagogical support, had significantly higher levels of digital cultural capital and participation in online cultural environments. This difference, supported by moderate to high effect sizes, suggests that the quality of connectivity and formative mediation have a direct influence on self-efficacy, planned cultural consumption, and digital content creation.

Secondly, the findings show that the absence of pedagogical mediation and limitations in the type of connection and devices reinforce a restrictive cultural consumption, focused on entertainment content and lacking opportunities for symbolic expression. Likewise, the barriers declared—such as the lack of a stable connection, lack of knowledge about where to find events, and the absence of accompaniment -confirm that the digital divide is multidimensional and that overcoming it requires strategies that address both technological and educational and motivational aspects.

Third, the study provides empirical evidence that reinforces the theoretical contributions of international and Latin American authors such as Warschauer, Bourdieu, Livingstone, and Helsper, who argue that the digital divide is a complex phenomenon that can only be understood by addressing the social, educational and

#### 9 - Arévalo-Cordovilla F, *et al*

symbolic conditions that mediate the use of ICTs. Furthermore, the research extends international findings to a local context, emphasizing that public policies in Ecuador should go beyond expanding coverage and prioritize critical education, cultural participation, and territorial equity.<sup>(25)</sup>

Based on the findings and discussion presented, it is possible to formulate a set of recommendations that serve as input for designing public policies, educational programs, and socio-cultural strategies to promote more inclusive digital cultural participation among young Ecuadorians in Zone 5 and similar contexts.

It is not enough to offer connectivity; public policies must include training programs that develop critical and reflective digital skills among young people. These initiatives should incorporate content that promotes participation in digital communities, the creation of their cultural content, and the conscious and safe use of platforms. (1,3,9)

It is recommended that Internet expansion policies prioritize improving the quality and stability of connectivity in rural and peri-urban areas, complemented by affordable plans that guarantee continuous and equitable use of the service. (2, 5, 12)

It is suggested that both the educational system and social and municipal initiatives incorporate tutors, facilitators, or digital mediators to accompany users in their cultural appropriation of the digital environment.

It is advisable to involve young people themselves in the diagnosis, design, and evaluation of public policies and digital projects so that their voices are recognized and actions respond to their interests, tastes, and genuine needs. It is also essential that young people are identified as cultural agents in their communities.

#### **REFERENCES**

- 2. Buckingham D. Youth, identity, and digital media. Cambridge: MIT Press; 2008. Disponible en: https://mitpress.mit.edu/9780262524826/youth-identity-and-digital-media/
- 3. Livingstone S, Helsper E. Gradations in digital inclusion: children, young people and the digital divide. New Media Soc. 2007;9(4):671-696. Disponible en: https://doi.org/10.1177/1461444807080335
- 4. Warschauer M. Technology and social inclusion. Cambridge, MA: MIT Press; 2004. Disponible en: https://mitpress.mit.edu/9780262731736/technology-and-social-inclusion/
- 5. Martínez Tessore AL. Brechas digitales y derecho a la educación en tiempos de pandemia. Propuesta Educ. 2021;(56):11-27. Disponible en: http://www.propuestaeducativa.flacso.org.ar/index.php/PropuestaEducativa/article/view/2300
- 6. Guapulema Ocampo KJ, Alvarado Guapulema PA, Proaño del Castillo MG, Peñaloza Camacho KI. La brecha digital en la educación ecuatoriana. LATAM Rev Latinoam Cienc Soc. 2024;5(5):4038-4050. Disponible en: https://www.revlatam.com/index.php/revista/article/view/4038
- 7. Van Dijk J. The deepening divide: inequality in the information society. London: Sage; 2005. Disponible en: https://us.sagepub.com/en-us/nam/the-deepening-divide/book223771
- 8. Comisión Económica para América Latina y el Caribe (CEPAL). Tecnologías digitales para un nuevo futuro en América Latina y el Caribe. Santiago: CEPAL; 2020. Disponible en: https://www.cepal.org/es/publicaciones/45539
- 9. UNESCO. Alfabetización mediática e informacional para todos. París: UNESCO; 2021. Disponible en: https://unesdoc.unesco.org/ark:/48223/pf0000374626
- 10. Selwyn N. Education and technology: key issues and debates. London: Routledge; 2011. Disponible en: https://doi.org/10.4324/9780203127829
- 11. Lazo LM. La constitución del capital cultural digital en la educación contemporánea. Lat Am J Hum Educ Diverg. 2022;1(1):7-17. Disponible en: https://www.revistaslatam.org/index.php/LAJHED/article/view/114
- 12. DiMaggio P, Hargittai E. From the 'digital divide' to 'digital inequality': studying Internet use as penetration increases. Princeton University; 2001. Disponible en: https://www.princeton.edu/~artspol/workpap15.html
  - 13. Jenkins H, Ford S, Green J. Spreadable media: creating value and meaning in a networked culture. New

