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Analysis of the connection between the legal framework and public policies regarding the access to and use of artificial intelligence technologies by individuals with disabilities in Latin American nations

Análisis de la conexión entre el marco legal y las políticas públicas en materia de acceso y uso de tecnologías de inteligencia artificial por parte de personas con discapacidad en naciones latinoamericanas

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Abstract

This study aims to explore and establish the relationship between the legal framework and public policies governing access to and use of artificial intelligence (AI) technologies by individuals with disabilities in Latin American countries. To achieve this, an analysis was conducted on the region's current government regulations and policies, alongside the initiatives and practices implemented in this area. The findings highlight a variety of approaches and levels of progress in regulating and promoting technological accessibility for people with disabilities. Notable advancements and areas for improvement were identified to enhance inclusion and equitable access to AI tools. Based on these insights, robust recommendations and guidelines are proposed to strengthen the integration of individuals with disabilities into the digital era, ensuring their rights and fostering their full participation in society. This research offers valuable contributions to understanding and addressing the challenges and opportunities arising from the intersection of the legal framework, public policies, and AI technologies in the context of disability in Latin America.

Keywords: Latin America; Assistive Technologies; Public Policies; Artificial Intelligence; Individuals with Disabilities.

Resumen

Este estudio tiene como objetivo explorar y establecer la relación entre el marco legal y las políticas públicas que rigen el acceso y uso de las tecnologías de inteligencia artificial (IA) por parte de las personas con discapacidad en los países de América Latina. Para ello, se analizaron las regulaciones y políticas gubernamentales vigentes en la región, así como las iniciativas y prácticas implementadas en la materia. Los resultados destacan una variedad de enfoques y niveles de progreso en la regulación y promoción de la accesibilidad tecnológica para las personas con discapacidad. Se identificaron avances notables y áreas de mejora para mejorar la inclusión y el acceso equitativo a las herramientas de IA. Sobre la base de estos conocimientos, se proponen recomendaciones y directrices sólidas para reforzar la integración de las personas con discapacidad en la era digital, garantizando sus derechos y fomentando su plena participación en la sociedad. Esta investigación ofrece valiosos aportes para comprender y abordar los desafíos y oportunidades que surgen de la intersección del marco legal, las políticas públicas y las tecnologías de IA en el contexto de la discapacidad en América Latina.

Palabras clave: América Latina; Tecnologías de Apoyo; Políticas Públicas; Inteligencia Artificial; Personas con Discapacidad.



1. INTRODUCTION

In the current era of rapid technological progress, artificial intelligence (AI) technologies have emerged as a significant resource for individuals with disabilities in Latin America. However, equitable and effective access to these tools for everyone necessitates the implementation of suitable regulations and policies. This study aims to examine the influence of the legal framework and public policies on the accessibility and utilization of AI technologies by people with disabilities in the region. To accomplish this, a research methodology will be employed to explore both existing regulations and their practical application in the Latin American context (Martínez & Velásquez, 2020).

Latin America confronts distinctive challenges in achieving digital inclusion and technology access for individuals with disabilities. While certain nations have advanced in implementing laws and policies to promote digital accessibility, notable disparities remain in the availability and effective utilization of AI technologies for this population. Barriers such as a lack of coordination between governmental and non-governmental entities, limited resources, and the persistent digital divide hinder progress. These challenges are underscored in reports by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Economic Commission for Latin America and the Caribbean (ECLAC), titled "Digital Society: Gaps and Challenges for Digital Inclusion in Latin America and the Caribbean" (UNESCO, 2017) and "A Digital Pathway for Sustainable Development in Latin America and the Caribbean" (CEPAL, 2022), respectively.

In examining the influence of the legal framework and public policies on the access to and use of AI technologies by individuals with disabilities in Latin America, it is essential to recognise the critical role of information in both individual and societal advancement. Information equips individuals with the knowledge needed to comprehend the world and its events, providing valuable tools to navigate societal dynamics and enhance quality of life (Bologna, 2020).

For individuals with disabilities, access to information is particularly significant in the context of AI applications. Timely and comprehensive access to AI-generated content enables them to stay informed, benefit from educational materials tailored to their unique needs, and engage fully in digital and social environments. However, significant barriers persist, including insufficient accessibility in AI platforms and the lack of inclusive design in technology development. These obstacles highlight the pressing need for comprehensive legal frameworks and effective public policies that guarantee equitable access to AI-generated information for all individuals, regardless of disability (Bologna, 2020).



