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Current Status of Access to Digital Rights for Children with Disabilities Research Report

Accountability for Children Advocacy for Rights
Çocuklar için Hesap Verebilirlik Haklar için Savunuculuk

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EXECUTIVE SUMMARY

The research study carried out within the scope of the project **"Strengthening Data-Driven Monitoring and Advocacy for the Prevention of Violence Against Children with Disabilities in the Digital Space,"** implemented by Engel Siz Yaşam Derneği and supported by the Civil Society Cooperation Programme "Accountability for Children, Advocacy for Rights," was conducted between 15 March and 10 April 2025 with the participation of 82 children with disabilities living in six different districts of İzmir (Karabağlar, Konak, Bayındır, Torbalı, Gaziemir, Bornova). The study demonstrates that digital inequalities are not limited solely to the possession or lack of technological tools; rather, they intersect with social, spatial, economic, and structural barriers. At the same time, it presents a comprehensive analysis—based on both qualitative and quantitative data collected from the field—of the extent to which children's rights to protection, development, participation, and privacy in digital environments are safeguarded.

The key findings of the research reveal that although children with disabilities have a high level of ownership of digital technologies, they face serious limitations in the functionality of these technologies. The fact that digital devices are not adapted according to disability types demonstrates that access needs to be assessed not at the technical level but at the functional level. This situation makes visible the difference between the ownership and the effective use of digital tools, pointing to a structural problem defined in the literature as the "illusion of access." In particular, the lack of screen reader software, sign language supports, or ergonomic equipment prevents the devices from becoming a meaningful means of access for children.

The findings obtained in the six districts of İzmir (Karabağlar, Konak, Bayındır, Torbalı, Gaziemir, and Bornova), where the research was conducted, show that spatial inequalities are a determining factor in digital access. In particular, the inadequacy of internet infrastructure in rural neighborhoods and the fact that some children have only limited access to their parents' phones deepen digital exclusion along an axis of spatial segregation. At the same time, parents' low level of education results in insufficient support for digital literacy within the family and causes children to remain unprotected in areas such as digital safety, privacy, and critical access to information.
Children with disabilities face not only technical barriers but also forms of digital violence such as content incompatibility, the use of exclusionary language, cyberbullying, and unauthorized data sharing encountered in digital environments. Especially for children with visual or hearing impairments, inaccessible content restricts their rights to digital development and learning. Violations of privacy and the weakness of protective mechanisms manifest in examples such as the unauthorized sharing of children's photographs or the use of their account information by third parties; this lays bare the fragility of children's rights in the digital environment.

The research findings also show that the digital participation of children with disabilities is limited. The lack of channels where children can make their voices heard, produce content, or actively take part in online communities demonstrates that the right to participation is rendered invisible in the digital environment. When families' protective attitudes combine with the lack of inclusivity in technological designs, the child's right to make decisions based on his or her evolving capacities is de facto eliminated.

The most fundamental message to policymakers is that digital inclusion cannot be achieved solely through technical solutions. Accessible digital design, child-centered digital literacy policies, and inclusive educational curricula must be addressed with a holistic strategy. In order to ensure that children participate in the digital environment equally, safely, and actively, disaggregated data based on discrimination should be collected, digital support mechanisms should be established at the local level, and children's direct participation in these processes should be ensured. In addition, regulatory frameworks should be established to define accessibility obligations for technology companies and digital content producers.

This study reveals that access to rights in the digital environment for children with disabilities is not merely an individual user experience; rather, it is a rights issue in which social inequalities are reproduced in the digital sphere, and it aims to develop transformative policy recommendations for child-centered digital justice

INTRODUCTION

In our era, where digitalization is transforming all areas of life, children's life experiences are also being profoundly reshaped. Childhood is now constructed not only in the physical world but also in digital spaces; children's ways of playing, learning, communicating, expressing themselves, and participating in social processes gain a new dimension through digital tools.

This transformation should be considered not only as a technical advancement but also as a normative change that necessitates the reinterpretation of the child rights regime.

For children's rights must be guaranteed and made applicable not only in traditional domains but also in digital environments. Ensuring the protection of children's rights in digital environments requires a reassessment within the framework of children's evolving capacities, individual autonomy, and right to participation.

The integration of digital technologies into children's lives has not only expanded avenues for information access but has also fundamentally altered their modes of self-expression, identity formation, and social interactions.

Social media platforms, gaming applications, educational software, and interactive content have become integral parts of children's daily lives. In this context, the digital environment represents a multidimensional space that carries both opportunities and risks for children. Analyzing these opportunities and risks through a rights-based approach is essential for the development of policies that place children's welfare and well-being at the center.

General Comment No. 25 (2021), adopted by the United Nations Committee on the Rights of the Child, explains how the Convention on the Rights of the Child (CRC) should be applied to the digital environment, taking into account the growing impact of digital technologies on children's lives.

This document clearly sets out that children have fundamental rights in the digital environment—just as in all other environments—such as access to information, freedom of expression, privacy, participation, protection, education, culture, and play. This approach places on States not only the obligation to protect children from harm but also the duty to ensure that they benefit equally from the opportunities of the digital world. Furthermore, it calls for the development of inclusive policies and practices that address not only the risks children encounter online but also how they can make the most of the opportunities offered by the digital environment.

In this framework, access to digital rights for children with disabilities emerges as a multilayered issue. While the digital environment can offer significant opportunities as an equalizing tool for children with disabilities, it also brings with it risks of exclusion and discrimination in new forms. The barriers encountered in the digital environment function not only at the technical level but also as multilayered obstacles structured at social, economic, cultural, and political levels. The research carried out by Engel Siz Yaşam Derneği has made visible, at the local level, the inequalities faced by children with disabilities in the digital world; it has revealed that digital content, technological designs, and policies do not sufficiently respond to disability-based needs. The equal, safe, and meaningful participation of children in digital environments depends not only on technical infrastructure but also on accessible designs, inclusive content production, and a supportive social environment.

In the context of Türkiye, the dimensions of digital inequalities emerge in a more complex and intersectional manner. In this study conducted in İzmir, it has been observed that the digital access experiences of children with disabilities are not limited to device ownership or internet connection; rather, they are shaped by multiple factors such as the functionality of devices, the accessibility of content, the presence of social support mechanisms, the level of digital literacy within families, and spatial conditions. The situation defined as the "illusion of access" reveals that although children physically possess technological tools, their opportunities to use these tools effectively, safely, and freely are severely limited. In this context, it is understood that digital exclusion is not only about the digital divide but is also a multilayered phenomenon that encompasses content-related, experiential, and cognitive differences.

The data from the research show that access experiences differ according to types of disability. For children with visual impairments, screen reader software, audio content, and contrast settings are fundamental requirements; for children with hearing impairments, subtitles, sign language support, and access to silent content come to the forefront. For children with physical disabilities, the ergonomic design of devices, the availability of assistive technologies, and the accessibility of user interfaces are decisive factors. However, current digital platforms fall short in offering customized solutions for these different needs, structurally limiting the equal participation of children with disabilities. These shortcomings necessitate comprehensive reassessments both in terms of the design of digital products and the regulations governing them.

Socioeconomic inequalities also have a determining impact on digital access. The fact that most of the parents of the children participating in the research have a low level of education shows that intrafamilial digital support mechanisms are weak. In particular, the fact that only 8.6% of mothers are university graduates reveals that children do not receive adequate guidance and protection in matters of digital literacy, safety, and privacy. This situation demonstrates that children are left alone in digital environments, exposed to online dangers, and unable to systematically develop their digital skills. The role of educational level as a determining factor in the exercise of digital rights shows that opportunities available to children in the digital world are not distributed equally.

Moreover, the dangers children face in digital environments are not limited to technical issues. Some of the children who participated in the research stated that they encountered risks such as digital violence, privacy violations, and online bullying. Examples such as the unauthorized sharing of their photos, the creation of fake accounts in their names, or receiving insulting messages point to the inadequacy of protection mechanisms in digital environments. These findings once again highlight the necessity of effectively safeguarding children's rights in the digital sphere. Digital security, the protection of privacy, and protection from harmful content cannot be ensured solely through device ownership but require strengthening children through supportive environmental mechanisms.