- 14. Díaz R, Salas M. Participación cultural y brecha digital entre adolescentes rurales peruanos. Rev Latinoam Cienc Soc Niñez Juvent. 2022;20(1):89-104. Disponible en: https://revistas.umanizales.edu.co/ojs/index.php/rlcsnj/article/view/5732
- 15. Helsper EJ, Van Deursen AJ. Digital skills in Europe: impact on youth opportunities. New Media Soc. 2017;19(2):240-259. Disponible en: https://doi.org/10.1177/1461444815616354
- 16. Cabero-Almenara J, Torres-Barzabal L, Hermosilla-Rodríguez JM. TIC y ciudadanía crítica e-digital. Educ Knowl Soc. 2019;20:1-14. Disponible en: https://doi.org/10.14201/eks.20369
- 17. boyd d. It's complicated: the social lives of networked teens. New Haven: Yale University Press; 2014. Disponible en: https://yalebooks.yale.edu/book/9780300199000/its-complicated/
- 18. Rendón JG, Angulo JP. Metaanálisis sobre ciudadanía digital en Iberoamérica. Edutec. 2022;(82):91-103. Disponible en: https://doi.org/10.21556/edutec.2022.82.1997
- 19. Ruiz JM, Pérez C. Integración tecnológica y mediación pedagógica en aulas virtuales. Rev Educ Costa Rica. 2021;45(2):1-20. Disponible en: https://www.revistas.ucr.ac.cr/index.php/educacion/article/view/45738
- 20. Vygotsky LS. Mind in society: the development of higher psychological processes. Cambridge, MA: Harvard University Press; 1978. Disponible en: https://doi.org/10.4159/harvard.9780674076680
- 21. Wang D, Hong Y, Tai Y. Online youth culture and gratification. Telemat Inform. 2021;58:101523. Disponible en: https://doi.org/10.1016/j.tele.2020.101523
- 22. Martín-Barbero J. Communication, culture and hegemony. Mexico: GGM; 2001. Disponible en: https://doi.org/10.2307/j.ctv2v6p5gq.6
- 23. Cobo C. Invisible learning: toward a new ecology of education. Barcelona: UOC; 2010. Disponible en: http://www.invisiblelearning.com/book/
- 24. Albornoz LA. Comunicación y políticas públicas en la sociedad digital. Montevideo: UNESCO; 2004. Disponible en: https://unesdoc.unesco.org/ark:/48223/pf0000135367
- 25. Feixa C. Generación XX: la juventud entre la tradición y la modernidad. Rev Latinoam Cienc Soc Niñez Juvent. 2006;4(2):1-18. Disponible en: https://revistas.umanizales.edu.co/ojs/index.php/rlcsnj/article/view/459
- 26. Goedert D, Arndt P. Educación remota en pandemia: reflexiones pedagógicas. Rev Educ Distancia. 2020;20(63):1-17. Disponible en: https://doi.org/10.6018/red.444401
- 27. Sádaba-Chalezquer C. Participación cultural juvenil y entornos digitales. Profesional Inform. 2022;31(4):e310402. Disponible en: https://doi.org/10.3145/epi.2022.jul.02
- 28. We Are Social, Meltwater. Digital 2023: global overview report. London: We Are Social; 2023. Disponible en: https://wearesocial.com/digital-2023-global-overview-report/
- 29. Livingstone S, Third A. Children's and young people's rights in the digital age. New Media Soc. 2017;19(5):657-670. Disponible en: https://doi.org/10.1177/1461444816686318
- 30. De Gouveia P, Briceño S. Políticas de inclusión digital y juventud. Lima: Fundación Telefónica; 2019. Disponible en: https://www.fundaciontelefonica.com/publicacion/politicas-de-inclusion-digital-y-juventud/
- 31. Norris P. Digital divide: civic engagement, information poverty, and the internet worldwide. Cambridge: Cambridge University Press; 2001. Disponible en: https://doi.org/10.1017/CBO9780511805087
  - 32. Martín-Barbero J. De los medios a las mediaciones. Mexico: GGM; 1987. Disponible en: https://doi.

org/10.4324/9781315548978

### **FINANCING**

None.

# **CONFLICT OF INTEREST**

The authors declare that there is no conflict of interest.

#### **AUTHORSHIP CONTRIBUTION**

Conceptualization: Luis Rosero, Felipe Arevalo, Kerly Palacios and Guillermo Del Campo.

Data curation: Guillermo Del Campo.

Formal analysis: Luis Rosero.

Research: Luis Rosero, Felipe Arévalo, Kerly Palacios y Guillermo Del Campo. Methodology: Luis Rosero, Felipe Arévalo, Kerly Palacios y Guillermo Del Campo.

Project management: Felipe Arévalo.

Resources: Luis Rosero, Felipe Arévalo, Kerly Palacios y Guillermo Del Campo.

Software: Felipe Arevalo. Supervision: Felipe Arévalo. Validation: Kerly Palacios. Visualization: Kerly Palacios.

Writing - original draft: Guillermo Del Campo.

Writing - revision and editing: Kerly Palacios and Guillermo Del Campo.