The United Nations (UN) Convention on the Rights of Persons with Disabilities (CRPD), adopted in 2006 and enforced since 2008, stands as the primary international human rights framework dedicated to safeguarding the rights and dignity of individuals with disabilities. The CRPD recognises accessibility not as an isolated right but as a fundamental principle that facilitates the exercise of all other rights (Barajas, 2006). Accessibility is thus understood as an essential tool for enabling broader rights, rather than a standalone entitlement, according to (Pinilla-Roncacio & Gallardo, 2023). Furthermore, the CRPD Committee views accessibility as an investment in societal advancement and a critical element of the sustainable development agenda (United Nations, 2006).

Drawing upon this conceptual foundation and using data collection methodologies, this study proposes a detailed analysis of the legal, social, and political approaches in six Latin American countries: Ecuador, Guatemala, Mexico, Panama, Paraguay, and Peru. The objective is to assess how governmental institutions have worked to uphold the right to utilise artificial intelligence and access information for individuals with disabilities.

In addition, this research will explore the current conditions and challenges encountered by individuals with disabilities, particularly focusing on how these obstacles correlate with restricted access to other fundamental rights. This perspective aims to underscore the significance and urgency of guaranteeing accessibility rights while identifying the most effective strategies for achieving this goal. To this end, the following objectives have been outlined, aimed at addressing the critical task of ensuring that digital transformation becomes inclusive and advantageous for all segments of society:

General Objective:

To examine the influence of the legal framework and public policies on the access to and use of artificial intelligence technologies by people with disabilities in Latin American countries.

Specific Objectives:

- To identify and define the obstacles that limit access to artificial intelligence technologies for people with disabilities in the region.
- To review various models, initiatives, and successful practices concerning the access to and use of artificial intelligence technologies by people with disabilities in the region.
- To propose recommendations for strengthening access to artificial intelligence technologies for people with disabilities in the region, based on the findings and analyses derived from the research.



2. DEVELOPMENT

Drawing from the analysis of the gathered data and document review, several barriers and opportunities regarding access to and use of artificial intelligence technologies by people with disabilities in Latin America were identified. Based on these insights, this section offers a series of recommendations to enhance digital inclusion and ensure equal access to AI technologies. The suggested recommendations are rooted in identified best practices and the specific needs and challenges found during the research. These guidelines are intended to assist policymakers, civil society organizations, and technology developers in creating a more inclusive and accessible environment for all individuals, regardless of their abilities.

3. METHODOLOGY

The following section details the specific procedures, materials utilized, and participant selection criteria, ensuring the study's reproducibility and validity.

Methodological Approach:

To accomplish the stated objectives, a mixed-methods approach was adopted, integrating both qualitative and quantitative techniques (Medina-Romero et al. 2023). A thorough literature review on legislation and public policies related to disability and artificial intelligence in Latin American countries was conducted (Hessel et al., 2020). In addition, semi-structured interviews were held with experts in the fields of disability, technology, and policy development to gain a deeper understanding of the current challenges and opportunities. The data collected were analyzed using both qualitative and quantitative methods, which were then used to form the final recommendations of the study (Hernández-Sampieri et al. 2022).

Document Analysis:

A thorough review of legislation, public policies, reports, and documents concerning disability and technology in Latin American countries was carried out. This analysis helped establish a contextual framework to understand the current status of access to and use of artificial intelligence by people with disabilities.

Semi-Structured Interviews:

Semi-structured interviews were held with a representative sample of people with disabilities, technology experts, civil society organization representatives, and policymakers. These interviews offered a range of



perspectives on existing barriers, best practices, and suggestions for enhancing access to artificial intelligence.

Data Analysis:

The data gathered from the literature review and interviews were analyzed using both qualitative and quantitative methods. Patterns, trends, and emerging themes were identified, enabling cross-country comparisons and the development of well-supported recommendations.

4. RESULTS

The research on the legal framework and public policies concerning the access and use of artificial intelligence technologies by people with disabilities in Latin America produces important findings. Table 1 displays a documentary review matrix that summarizes the key insights from the reviewed literature. This matrix includes 38 pertinent references spanning from 1996 to 2023 and offers a thorough overview of the progress, challenges, and viewpoints regarding digital accessibility and the inclusion of people with disabilities in the age of artificial intelligence. Below is a detailed summary of the gathered information, emphasizing the most crucial aspects for our study.

Assistive technology specifics: Each resource associated with assistive technology is thoroughly analyzed to determine how it addresses the distinct needs of individuals with disabilities. For instance, research on smart wheelchairs investigates how these devices improve mobility and independence for people with motor disabilities, while studies on adaptive communication systems explore how they support interaction and communication for individuals with speech or language impairments.