> The participation of children with disabilities in the digital environment should not be considered merely as a matter of individual access but as a political issue that must be evaluated within the framework of social justice and equal citizenship principles. Digital participation encompasses not only access to information but also new forms of representation, visibility, freedom of expression, and social engagement.

The participation of children with disabilities in digital content creation, their ability to take part in online communities, share their own experiences, and develop digital citizenship skills transforms them from passive users into active subjects in the digital sphere. However, this transformation is made possible not only through technological tools but also through accessible design, inclusive policies, digital education, and support mechanisms.

In this context, the study aims to analyze the current state of access to digital rights for children with disabilities in Türkiye in a multidimensional way. Through quantitative and qualitative data collection techniques, the research reveals children's digital experiences, the barriers they face, and the strategies they use to overcome these barriers, while providing evaluations in light of national and international normative frameworks. The central research problem is embodied in the questions of to what extent children with disabilities can benefit from digital rights, for what structural, technical, or social reasons these rights remain limited, and how these limitations can be overcome.

This research, while providing an original contribution to the digital inequality literature through the İzmir sample, also aims to make visible the rights claims of children with disabilities in digital environments. The findings obtained are combined with child rights-based policy recommendations to create a roadmap for building an inclusive, accessible, and equitable structure in the digital sphere.

1.CONCEPTUAL AND THEORETİCAL FRAMEWORK

1.1. The Right to Digital Participation: Within the Context of The Convention on the Rights of the Child

The right to digital participation encompasses more than passive access to online content; it involves children actively engaging in shaping the digital environment. This rights-based, child-centred approach includes children's abilities to express their thoughts, access information, create digital content, and actively participate in digital communities. Realizing digital participation requires not only technical access but also support tailored to children's ages, developmental stages, cognitive capacities, and specific needs, ensuring their voices are heard and considered in participation processes. (United Nations, 1989).

The United Nations Committee on the Rights of the Child's General Comment No. 25 (2021) affirms that children are rights holders in digital spaces, just as in all other areas of life, and that states must guarantee these rights. Articles 12 (respect for the child's views), 13 (freedom of expression), and 17 (access to information) of the Convention on the Rights of the Child (CRC) provide the legal foundation for digital participation.

Committee emphasizes that digital participation involves not only protecting children from online risks but also ensuring they can fully benefit from digital opportunities.

Thus, the right to digital participation is not merely an individual freedom but is critical for social inclusion, cultural representation, and the development of democratic citizenship consciousness. (Livingstone & Helsper, 2007) Enabling children to express their experiences, contribute to decision-making processes, and influence digital policies transforms them from passive recipients to active producers. This transformation enhances not only individual development but also societal equality, diversity, and inclusivity. (Alper & Goggin, 2017)

Addressing digital participation from a disability perspective is essential to assess the practical implementation of this right. Access to online content for children with disabilities is influenced by factors such as the ergonomic design of digital tools, content accessibility, and technical compatibility of platforms. Therefore, genuine digital participation necessitates technologies that are not only accessible but also inclusive and transformative, imposing obligations on both states and the private sector to develop accessible digital infrastructures and policies.

For children with disabilities, fully exercising the right to digital participation is linked not only to individual competencies but also to the support of their social environment, the digital awareness of families, the inclusivity of the education system, and the effectiveness of decision-making mechanisms representing children. Consequently, the right to digital participation requires a multi-level societal transformation.

Ensuring children's access to digital environments and supporting their active, meaningful, and safe participation are imperative for fully realizing children's rights in the digital age.

The right to digital participation includes children's capacities to be active agents in the online world, moving beyond content consumption to content creation, voicing their perspectives on digital platforms, and engaging in social, cultural, and educational activities through digital means. Therefore, digital participation should be viewed not only as a matter of technical access but as a rights category that prioritizes recognizing and strengthening children's developmental capacities. General Comment No. 25 by the United Nations Committee on the Rights of the Child outlines states' obligations to ensure children's "full and effective participation" in the digital environment, emphasizing the need for equal access to digital opportunities alongside protection from harm.

The right to digital participation is directly related to Articles 12, 13, and 17 of the Convention on the Rights of the Child. Article 12 grants children the right to express their views freely in all matters affecting them, with due weight given according to their age and maturity. Article 13 ensures the child's right to freedom of expression, and Article 17 encompasses the right to access information, particularly content that contributes to their moral and mental development.

In the digital age, these rights extend beyond traditional media to include the internet, social media, digital games, and learning platforms. Therefore, restricting or denying access to digital environments is not merely a technical issue but represents systematic exclusion from democratic citizenship practices such as participation, expression, information acquisition, and decision-making.

Ensuring equitable access to digital environments is thus a fundamental requirement not only for individual development but also for securing children's full participation in social life. Digital access enables children to become visible members of society, assert their rights, share their experiences publicly, and contribute to the transformation processes of the digital society.

For children with disabilities, digital participation offers a potential space to compensate for physical exclusion; however, if this space lacks accessibility and inclusivity, it poses a risk of secondary exclusion.

Therefore, Articles 12, 13, and 17 of the Convention necessitate the reconceptualization of digital participation as a universal right, not a privilege, mandating that states, educational institutions, local governments, and the private sector uphold their responsibilities in the digital realm.

1.2. Accessibility: Technological Justice and Structural Inequalities

The concept of accessibility encompasses the capacity of individuals with disabilities to reach physical, digital, and social environments in an unimpeded, safe, independent, and dignified manner. (Seale, 2014) In today's world, where digitalization is restructuring individual and societal life, accessibility within digital environments is gaining increasing importance. This access is not limited to the mere possession of digital devices; it also necessitates that these devices and their content are designed to meet the specific needs associated with various types of disabilities. (Alper & Goggin, 2017).

For individuals with visual impairments, tools such as screen readers, high-contrast options, and audio guidance are essential. For those with hearing impairments, subtitles, sign language translations, and visual alerts are crucial. Individuals with physical disabilities benefit from alternative input devices, keyboard-friendly designs, and voice control features. However, equally important as these technical solutions are their sustainability, currency, and the continuity of individual-level access. Therefore, accessibility should be evaluated not only at the level of individual hardware and software but also within systemic, political, and economic contexts.

This multifaceted nature of accessibility directly relates it to the principle of "technological justice." Technological justice advocates for the design of information and communication technologies that recognize individual differences and enable equal participation in social life.

Nonetheless, most current digital products and services are developed based on a default user model that typically assumes individuals without physical or cognitive disabilities within a certain age range. This approach often renders the needs of individuals with disabilities invisible or addresses them in a marginalized manner.

The accessibility of digital tools and environments extends beyond individual technology; it also encompasses public policy, economic disparities, and cultural attitudes, forming a structural issue.

Research conducted within the Turkish context reveals that a significant portion of digital content is not customized for various disability conditions. Many platforms, including public services, fall short of accessibility standards.

Educational applications, public e-services, digital libraries, social media, and digital media content often do not cater to the needs of these children. Consequently, accessibility should be considered not merely as an individual concern but as a product of structural inequalities. (Council of Europe, 2018).

The barriers to digital participation faced by children with disabilities cannot be solely attributed to technical incompatibilities. Factors such as families' lack of knowledge about digital tools, insufficient financial resources, and the absence of support from schools and social environments also pose significant obstacles to accessibility. In low-income families, issues like outdated, slow, or damaged technological devices; unstable internet connections; and the high cost or limited availability of accessible software significantly restrict children's active participation in digital life.

In conclusion, digital accessibility must be approached holistically, encompassing the inclusive design of technological products, their affordability, the strengthening of social support mechanisms, and the adoption of equitable policy approaches. Without such comprehensive measures, the process of digitalization risks becoming a domain where existing inequalities are further entrenched, rather than a platform for equal opportunities for children with disabilities.

1.3. Social Exclusion Theory and Intersectionality

The challenges faced by children with disabilities in digital environments are multifaceted and cannot be solely attributed to individual limitations or technological shortcomings. These issues extend beyond the mere ability to use digital tools and are deeply influenced by structural inequalities, societal norms, and socio-economic conditions. Consequently, digital exclusion should be examined not just as a matter of technical access but within the broader context of structural inequalities, as framed by social exclusion theory. (Livingstone & Helsper, 2007).

Social exclusion refers to the inability of individuals to participate fully and equally in economic, social, cultural, and political life. In the digital realm, this exclusion encompasses not only the lack of internet connectivity but also barriers to accessing online resources, understanding digital content, participating in digital production processes, and exercising digital rights.