Regional and global viewpoints: It is crucial to understand how the regional and global perspectives presented in the resources connect to the barriers people with disabilities face in accessing information across various contexts. For example, reports from international organizations offer valuable insights into global challenges and effective strategies, while studies concentrating on particular contexts provide in-depth information on the specific needs and available resources in those areas.

Technological progress and upcoming opportunities: Beyond analyzing existing assistive technologies, we can also investigate emerging technological developments and future possibilities for enhancing information access for people with disabilities. This includes studies on cutting-edge artificial intelligence technologies, virtual or augmented reality applications, and wearable devices, all of which have the potential to greatly influence accessibility and inclusion.



Challenges and constraints: Although assistive technologies provide numerous opportunities to enhance information access, it is crucial to acknowledge the challenges and limitations experienced by people with disabilities. These include economic, social, and cultural barriers, as well as technical or design issues in current technologies.

Legal framework: The examination of various contributions on the legal framework for people with disabilities reveals a range of perspectives in the academic literature. Some studies emphasize the significance of regulations and standards related to the accessibility and availability of technologies, acknowledging their vital role in fostering inclusion and equal opportunities. This research highlights the necessity of ensuring adherence to such regulations to create an inclusive technological environment. On the other hand, some studies concentrate more on the technical aspects or the practical impacts of technology on people with disabilities, without addressing the foundational legal framework. This contrast highlights the need for an integrated approach that considers both technical factors and the legal and ethical dimensions of technologies for people with disabilities, as the successful implementation of these technologies relies heavily on a robust and clearly defined legal framework.

The purpose of this analysis is to examine the key legal relationships between educational and digital inclusion, with inclusion being understood as social justice and the safeguarding of processes that enable the participation and empowerment of all citizens (Navarrete et al., 2020). This framework posits that inclusion should create alternatives that strengthen fundamental human rights, participation, and the visibility of rights holders (Ávila-Hernández et al. 2024).

This perspective provides a clearer understanding of the barriers to information access encountered by people with disabilities, while exploring how these barriers can be addressed through assistive technologies and other initiatives. From global reports to specific studies on adaptive technologies, each resource offers a distinct viewpoint on the challenges and opportunities within this field.

It is crucial to acknowledge that, while assistive technologies have greatly enhanced information access for many individuals with disabilities, considerable challenges remain. These challenges may involve economic, social, and technical constraints, as well as cultural and conceptual obstacles.

To effectively address these challenges, it is essential to adopt a holistic approach that integrates technological advancements with inclusive policies, accessible education, and public awareness. Additionally, ongoing research and the development of innovative solutions are necessary to enhance accessibility and inclusion for everyone, regardless of their abilities or skills.



The legal framework defines rights and standards that ensure accessibility and equal opportunities for people with disabilities in using technology. The studies reviewed emphasize the need to ensure that technological policies and regulations address the accessibility requirements of people with disabilities, thereby guaranteeing their full participation in society.

In a broader sense, the essence of the law is emphasized through its humanism. This is reflected not only in the thorough examination of its foundations but also in its impact, which challenges the concept of the common good in its entirety. Therefore, Cotta argues that the question of why the law exists comes before the question of what the law is, leading us to anthropology. He maintains his thesis that coexistence is the ontological basis of law. Kaufmann, in turn, agrees with this inseparable link between the legal and the human, concluding that the concept of law is inherently tied to the idea of the personal human being, or else it is meaningless, meaning the law is a representation of the human being's concept (Castaño-Bedolla et al. 2013).

A strong legal framework not only safeguards the rights of people with disabilities but also steers technological innovation towards more inclusive and accessible solutions. This is evident in the documents reviewed, which highlight the significance of incorporating legal aspects from the initial stages of technology development for people with disabilities. Furthermore, these documents stress the necessity of collaboration among governments, civil society organizations, the private sector, and the academic community to ensure that technologies are designed and implemented in compliance with legal standards and foster the inclusion of people with disabilities in all areas of modern life.

Table 2 offers a comparative analysis of the key areas prioritized in the national digital development strategies of six Latin American and Caribbean countries: Ecuador, Guatemala, Mexico, Panama, Paraguay, and Peru. It highlights the main focus areas in each country, including digital government, inclusive social development, the digital economy, infrastructure and connectivity, citizenship and rights, and digital security. By analyzing these topics, the goal is to understand how each country is approaching digital transformation and their priorities for fostering effective and equitable digital inclusion. This comparison offers an in-depth look at regional initiatives to integrate people with disabilities into the digital era.

Table 1:

Key focus areas in the main pillars of national digital development strategies in Latin America and the Caribbean.