Such digital inequalities can lead to a wide range of rights violations for children, affecting their access to information, freedom of expression, digital safety, and public representation.

For children with disabilities, these forms of exclusion are particularly complex. They often encounter overlapping physical, social, and digital barriers that hinder their access, usage, participation, and representation in digital spaces. Fieldwork conducted in six districts of İzmir—Karabağlar, Konak, Gaziemir, Bayındır, Torbalı, and Bornova—revealed that merely owning a device does not resolve these challenges. The devices used often lack functionality, internet infrastructure is inadequate, and families frequently lack the digital literacy necessary to support their children's needs.

Qualitative interviews indicate that many children with disabilities have limited access to digital devices, often restricted to brief periods using their parents' phones. This limited access transforms digital tools from potential sources of empowerment into experiences marked by control and restriction. Developing the knowledge, skills, and confidence required for active digital citizenship necessitates not only technical tools but also a supportive social environment. However, the dynamics of social exclusion often limit these children's access to such support systems.

Applying social exclusion theory to digital contexts requires attention to not only technical deficiencies but also societal norms, cultural codes, and economic structures. While digitalization has the potential to transform inequalities, it also risks exacerbating them. For instance, the increasing reliance on digital tools in education offers new learning opportunities for some children while simultaneously infringing upon the right to education for others who lack access. Thus, digital exclusion becomes not only a rights violation but also a mechanism for the reproduction of long-term social inequalities.

Intersectionality theory provides a valuable framework for analyzing these complex inequalities. Introduced by Kimberlé Crenshaw, this approach posits that individuals experience overlapping and interdependent systems of discrimination or disadvantage. For children with disabilities, digital exclusion is compounded by factors such as socio-economic status, gender, age, and geographic location. (Crenshaw, 1991; Buckingham, 2007) For example, girls with disabilities from low- income families may face dual exclusion due to gender-based societal expectations and disability-related biases. Practices such as prioritizing digital device access for boys or limiting girls' online activities to educational purposes reflect these intersecting forms of exclusion. (Alper & Goggin, 2017).

Data from the fieldwork also indicate that children living in remote areas face additional challenges due to inadequate technical infrastructure and lower levels of digital awareness among families.

These systemic barriers hinder the development of digital citizenship skills, leading to significant disparities in digital literacy and representation within digital communities.

Digital exclusion affects not only children's online experiences but also their offline social lives, diminishing their overall life satisfaction and sense of belonging. Children who lack digital representation often remain invisible in public policies and digital content creation, posing obstacles to the reconstruction of digital rights tailored to children's needs. Therefore, social exclusion theory should be employed not only descriptively but also as a critical and transformative analytical tool.

In summary, digital exclusion is both a consequence and a perpetuator of the structural inequalities that underpin the challenges faced by children with disabilities in digital environments. Addressing this issue requires a combined application of social exclusion theory and intersectionality to ensure that policies promoting digital inclusion extend beyond technical solutions to encompass social justice, equality, and rights-based transformations.

1.4. Digital Citizenship and Digital Literacy

Digital citizenship refers to the ability of individuals to participate in digital environments not merely as passive users, but as conscious, ethically aware, and active participants who are informed about their rights and responsibilities. (Buckingham, 2007) In this context, digital citizenship encompasses children's capacity to express themselves freely and to participate equally in digital social processes. Research findings reveal that children with disabilities face significant inequalities in acquiring these competencies.

Digital citizenship is not only about technical skills; it is also directly related to children's awareness of their rights, their ability to engage in online communities, contribute to decision-making processes, and take part in digital content creation. At this point, digital literacy emerges as a core component of digital citizenship. Digital literacy involves a multifaceted set of skills including accessing information, critically evaluating content, producing digital content, developing awareness of online safety, protecting personal data, and fostering ethical behavior in digital spaces.

> The research data show that children with disabilities often have limited digital literacy skills, which in turn increases their vulnerability in digital environments.

The fieldwork conducted in İzmir indicates that the majority of children predominantly use digital tools for entertainment and gaming, while their use for education, communication, and self- expression remains significantly limited. Interviews revealed that children's experiences with digital content creation are minimal, with most of them remaining in the role of passive consumers.

Furthermore, many children lack awareness regarding online safety, privacy protection, and digital rights. In the face of dangers such as online violence, cyberbullying, and personal data breaches, children often find themselves unsupported and lack proper guidance. In this regard, the deficiency in digital literacy is not merely a lack of technical skills but constitutes a structural form of exclusion that undermines equal participation as digital citizens.

One prominent finding is the impact of low parental education levels—especially among mothers—on children's ability to develop digital literacy skills. The absence of supportive mechanisms within the household makes it difficult for children to be aware of their rights and express themselves safely in online spaces. Moreover, the lack of parental protection and guidance in the face of digital risks further deepens children's vulnerability.

During interviews conducted within the scope of the project, some children reported that they had not received any instruction on how to behave in the digital world and that their families or teachers lacked knowledge on this subject. This highlights that digital citizenship is not merely an individual responsibility but a collective one. It is essential that not only children, but also parents, teachers, and local stakeholders receive education on digital rights, online safety, and ethical behavior.

In conclusion, enhancing the digital citizenship capacities of children with disabilities requires more than just access to digital tools. It necessitates the empowerment of their ability to produce content, be visible in the digital environment, engage in online communities, and exercise their digital rights. Digital citizenship and digital literacy not only enable children to exist in the digital world but also empower them to contribute to its transformation. In this respect, the project we have implemented places critical responsibilities on both content creators and policymakers in strengthening the digital literacy and citizenship capacities of children.

1.5. Normative Framework: National and International Instruments

Assessing the digital rights of children with disabilities necessitates a robust normative and legal framework. This framework encompasses national and international human rights instruments, laws, and regulations that ensure children can fully exercise their rights not only in traditional settings but also within the digital realm. To effectively respond to the demands of the digital age, these instruments must be evaluated holistically and practically, both theoretically and in application.

The United Nations Convention on the Rights of the Child (CRC) provides the foundational reference for children's rights in digital contexts. Articles 12 (the right to express views), 13 (freedom of expression), 16 (right to privacy), and 17 (access to information) are particularly

pertinent. The Committee on the Rights of the Child's General Comment No. 25 (2021) extends these provisions to the digital environment, emphasizing children's rights to protection, development, and participation online. This comment urges states to restructure their digital policies to align with child-friendly principles. (UNCRC, 2021)

The Council of Europe's Recommendation CM/Rec(2018)7 underscores the necessity of recognizing, supporting, and safeguarding children's rights in digital settings. It details rights related to information access, participation in digital media creation, and protection within digital environments. The recommendation also highlights the importance of state collaboration with technology companies to ensure safe, inclusive, and accessible digital experiences for children. (Council of Europe, 2018).

The United Nations Convention on the Rights of Persons with Disabilities (CRPD) is a pivotal international instrument safeguarding the digital rights of persons with disabilities, including children. Article 7 guarantees that children with disabilities enjoy all human rights on an equal basis with others, ensuring their views are respected and they are protected from discrimination. Article 9 addresses accessibility, mandating that states facilitate access to information and communication technologies, including the internet, for persons with disabilities. (CRPD, 2006).

In Turkey, the national normative framework concerning children's digital rights is primarily shaped by the 2023–2028 Turkey Child Rights Strategy Document and Action Plan. This document aims to recognize children's digital rights, ensure their online safety, and enhance digital literacy levels. However, findings from field research indicate that the practical implementation of this strategy is limited, particularly regarding inclusivity for children with disabilities. (T.C. Ministry of Family and Social Services, 2023) Additionally, Law No. 6698 on the Protection of Personal Data (KVKK) provides a legal basis for safeguarding children's data in digital environments. Yet, the law lacks explicit provisions tailored to children's data protection needs. There is a pressing need to develop clear institutional and pedagogical guidelines that address consent processes and data handling practices appropriate to children's developmental stages. (Personal Data Protection Authority, 2016).

Curriculum reforms by the Ministry of National Education (MEB) concerning digital literacy are also integral to this normative framework. Nonetheless, interviews conducted during the project reveal that these curricular contents are not adequately adapted for children with disabilities, and educators often lack sufficient training on digital inclusivity. (Ministry of National Education, 2022).

Guidelines published by the Information and Communication Technologies Authority (BTK), such as the "Digital Privacy Guide for Parents," aim to raise public awareness about digital safety and children's privacy. However, these materials are generally designed for a universal user profile and do not specifically cater to the unique needs of children with disabilities.

Moreover, BTK's content filtering and monitoring practices warrant careful scrutiny to ensure they do not inadvertently restrict children's freedom of expression. (Information and Communication Technologies Authority, 2021).

In summary, while there are substantial legal and policy frameworks at both international and national levels aimed at protecting children's rights in digital environments, structural gaps persist in their implementation.

Field studies in İzmir have highlighted these gaps, manifesting as limited access to digital content, lack of representation, and insufficient safe participation opportunities for children with disabilities. Therefore, it is imperative to operationalize these normative instruments not merely as legal texts but as actionable measures that positively impact children's daily digital experiences.

Developing a comprehensive approach to digital children's rights requires policies that consider technical, pedagogical, and socio-cultural factors, center the specific needs of children with disabilities, and actively support their participation in decision-making processes as autonomous individuals.

2. METHODOLOGICAL APPROACH

The framework of the research is based on a multi-layered approach aimed at understanding the inequalities experienced by children with disabilities in digital environments through both quantitative and qualitative dimensions. Within the scope of a mixed-methods strategy, the research combined quantitative tools, which allow for the analysis of large-scale patterns, with qualitative methods that reveal the contextual and emotional dimensions of lived experiences. This methodological choice made it possible to uncover not only statistical gaps in children's access to digital rights but also how these disparities are reflected in their daily lives.

The quantitative component of the study aimed to gather data on areas such as access to digital devices among children with disabilities, types of devices used, availability of internet connectivity, frequency of exposure to digital content, and levels of participation in social media and communication platforms. Additionally, critical areas such as awareness of digital privacy, experiences of online bullying, and perceptions of freedom of expression in digital spaces were also assessed. In this context, the quantitative dataset enabled a systematic analysis of how children with disabilities encounter digital inequalities.

The qualitative component of the research focused on revealing the personal and structural dimensions of digital exclusion. Semi-structured interviews addressed the digital experiences of children, parental attitudes, observations from teachers, and practices of public institutions. These interviews highlighted that digital inequality is not limited to issues of physical access; it is also shaped by multidimensional factors such as social prejudice, lack of pedagogical support, and insufficient institutional awareness.

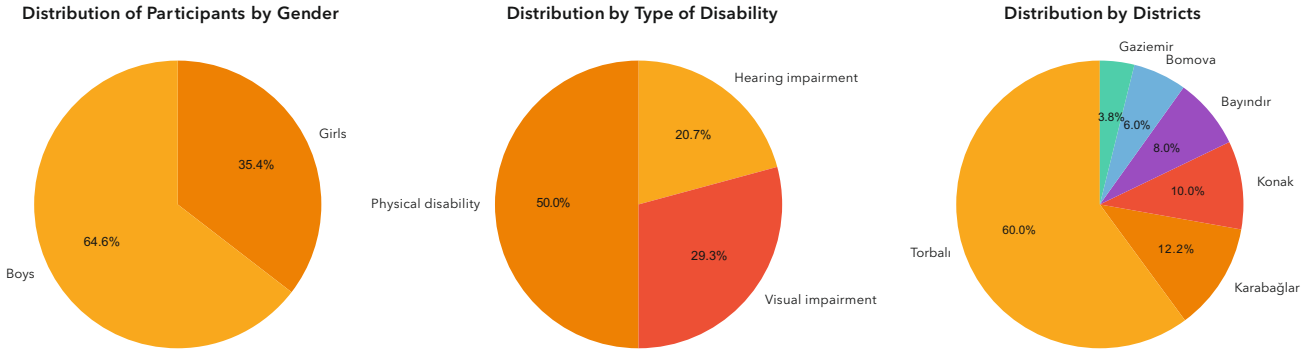
Importantly, the direct inclusion of the voices of children with disabilities constituted a unique and empowering aspect of the research. Throughout the interviews, child-friendly communication techniques appropriate to the children's developmental levels were used, and safe environments were provided to ensure that they could freely express themselves. Their narratives were approached with sensitivity—not merely as "data," but as central perspectives shaping the research.

Through this holistic approach, the study not only mapped inequalities in access to digital technologies on a quantitative level but also analyzed the social, cultural, and emotional reflections of these disparities from a qualitative perspective. As a result, digital exclusion has been conceptualized not merely as a matter of lacking devices or internet access, but as a broader issue of social justice and inclusion.

The study sample consisted of children with disabilities residing in the districts of Karabağlar, Bayındır, Torbalı, Bornova, Konak, and Gaziemir within the province of İzmir. These districts represent the spatial and socio-economic diversity of İzmir, encompassing both rural and urban settlement characteristics. The differences among the districts in terms of income level, service infrastructure, and educational attainment provided a basis for analyzing the spatial dynamics of digital exclusion.

This research is a non-interventional, single-center study with a cross-sectional design. It was planned using a mixed-methods approach, incorporating both quantitative and qualitative data collection techniques.

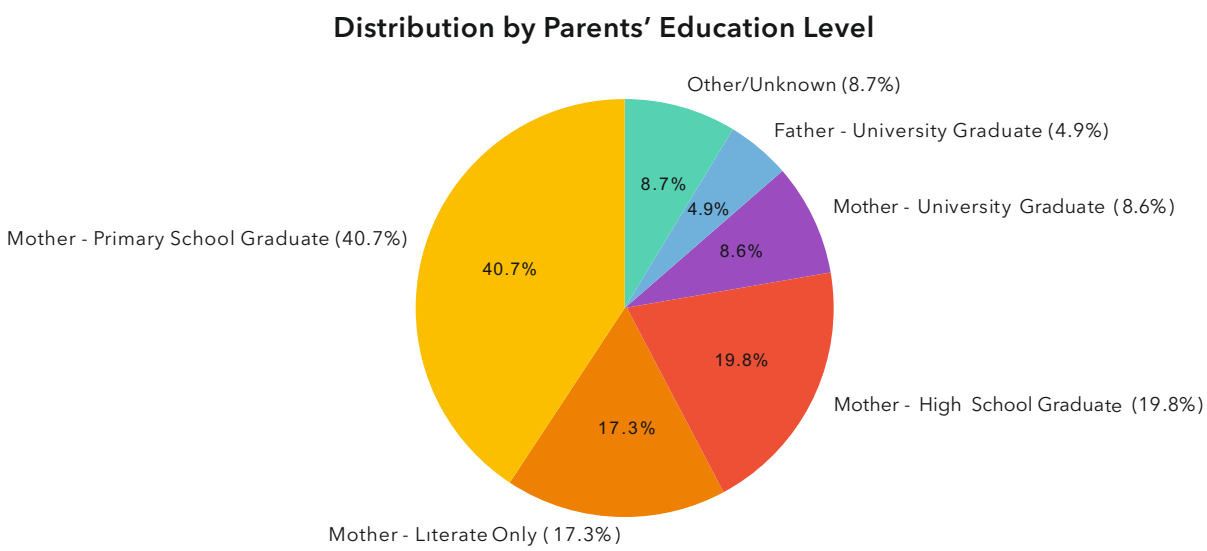
Quantitative data were obtained through structured surveys conducted with a total of 82 children with disabilities, aged between 8 and 18 (with the majority between the ages of 12 and 15), residing in the districts of Torbalı, Karabağlar, Bayındır, Bornova, Konak, and Gaziemir in İzmir. Among the participants, 64.6% were boys and 35.4% were girls. In terms of type of disability, 50% of the children had physical disabilities, 29.3% had visual impairments, and 20.7% had hearing impairments. In terms of district distribution, approximately 60% of the children resided in the Torbalı district, followed by Karabağlar, Konak, Bayındır, Bornova, and Gaziemir.



This distribution enables an understanding of the diversity of the study's spatial focus and how digital inequalities vary across local contexts. Efforts were made to ensure balanced representation across all disability groups, as well as diversity in gender and age. As a result, the study was able to conduct a detailed analysis of how digital experiences differ depending on type of disability and demographic characteristics.