Country	Digital Government	Inclusive Social Development	Digital Economy	Infrastructure and Connectivity	Citizenship and Rights	Digital Security	Legal Framework	Other
Ecuador		X	X	X	X	X		
Guatemala	X	X				X		X
Mexico	X	X	X		X		X	
Panama	X	X	X	X			X	X
Paraguay	X	X	X			X		X
Peru	X		X			X	X	
Total	5	5	5	2	2	3	6	2

Source: Created by the author based on data from CEPAL, 2022 (CEPAL, 2022).

Each priority area in the digital development strategies of the six chosen Latin American countries has the following features:

Digital Government:

Ecuador, Guatemala, Mexico, and Panama place a strong emphasis on digital government in their strategies, reflecting a commitment to modernizing public services through technology. This may involve the development of government websites, online services, the digitalization of administrative processes, and utilizing data for informed decision-making. A well-implemented digital government can improve public administration efficiency and transparency, decrease bureaucracy, foster greater citizen engagement, and enhance accountability.

Inclusive Social Development:

Ecuador, Guatemala, Mexico, and Panama acknowledge the significance of inclusive social development in their strategies. This focuses on leveraging technology to reduce social and economic disparities, ensuring that all communities have fair access to digital opportunities. Efforts in this area may involve initiatives such as digital literacy programs, providing Internet access in rural regions, integrating people with disabilities into the digital sphere, and encouraging the involvement of marginalized groups in the digital economy.

Digital Economy:

All the countries prioritize the digital economy in their strategies, highlighting the significance they place on digitizing economic sectors to drive growth and enhance competitiveness. Efforts in this area may involve supporting new startups and tech entrepreneurs, encouraging e-commerce, implementing policies for digital financial inclusion, and promoting technological innovation in traditional industries.



Infrastructure and Connectivity:

Panama is the only country to prioritize infrastructure and connectivity in its strategy, emphasizing the importance of building strong digital infrastructure and enhancing connectivity to foster economic and social progress. Efforts in this area may involve expanding broadband access, deploying high-speed telecommunications networks, and improving digital infrastructure in rural and remote regions.

Citizenship and Rights:

Ecuador, Mexico, and Paraguay incorporate citizenship and rights into their strategies, reflecting a commitment to safeguarding citizens' digital rights and encouraging active participation in the digital realm. Actions in this area may involve protecting data privacy, promoting freedom of expression online, regulating misinformation, and advancing digital inclusion for all citizens.

Digital Security:

Ecuador, Guatemala, Panama, and Peru prioritize digital security in their strategies, highlighting their focus on tackling cybersecurity challenges and safeguarding citizens and institutions from potential threats and cyberattacks. Actions in this area may involve establishing data protection measures, preventing cyberattacks, promoting cybersecurity education, and fostering international cooperation to combat cybercrime.

Legal Framework:

Ecuador, Guatemala, Mexico, Panama, Paraguay, and Peru have shown a commitment to incorporating elements of their legal frameworks concerning people with disabilities. However, it is essential to note that the level of progress in developing laws and regulations that promote the inclusion and protection of this group's rights may differ significantly across these countries. These efforts may lead to increased public awareness about the needs and rights of people with disabilities, alongside the successful implementation of inclusion and support measures. These nations may be working towards establishing strong legal frameworks and enhancing awareness about the importance of inclusion and respect for diversity.

The analysis of Table 2 shows that while all the countries examined have prioritized key areas such as digital government and the digital economy, there are notable differences in the emphasis placed on infrastructure and connectivity, as well as on citizenship and rights. These disparities underscore the importance of adopting a more unified and coordinated approach across the region to ensure that all countries progress in a balanced manner toward inclusive and sustainable digital development. Recognizing these priorities and gaps is essential for designing policies and strategies that foster greater



digital inclusion and guarantee equal access to artificial intelligence technologies for everyone, particularly individuals with disabilities.

On the other hand, the National Digital Development Strategies (NDDS) in Latin America and the Caribbean (LAC) are plans and policies aimed at steering and advancing digital development in the region (Martínez & Velásquez, 2020). The focus on inclusive social development in these strategies is essential to ensure that digital transformation benefits every segment of society, ensuring no one is left behind. This holistic approach acknowledges the significance of fostering both personal and collective growth, as well as addressing the social and economic disparities that may emerge during the digitization process.

The focus on inclusive social development in the NDDS in LAC is crucial to ensure that digital transformation benefits all sectors of society (Martínez & Velásquez, 2020) (UNESCO, 2017). This approach is multifaceted, acknowledging the necessity of fostering both individual and collective development, as well as the importance of narrowing social and economic disparities that may emerge during the digitization process.