The parental profile within the sample was also carefully structured. Among the mothers of participating children, 40.7% had completed primary school, 17.3% were literate but had no

formal education, 19.8% were high school graduates, and only 8.6% had a university degree. These findings suggest that support mechanisms provided by families in terms of digital literacy and access to technology are often limited. In fact, according to the study data, only 8.6% of mothers and 4.9% of fathers of participating children had a university education. The fact that 40.7% of mothers had only completed primary school and 17.3% were only literate points to significant limitations in the level of guidance and support children can receive at home regarding digital literacy. In this context, children are often required to develop the skills to recognize online risks, access reliable information, and exercise their digital rights largely through individual effort, in the absence of consistent parental support.



In addition to socio-economic diversity within the sample structure, the age groups were also represented in a balanced manner. This enabled a comparative analysis of how children of different ages interact with digital media. For instance, the use of social media and tendencies for online participation among adolescents differ significantly from those of younger children.

The data collected throughout the research process were analyzed using a combined approach of qualitative and quantitative methods. Quantitative data were subjected to descriptive statistical analysis through the SPSS software. Frequency distributions, percentage ratios, and cross-tabulations were used to determine overall trends regarding the sample's access to digital tools, patterns of use, experiences with social media, awareness of online safety, and exposure to digital risks.

In particular, the impact of demographic variables such as gender, age, type of disability, and parental education level on digital experiences was analyzed in detail. These analyses revealed that digital inequality is not only rooted in technical infrastructure but also shaped by complex social conditions.

For the qualitative data, a thematic content analysis method was employed. Semi- structured interview transcripts were categorized through a pre-coding process, and then these codes were grouped under thematic clusters to build an analysis aligned with the conceptual framework. The emerging themes included: "barriers to access to digital tools," "lack of digital literacy among families," "perceptions of online safety and privacy," and "limits to freedom of expression and participation in digital spaces."

The interview content was analyzed not only based on the participants' verbal responses, but also through qualitative cues such as silence, pauses, and emotional tone, providing a deeper perspective on children's place in the digital world. Particular attention was given to intersectional inequalities, such as the underrepresentation of girls in digital spaces, parental control, and intra-family digital role divisions, which emerged as central themes.

Through this dual-track analysis strategy, general trends derived from numerical data were integrated with personal narratives, enabling a structured yet flexible level of interpretation that aligned with the theoretical foundations of the study. The analysis adopted an approach that regarded children not merely as subjects of representation, but as active agents, treating the data as a transformative resource rather than solely informational.

Despite the carefully designed mixed-methods strategy, the study had certain limitations. First, since the fieldwork was conducted solely in the province of İzmir, the findings are context-specific and cannot be generalized to the entire population of children with disabilities in Turkey. Although diversity in disability types was considered in the sampling, the limited sample size restricted the representation of some groups. In particular, children with intellectual and pervasive developmental disabilities, as well as neurodiverse children, were not included in the study scope, leading to a lack of insight into their digital experiences.

Although the questionnaires and semi-structured interview forms were designed to be appropriate for children's age, cognitive development, and communication skills, some children had difficulty understanding abstract concepts. This limited the homogeneity of the qualitative data. Additionally, since the study was conducted within a specific time frame, the findings may not reflect long-term trends in an era of rapidly evolving digitalization.

Lastly, the research was carried out with the approval of the Non-Interventional Research Ethics Committee of İzmir Provincial Directorate of Health, affiliated with SBÜ Dr. Behçet Uz Pediatric Diseases and Surgery Training and Research Hospital, under Protocol No. GOA-108, dated 09.01.2025.

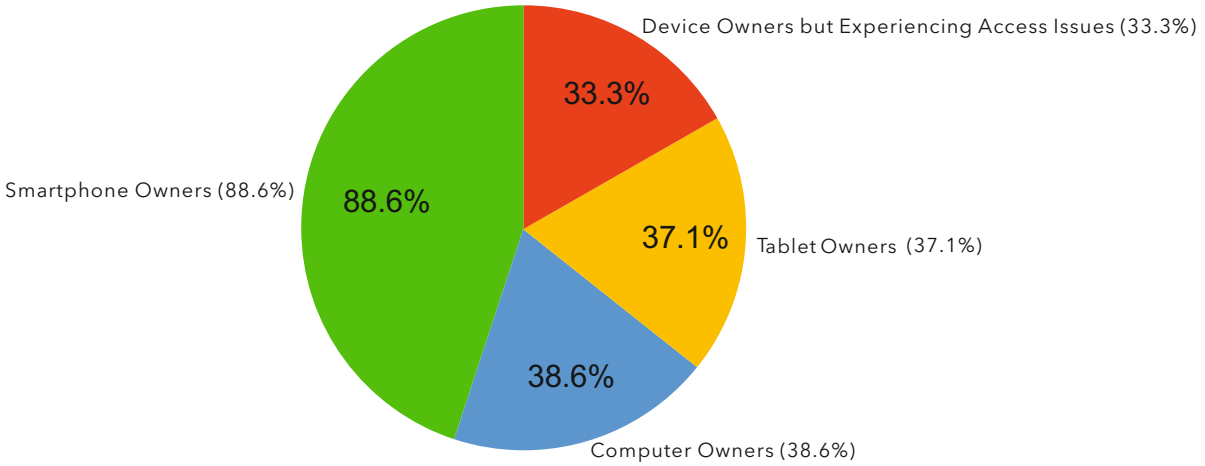
Participation was secured through written informed consent forms. Throughout the research process, the principles of confidentiality, protection of personal data, and respect for children's rights to expression and representation in digital spaces were strictly observed. All surveys were conducted anonymously. The collected data will be used solely for academic analysis and advocacy purposes. The data collection process and research practices adhered to UNICEF's 2021 "Ethical Research Involving Children" guidance, the Helsinki Declaration, and GDPR/KVKK regulations.

3. PRESENTATION OF FINDINGS AND ANALYTICAL DISCUSSION

3.1. Ownership of Digital Devices and Structural Access Barriers

According to the quantitative findings of the research, **88.6% of the participating children own a smartphone, 38.6% a computer, and 37.1% a tablet**. However, ownership rates do not provide a direct guarantee in terms of access to digital rights. Findings obtained from qualitative interviews reveal that, despite the relatively high ownership of **tablets and computers**, these devices **cannot be used effectively** because they are not suitable for the children's disabilities. For example, a significant portion of children with visual impairments reported that **screen reader software does not work on tablets or remains inadequate for Turkish content**. Children with physical disabilities stated that they had difficulty accessing tablets especially **due to the small keys on touchscreens;** while children with hearing disabilities expressed that they **could not access educational content** because of **the lack of subtitle support** in video materials. In light of these data, it is understood that a portion of children who own digital devices cannot use them effectively, and that access entails not only technical but also structural limitations. **The failure to support owned devices with hardware or software appropriate to the type of disability causes these devices to remain inaccessible**. In qualitative data, at least one in three participants drew attention to the functional incompatibilities they experienced with their devices in the digital environment. This situation points to a serious gap between ownership and access; this difference, defined in the literature as the "illusion of access", shows that digital inequality is deepening.