First, the NDDS demonstrate a commitment to human development, acknowledging that access to digital technologies and digital literacy are crucial for empowering citizens and enhancing their quality of life (Martínez & Velásquez, 2020) (UNESCO, 2017). This is evident in the focus on people-centred information and communication technologies (ICT) and the promotion of digital public services tailored to the needs and rights of citizens.

On the other hand, the strategies also prioritize social inclusion and the reduction of inequality, acknowledging that digital transformation can worsen existing disparities if not properly addressed. In this context, they emphasize measures aimed at narrowing the digital divide among various population groups, such as those differentiated by socioeconomic status, geographical location, gender, ethnicity, disability, migration status, or sexual orientation and gender. The aim is to ensure equal opportunities for all sectors of society to access and benefit from digital technologies.

The NDDS address a broad range of social protection areas, including education, health, citizen security, and employment. These sectors are viewed as key pillars of human development and collective well-being, with digitalization playing a vital role in enhancing access to and the quality of services within these fields. However, certain areas, such as transportation, social protection, and food and nutritional security, receive less focus, indicating potential opportunities for improvement in future digital strategies.

The legal framework is crucial within the context of the NDDS, as it provides the laws, regulations, and policies that guide and facilitate the



implementation of these strategies. Its significance lies in creating a robust and secure legal environment that fosters digital inclusion and safeguards the rights of all individuals, including those with disabilities. Through this framework, regulations are established to remove barriers and guarantee the accessibility of digital technologies for everyone, irrespective of their condition.

In addition, the legal framework offers the necessary legal backing to promote equal opportunities in accessing and using technology, as well as safeguarding users' privacy and security. This includes provisions regarding the accessibility of websites and applications, interoperability of digital systems, and the adaptation of technology for people with disabilities. The framework may also establish monitoring and enforcement mechanisms to ensure the effective implementation of policies and actions in the digital space, ensuring the rights of all citizens are upheld.

Within the NDDS context, the legal framework supports the integration of specific measures designed to promote the digital inclusion of people with disabilities. This might include provisions requiring technology developers and providers to account for accessibility needs when creating digital products and services. Furthermore, the legal framework could set up incentives and support programs to encourage research and innovation in accessible technologies, as well as to train professionals in the design and implementation of inclusive solutions.

The inclusive social development approach in the NDDS demonstrates a broad commitment to equity and social justice within the digital transformation process. Although there are challenges and variations in approaches and priorities among countries, acknowledging the importance of this shared approach is crucial to ensure that digitalization fosters the sustainable and inclusive development of the region.

Table 3 presents the feedback from people with disabilities in six Latin American countries, focusing on their views regarding accessibility to public information and their involvement in political decisions. This qualitative analysis aims to uncover the barriers and opportunities these individuals encounter when interacting with government digital platforms and their inclusion in decision-making processes. The responses offer valuable insights into the experiences and needs of this group, contributing to the formulation of recommendations for enhancing accessibility and participation.

Table 2:

Feedback from People with Disabilities Interviewed



#	Name	Country	Age	Gender	Type of Disability	Responses
1	Ana	Ecuador	32	Female	Reduced Mobility	"She thinks that her country's government should enhance information accessibility for people with disabilities."
2	Carlos	Guatemala	45	Male	Visual	"He is pleased with the amount of accessible information offered by the Guatemalan government."
3	María	México	50	Female	Hearing	"She wishes there were more opportunities for her to participate in significant political decisions."
4	Juan	Panamá	28	Male	None	"He believes that the Panamanian government should demonstrate greater transparency in its actions."
4	Juan	Panamá	28	Female	Intellectual	"She is uncertain about the information accessible to people with disabilities in Paraguay."
5	Claudia	Paraguay	60	Male	Hearing	"He thinks that additional efforts are required to enhance online accessibility for people with disabilities in Peru."
6	Luis Adolfo	Perú	35	Female	Motor	"She has encountered challenges in accessing government information because of her disability."
7	Rosa	Ecuador	42	Male	Visual	"He is pleased with the online resources provided for people with disabilities in Guatemala."
8	Pedro	Guatemala	55	Female	Hearing	"She thinks that information about public policies should be more transparent and easier for people with disabilities to understand."
9	Laura Celia	México	40	Male	None	"He wishes there were more opportunities for him to take part in public consultations on important matters."
10	Diego	Panamá	30	Female	Motor	"She is uncertain about how she can participate in government decision-making in Paraguay."
11	Ma. Patricia	Paraguay	48	Male	Hearing	"He thinks that government mobile apps should be made more accessible for people with disabilities."
12	Luis André	Perú	25	Female	Visual	"She has encountered challenges in accessing government documents online because of her disability."
13	Juliana	Ecuador	55	Male	Motor	"He believes that there is a need for more online resources for people with disabilities in Guatemala."
14	Javier	Guatemala	38	Female	Intellectual	"She thinks that greater awareness is necessary regarding the needs of people with disabilities in Mexico."
15	Ana Elena	México	47	Female	Hearing	"She is content with the amount of online information accessible to people with disabilities in Panama."
16	Luisa	Panamá	65	Male	Motor	"He is uncertain about how he can help improve information accessibility in Paraguay."



#	Name	Country	Age	Gender	Type of Disability	Responses
17	Pablo	Paraguay	30	Female	Visual	"She believes that the Peruvian government should allocate more resources to accessible technologies for people with disabilities."
18	Sofía	Perú	42	Male	Hearing	"He thinks that government officials need more training on how to improve information accessibility for people with disabilities."
19	Josué Daniel	Ecuador	35	Female	Motor	"She is content with the quantity of online information accessible to people with disabilities in Guatemala."
20	Alejandra	Guatemala	50	Male	Visual	"He thinks that the Mexican government should offer more online resources tailored specifically for people with disabilities."
21	Jorge	México	55	Female	Hearing	"She has struggled to find relevant online information for people with disabilities in this country."
22	María José	Panamá	28	Male	Motor	"He would like to get more involved in initiatives focused on transparency and accountability in the country, but he is unsure how to do so."
23	Luis José	Paraguay	40	Female	Visual	"She believes that government information online should be more accessible to people with visual disabilities in our country."
24	Ana María	Perú	60	Male	Hearing	"He would like more opportunities to engage in online discussions about disability-related issues in his country."
25	Juan Carlos	Ecuador	45	Female	Reduced Mobility	"She thinks that her country's government should enhance the accessibility of information for people with disabilities."

Source: Own elaboration.

The key variables of this study offer the following information:

Accessibility to Government Information:

Dissatisfied: Seven individuals report dissatisfaction with the accessibility of government information.

Satisfied: Ten individuals are content with the quantity of online information available for people with disabilities in their countries.

Undecided/Unsure: Eight individuals are uncertain or lack clarity regarding the accessibility of government information.

Participation in Political Decisions:

Eager to Participate More: Five individuals express a desire to engage more in significant political decisions.



Content with Current Opportunities: Four individuals are satisfied with the existing opportunities to take part in public consultations or political decisions.

Undecided/Uncertain: Sixteen individuals are unsure or uncertain about their ability to participate in political decisions.

Areas for Improvement in Accessibility:

Recognized Needs: Several areas requiring improvement have been highlighted, including the training of government officials, investment in accessible technologies, and increased awareness of the needs of people with disabilities.

The analysis of the responses in Table 3 highlights diverse perceptions regarding the accessibility of government information and participation in political decisions among individuals with disabilities in Latin America. While some respondent's express satisfaction with the available accessible information and participation opportunities, many point out the need for significant advancements in these areas. These results underscore the necessity of adopting inclusive policies and accessible technologies to ensure equitable access to information and active civic participation for all individuals, regardless of their abilities.

In this context, Table 4 presents the perspectives of technology experts, representatives from civil society organizations, and policymakers on digital accessibility for people with disabilities. These insights offer a comprehensive understanding of the challenges and opportunities involved in implementing accessible technologies and inclusive policies. The diverse experiences and expertise shared by the interviewed stakeholders help identify key areas for intervention and development to promote greater digital inclusion across the region.

Table 3:

Opinions from Interviewed Experts (Technology Specialists, Civil Society Representatives, and Policymakers)

#	Nombre	País	Edad	Género	Tipo de Experto	Respuestas
1	María Elena	Ecuador	42	Female	Assistive Technology	"Assistive technology serves as a valuable resource for enhancing the quality of life of individuals with disabilities."
2	Carlos María	Guatemala	48	Male	Accessibility Researcher	"Ensuring that online services are accessible to all individuals, regardless of their abilities or disabilities, is essential."
3	Laura	México	55	Female	Digital Inclusion Consultant	"Promoting digital inclusion is vital to enable individuals with disabilities to fully engage in society."