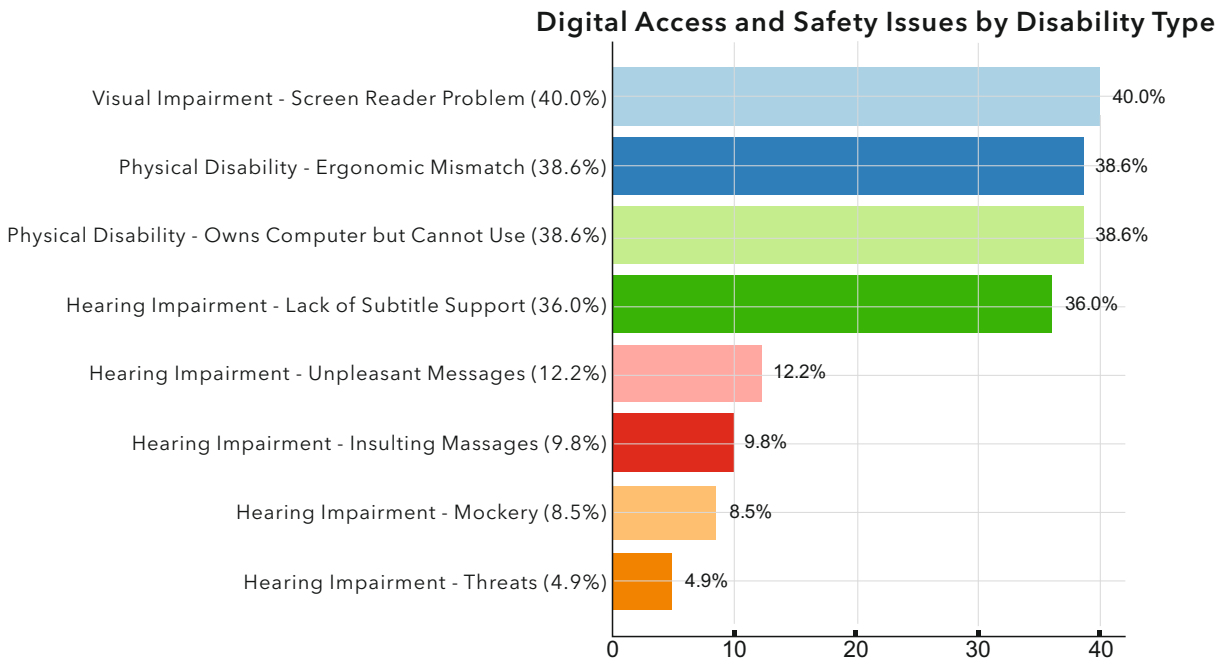
Digital Device Ownership and Access Mismatch



Qualitative interviews reveal in detail the structural barriers underlying this quantitative visibility children with **visual impairments** stated that without screen reader programs, they could not access websites, mobile applications, or digital content. However, they also noted that these tools often did not work, were outdated, or were **not sufficiently functional in Turkish content**. These interviews show that the principle of **universal accessibility is not taken into account** in the design of digital technologies, and that children with visual impairments face the risk of digital exclusion. In at least **40% of the qualitative interviews**, it was found that participants with visual impairments in particular emphasized the inadequacy of screen reader software.

Children with physical disabilities, on the other hand, revealed that the physical designs of digital tools are far from being inclusive. The difficulties they experience in using keyboards and mice demonstrate that ergonomic incompatibilities render devices non-functional. According to the survey data, only **38.6% of children who own a computer stated that they actually use it**, while in **qualitative interviews** a significant number of these children indicated that due to the lack of physical hardware and ergonomic problems, **they could not use their devices independently and effectively**. One participant stated that he needed a special accessibility device instead of a standard computer mouse, but could not obtain it due to its high cost. Another child noted that he could not access games or messaging applications **because of the small keys on the touchscreen phone**.

Children with hearing disabilities stated that most videos in digital environments **did not have subtitle support**, and **therefore they had great difficulties in accessing educational content and social media videos**. The lack of sign language support and the absence of transcription of voice commands into text make digital communication spaces limited for individuals with hearing impairments. According to the survey results, **12.2% of participants reported receiving unpleasant messages in digital environments, 9.8% encountered insulting messages, 8.5% reported being mocked, and 4.9% stated that they had been threatened**. These rates show that for children with hearing impairments there is not only a lack of access to visual content but also **insufficient support** in the areas of digital safety and protection.



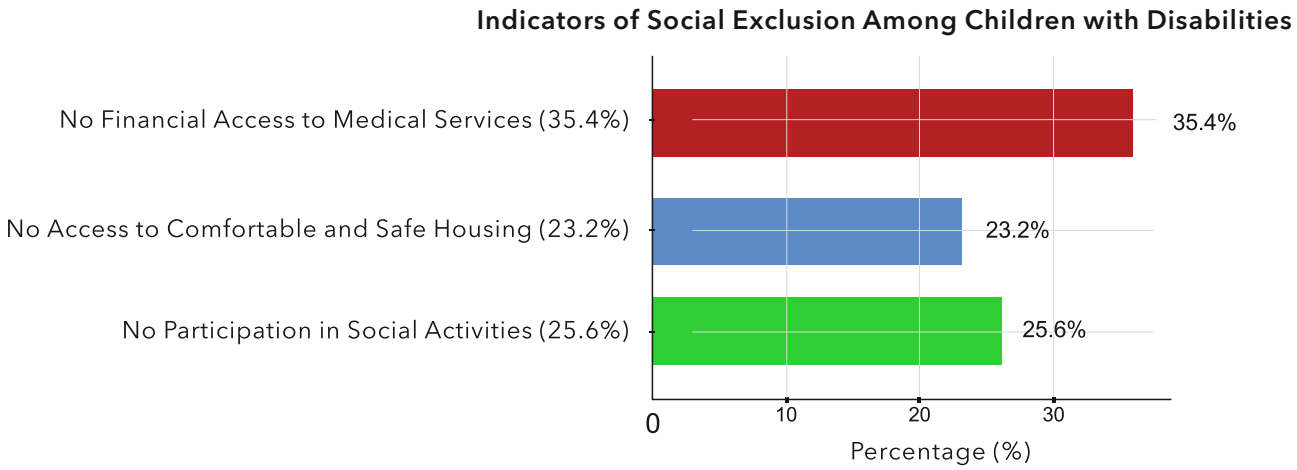
In the spatial context, the fact that the research was conducted in İzmir's districts of Karabağlar, Bayındır, Torbalı, Bornova, Gaziemir, and Konak has revealed the intra-urban inequalities of digital access. Particularly in Karabağlar, Bayındır, and Torbalı, infrastructure deficiencies, low socio-economic status, and limited internet access come to the forefront. 38% of participants stated that they did not have a fixed internet connection at home and could only connect for limited periods using their parents' mobile data. K4 illustrated how this situation hinders educational participation by saying, "The internet is often not enough. I cannot watch videos. I have to leave lessons unfinished."

The fact that similar problems were less evident in relatively more central districts such as Bornova and Konak shows that the digital divide is not only related to the rural-urban distinction but also to intra-urban socio-economic differences. This difference was also observed in access to digital content. For instance, K1 stated, "There are audiobooks but they are boring, sometimes they cut off halfway," while K2 said, "The screen reader skips some pages, sometimes it doesn't work at all," highlighting the problems of technical access linked to pedagogical quality.

The socio-economic level of families is a direct determinant of digital access capacity. Only 8.6% of mothers and 4.9% of fathers were university graduates, showing that family support for children's conscious and effective use of digital tools remains limited. Qualitative data support this picture: K2 noted, "There are free screen readers but they don't work. We cannot buy the paid ones," while K8 stated, "Our computer is old and when it breaks, we cannot afford the repair."

Some important data on the scale of social exclusion are also noteworthy:

- **35.4%** reported that their families did not have the financial means to access medical services.
- **23.2%** stated that they did not have access to comfortable and safe housing.
- **25.6%** reported that they could not participate regularly in social activities.



These indicators demonstrate the direct impact of poverty on digital access. It is understood that the sustainable use of digital technologies is not only related to owning a device, but is also closely linked to access to technical services, spare parts, software updates, and alternative support tools.

In this context, the functionality of digital access should be evaluated through four main axes:

Hardware Compatibility: Devices having technical equipment appropriate to the type of disability.
Content Accessibility: Digital content being adapted to different sensory or cognitive needs.
Infrastructural Connectivity: Provision of uninterrupted, stable, and high-speed internet access.
Economic Affordability: Sustainability of access to digital tools regardless of income level.