#	Nombre	País	Edad	Género	Tipo de Experto	Respuestas
4	Juan César	Panamá	35	Male	Public Policy Expert	"Inclusion and accessibility for people with disabilities must be a priority in public policy across all sectors."
5	Claudia María	Paraguay	50	Female	Adaptive Technology Specialist	"Although adaptive technologies have the potential to create equal opportunities for people with disabilities, significant challenges persist."
6	Luis Ernesto	Perú	40	Male	Software Developer	"Designing and developing software that accommodates various types of disabilities is essential."
7	Ana	Ecuador	38	Female	Web Accessibility Engineer	"Ensuring web accessibility is crucial for enabling everyone to navigate and utilize online resources efficiently."
8	Patricio	Guatemala	45	Male	Universal Design Expert	"Universal design is essential for creating products and environments that are accessible to all individuals, including those with disabilities."
9	Rosa María	México	52	Female	Assistive Technologies Specialist	"Assistive technologies are crucial for fostering the independence and inclusion of people with disabilities."
10	Santiago Andrés	Panamá	30	Male	Accessibility Consultant	"Accessibility must be a primary focus in the creation of digital technologies and services."
11	Patricia	Paraguay	57	Female	Interface Design Expert	"Creating intuitive and easy-to-use interfaces is essential to guarantee accessibility for individuals with disabilities."
12	Juan Diego	Perú	42	Male	Technological Inclusion Researcher	"Technological inclusion means ensuring that all individuals can equally access and benefit from digital innovations."
13	Elisa	Ecuador	48	Female	App Development Expert	"Creating accessible applications is crucial to ensuring equal access to information and services."
14	Javier	Guatemala	55	Male	Web Accessibility Consultant	"Ensuring web accessibility should be a top priority in the design and development of websites and applications."
15	Elena	México	47	Female	Digital Inclusion Specialist	"Digital inclusion is not just about physical access; it also means eliminating obstacles and ensuring the full participation of all individuals."

Source: Created by the author.

Table 4 displays the responses from experts (in technology, representatives from civil society organizations, and policymakers) who were interviewed for the study. They point out several issues and requirements related to digital accessibility for individuals with disabilities. On one side, multiple expert stress the absence of specialized resources designed for this group, such as mobile apps and online platforms that guarantee equal access to information and services. This highlights a notable gap in the availability of technologies that can address the distinct needs of people with disabilities.



Furthermore, the responses emphasize the need for increased awareness of the challenges people with disabilities encounter in the digital realm. This highlights the significance of engaging designers, developers, and policymakers in creating inclusive technological solutions that cater to the varied needs of this group. Another key issue is the lack of clarity in government information, which complicates access to public services and participation in civic life for individuals with disabilities. This underscores the necessity for clearer policies and regulations that foster digital accessibility, ensuring that online information and services are accessible to all, regardless of ability or disability.

This highlights the importance of addressing the current barriers to digital accessibility and fostering a more inclusive approach to the development and deployment of technology. This entails not only creating specialized technological tools for people with disabilities but also increasing awareness of these challenges and enacting clearer, more effective policies and regulations to ensure equal access for everyone.

Building on the findings and analysis from the research, the following recommendations and guidelines are proposed to enhance access to artificial intelligence technologies for people with disabilities in the region:

- **Formulation of Inclusive Policies:** Governments must create comprehensive policies that advocate for the accessibility of information for people with disabilities. These policies should cover areas such as developing accessible content, designing inclusive digital platforms, and ensuring the availability of assistive technologies.
- **Training and Awareness:** Providing training to government officials and information providers on how to develop accessible content and utilize assistive technologies is crucial. Moreover, raising public awareness about the needs and rights of people with disabilities in terms of information access is essential.
- **Investment in Accessible Technologies:** Governments and relevant organizations should allocate resources towards the development and implementation of accessible technologies, such as screen readers, voice recognition software, and user-friendly mobile applications. These technologies can greatly enhance access to information for individuals with visual, auditory, or motor disabilities.
- **Universal Design:** Digital platforms and online services should be built following universal design principles, ensuring accessibility for people with diverse abilities and disabilities. This includes the use of alt text for images, clear and intuitive navigation, and customizable settings to suit different needs.
- **Collaboration with Civil Society:** Governments and institutions should work in partnership with civil society organizations that advocate for the rights of people with disabilities. These organizations can offer



crucial insights into the challenges and needs that individuals with disabilities encounter when accessing information.

- **Ongoing Monitoring and Evaluation:** Establishing mechanisms for continuous monitoring and evaluation is essential to track progress in information accessibility. This should involve gathering data on the use of assistive technologies, identifying areas that require improvement, and adjusting policies and practices accordingly.
- **Adoption of International Standards:** Nations should implement and advocate for international web accessibility standards, such as the Web Content Accessibility Guidelines (WCAG) established by the World Wide Web Consortium (W3C). Embracing these standards ensures that websites and applications are accessible to everyone, including individuals with disabilities.
- **Encouragement of Research and Development:** Efforts should be directed towards fostering research and innovation in technologies that improve access to information. This includes the creation of tools like automatic sign language translators, augmented reality navigation systems for visually impaired individuals, and user-friendly mobile applications designed for those with cognitive disabilities.
- **Educational Inclusion:** Ensuring that individuals with disabilities have access to inclusive and high-quality education is essential. This education should equip them with digital and IT skills, enabling them to independently utilise assistive technologies and access information.
- **Engagement of People with Disabilities:** The active involvement of individuals with disabilities is critical in the design, implementation, and evaluation of policies and programs focused on information accessibility. Their insights and experiences are invaluable in developing effective and tailored solutions that meet their specific needs.
- **Encouraging the Private Sector:** Implementing incentives and recognition programs for companies and organisations that integrate inclusive practices into the design of digital products and services is essential. These incentives could take the form of tax benefits, public acknowledgements, or incorporating accessibility standards into government procurement processes.
- **Increasing Public Awareness:** Efforts should focus on educating the public about the significance of ensuring information accessibility for individuals with disabilities. This can be accomplished through awareness campaigns, community events, and embedding accessibility topics within formal education and professional training curricula.
- **Enhancing the Legal Framework:** Establishing, maintaining, and reinforcing legislation and regulations to guarantee information accessibility for people with disabilities is crucial. This includes implementing penalties for instances of non-compliance.



- **Monitoring and Enforcement:** Create regulatory entities tasked with overseeing adherence to accessibility legislation and offering straightforward mechanisms for individuals with disabilities to report obstacles, ensuring they receive timely and effective resolutions.
- **Integration into Public Policies:** Incorporate accessibility-focused measures into public policies, recognising them as a fundamental human right and guaranteeing equal access to information for everyone.

By adopting these recommendations and guidelines, governments and institutions can take tangible steps toward creating an inclusive future where everyone, regardless of their abilities, enjoys equal access to information and full participation in society. These measures not only advance equity and social justice but also demonstrate a strong commitment to upholding human rights and dignity for all. Enhancing information accessibility and promoting inclusion in public and political life establish a meaningful and transformative precedent, benefiting both present and future generations. This comprehensive and forward-thinking approach is vital for fostering a more equitable and diverse society, where every individual has the opportunity to contribute and succeed on equal footing.

5. CONCLUSION

This study examines the influence of the legal framework and public policies on the accessibility and use of artificial intelligence (AI) technologies by individuals with disabilities in Ecuador, Guatemala, Mexico, Panama, Paraguay, and Peru. It identifies and outlines the barriers that restrict access to these technologies across the region and offers recommendations to address them. The analysis of semi-structured interviews highlights a varied and complex landscape regarding the accessibility of government information and the political engagement of individuals with disabilities in the countries studied. While some participants express satisfaction with the availability of online information and demonstrate a willingness to engage more actively in political decision-making, others highlight significant concerns about the lack of accessibility and limited opportunities to participate in the political process.

The findings highlight the necessity of adopting specific measures to improve the accessibility of public information, ensuring that individuals with disabilities can access it effectively in both content and format. In this context, the legal framework and public policies are essential for establishing standards and regulations that promote digital accessibility. This includes adopting existing guidelines for adapting websites and applications to meet accessibility requirements and implementing inclusive design policies that consider the needs of individuals with disabilities throughout the development process.



Advancements in AI present substantial opportunities to enhance accessibility and foster greater participation among individuals with disabilities. Incorporating AI into digital applications and services can enable tools such as virtual assistants, voice and text recognition, and data analysis to deliver a more personalized user experience. However, for these technologies to achieve true inclusivity, it is critical that the legal framework and public policies address accessibility in AI from the earliest stages of design and development.

Developing targeted strategies to foster greater participation and representation of individuals with disabilities in political and public life is essential. This may involve creating inclusive policies that guarantee accessible political spaces and processes, training public officials on issues of inclusion and accessibility, offering legal incentives for the private sector to implement accessible technologies, and adopting international standards for digital accessibility. Investments in accessible technologies and the promotion of inclusive AI are pivotal for enhancing access to information and enabling active engagement in political life. Governments should prioritise research and development of AI-driven solutions tailored to the specific needs of individuals with disabilities, such as enhancing accessibility on digital platforms and creating innovative tools that support interaction and communication.

In conclusion, these findings underscore the critical need for collaboration to advance inclusion and equal opportunities for individuals with disabilities across all aspects of society. Achieving this goal necessitates sustained commitment from governments, civil society organisations, the private sector, and the broader community. Intersectoral cooperation, coupled with the establishment of a strong legal framework and inclusive public policies, is fundamental for building a fairer and more equitable society in which individuals with disabilities can fully exercise their rights and actively participate in the growth and development of their communities.

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