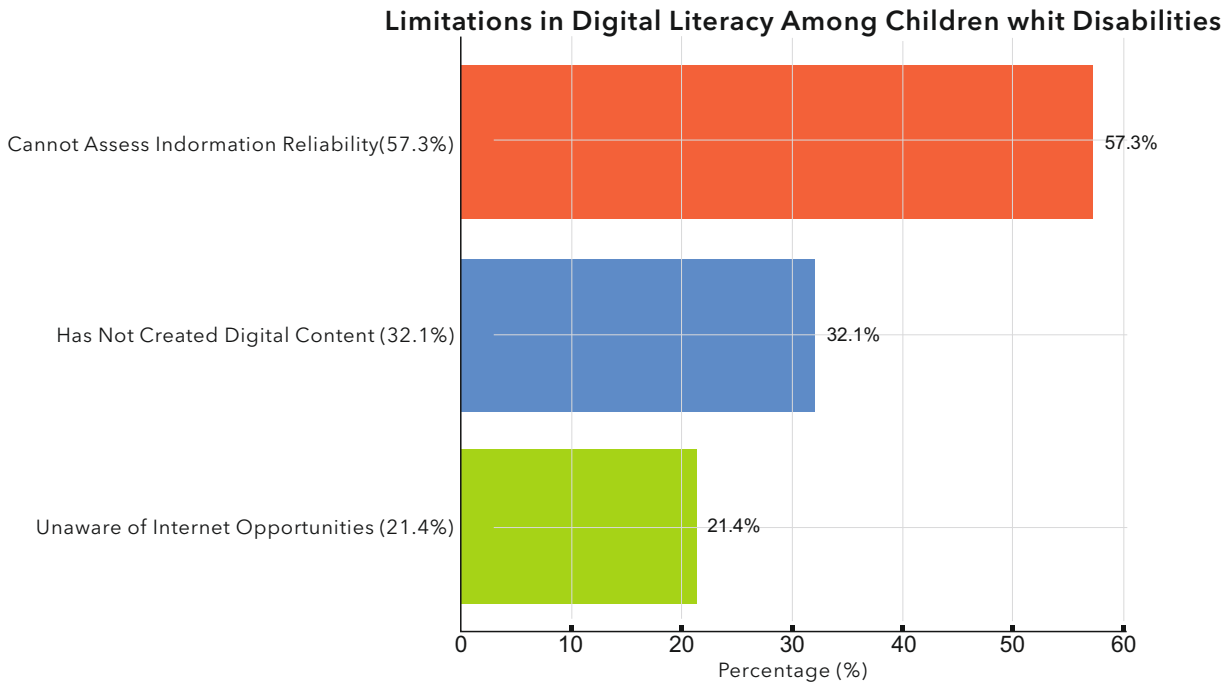
In summary, digital equality cannot be achieved solely through device ownership. Making access functional is possible only through addressing, in a holistic manner, the suitability of technological equipment to the type of disability, the accessibility of content, the sustainability of infrastructural conditions, and the presence of socio-economic support mechanisms. In this regard, digital inclusion policies to be developed should not be limited only to technical solutions; they must be based on holistic strategies centered on social justice, spatial equality, and children's digital citizenship rights.

Therefore, digital inclusion policies must go beyond technical fixes. They should be grounded in social justice, spatial equity, and the recognition of children's digital citizenship rights.

3.2. Digital Literacy, Access to Information, and the Right to Development

In today's world, where digitalization transforms all areas of life, the concept of digital literacy is not limited to the ability to use digital devices. On the contrary, it is defined as a multi-layered area of competence that includes an individual's ability to access information in digital environments, produce content, recognize and exercise online rights, protect themselves against digital threats, and manage personal data. In this context, digital literacy is the concrete equivalent of children's rights to development, expression, and participation in the digital age. Especially for children with disabilities, this competence should be regarded as a prerequisite for equal, safe, and effective participation in digital environments.

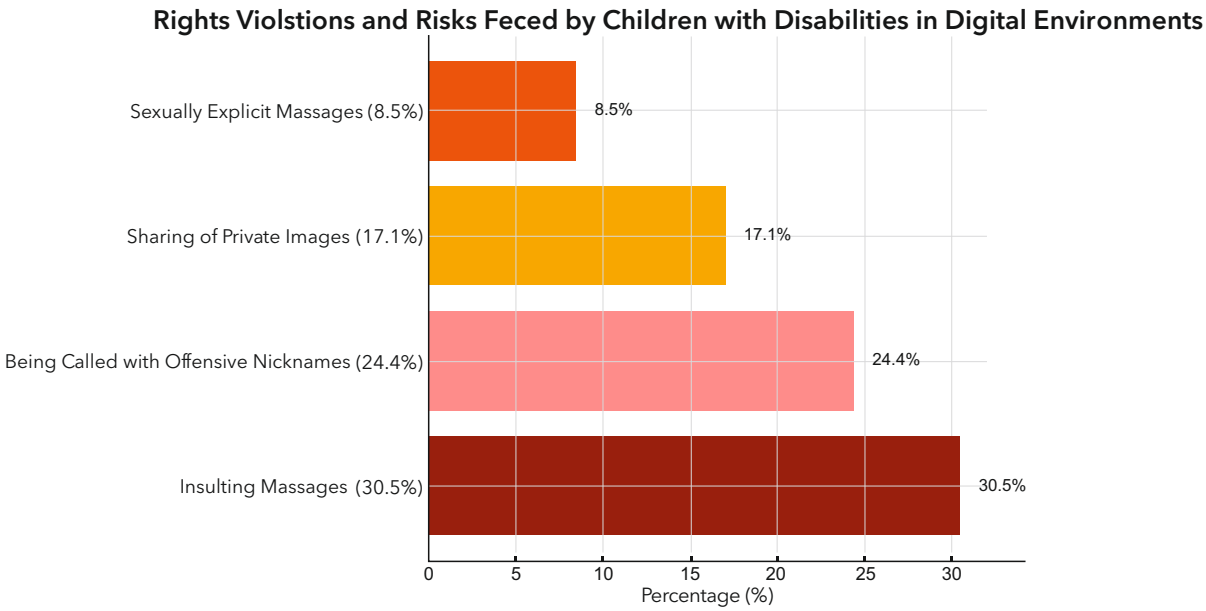
The quantitative findings of the research reveal that the digital literacy levels of children with disabilities are quite limited. 57.3% of the participants stated that they could not distinguish the reliability of the information available on the internet; 32.1% stated that they had never produced any digital content before. Likewise, 21.4% expressed that they did not have sufficient knowledge about the opportunities offered by the internet. This situation shows that children largely remain passive consumers in digital environments and that they face significant limitations in accessing information, exercising critical thinking, and using their rights to expression.



Qualitative interviews further deepen this picture. For instance, participant coded K3 (10 years old, a boy with a physical disability) stated that he used digital tools only for gaming and entertainment, thereby revealing the lack of guidance for educational or productive use. K6 (14 years old, a girl with a hearing disability), on the other hand, emphasized that she was excluded from the learning process due to the absence of subtitles or sign language support in educational videos. These statements show that the inaccessibility of digital content seriously restricts children's right to development in the digital environment.

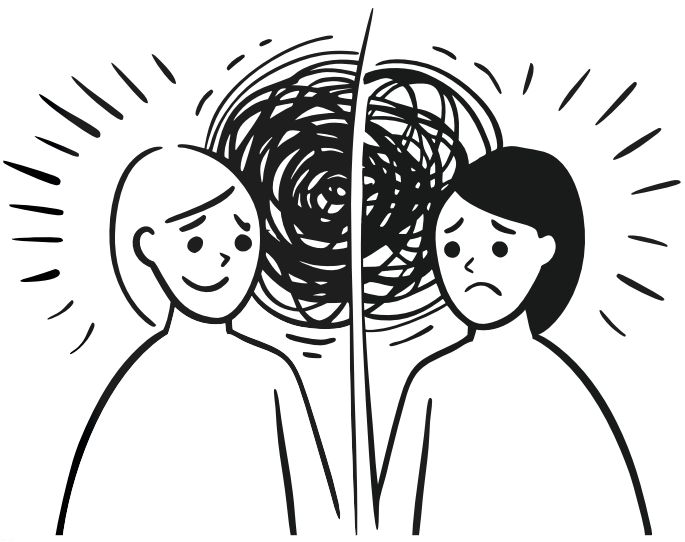
The incompatibility of digital content with the needs of children with disabilities is not only a pedagogical issue but also a rights-based one. Websites and applications that are not compatible with screen readers for children with visual impairments; videos without subtitles or sign language support for children with hearing impairments; and devices lacking ergonomic compatibility for children with physical disabilities further deepen digital inequality.

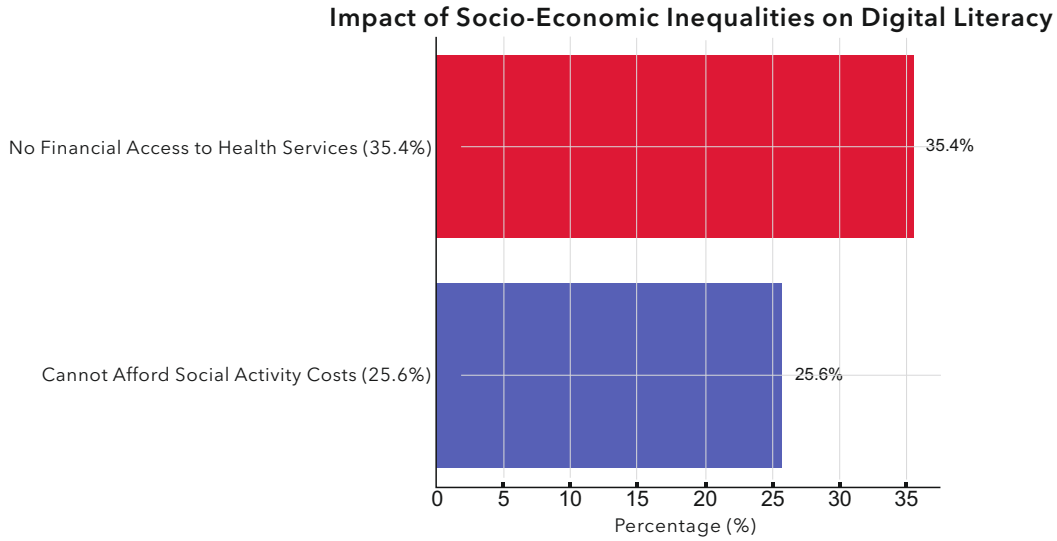
The lack of digital literacy is shaped not only by individual factors but also by structural and social ones. According to the research data, 30.5% of the participants stated that they had been exposed to insulting messages, 24.4% to being called by derogatory names, 17.1% to unauthorized sharing of their private photos or videos, and 8.5% to sexually explicit messages. These rates reveal that digital environments are not only spaces of learning and communication for children but also serious risk areas. However, despite these risks, very few children know how to defend their rights or how to make use of complaint mechanisms. Statements such as K3, *"I don't know how my information is used on the internet."*; K7, *"I want to be safe but I don't know which sites are secure."*; and K5, *"I don't know that there is a place to complain."* clearly reveal the disorientation and vulnerability experienced in digital environments.



The level of digital literacy within the family plays a critical role in the development of children's digital skills. However, the research findings show that families do not have sufficient capacity in this regard. Only 8.6% of the mothers and 4.9% of the fathers of the participating children are university graduates. The low level of parental education results in children lacking digital guidance, which leaves them alone and vulnerable in the face of digital threats. In the qualitative interviews, K5 highlighted the lack of digital guidance with the statement: *"My mother doesn't know what I should do. When I don't know either, I look at YouTube, but it's not always correct."* K8, on the other hand, stated: *"My father banned social media because he is afraid something bad might happen to us, but he doesn't teach me how to protect myself,"* emphasizing that protective but non-supportive approaches further restrict children's rights.

Socio-economic inequalities also have a determining impact on digital literacy. 35.4% of the participants stated that their families did not have the financial means to access health services, while 25.6% stated that they could not afford the costs of social activities. These data show that not only device ownership but also access to quality digital content and supportive technologies is seriously shaped by class-based determinants. Situations such as the dysfunctionality of free screen readers, the high cost of special software, or educational content being paid directly violate these children's right to access information.





In conclusion, the inadequacy experienced by children with disabilities in digital literacy skills stems not only from a lack of technical knowledge but also from the limited availability of accessible content, the weakness of family guidance mechanisms, and structural socio-economic inequalities. This constitutes a multilayered form of digital exclusion that directly affects children's rights to development and participation.

To overcome this exclusion, multi-level interventions are needed:

- Education curricula should be restructured in line with the principles of digital inclusion and universal design.
- Teachers should be provided with comprehensive in-service training on digital equality and safety.
- Digital parenting and guidance programs for families should be expanded.
- The production of digital content and accessible educational materials specifically for children with disabilities should be supported.
- Neighborhood-based digital support centers should be established at the local level, and social service systems should be equipped with mechanisms to detect and respond to digital violations.

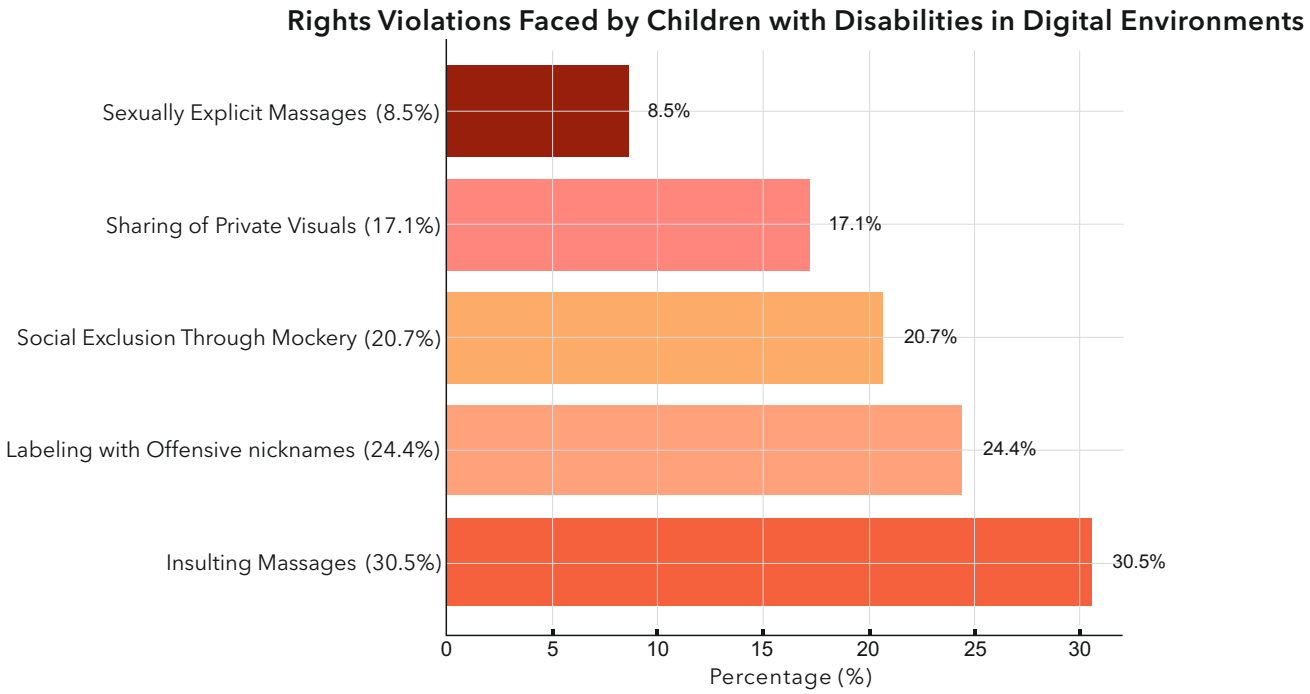
Policies to be developed with a holistic approach will pave the way not only for the strengthening of digital skills but also for ensuring the equal, safe, and active participation of children in digital environments. Digital literacy is not merely an individual skill for children; it is also a right, a protection mechanism, and a means of empowerment.

3.3. Privacy, Safety, and Experiences of Digital Violence

The threats faced by children with disabilities in digital environments are not limited to a lack of physical access or inadequate technical infrastructure. On the contrary, digital spaces are turning into platforms where invisible yet systematic rights violations occur, exploiting the emotional, cognitive, and social vulnerabilities of children with disabilities. Cyberbullying, digital violence, sexual harassment, grooming (online deception and preparation for abuse), humiliation, labeling, and social exclusion constitute the main forms of these violations.

The experiences of the children participating in the research provide important quantitative findings regarding the systematic nature and prevalence of these violations:

- 30.5% reported receiving insulting messages in digital environments,
- 24.4% reported being labeled with derogatory names or nicknames,
- 20.7% reported being mocked and excluded from games, chats, and social groups,
- 17.1% reported that their private photos or videos were shared without permission,
- 8.5% reported receiving sexually explicit messages.



These rates show that discrimination against children with disabilities in digital environments is not merely a matter of momentary individual deviations, but rather a normative mechanism of exclusion operating across social media, gaming, and communication platforms. In particular, the sharing of private visual materials and the sending of sexually explicit messages point to a profound security gap that directly violates children's digital privacy, increases the risk of sexual exploitation, and often remains invisible.

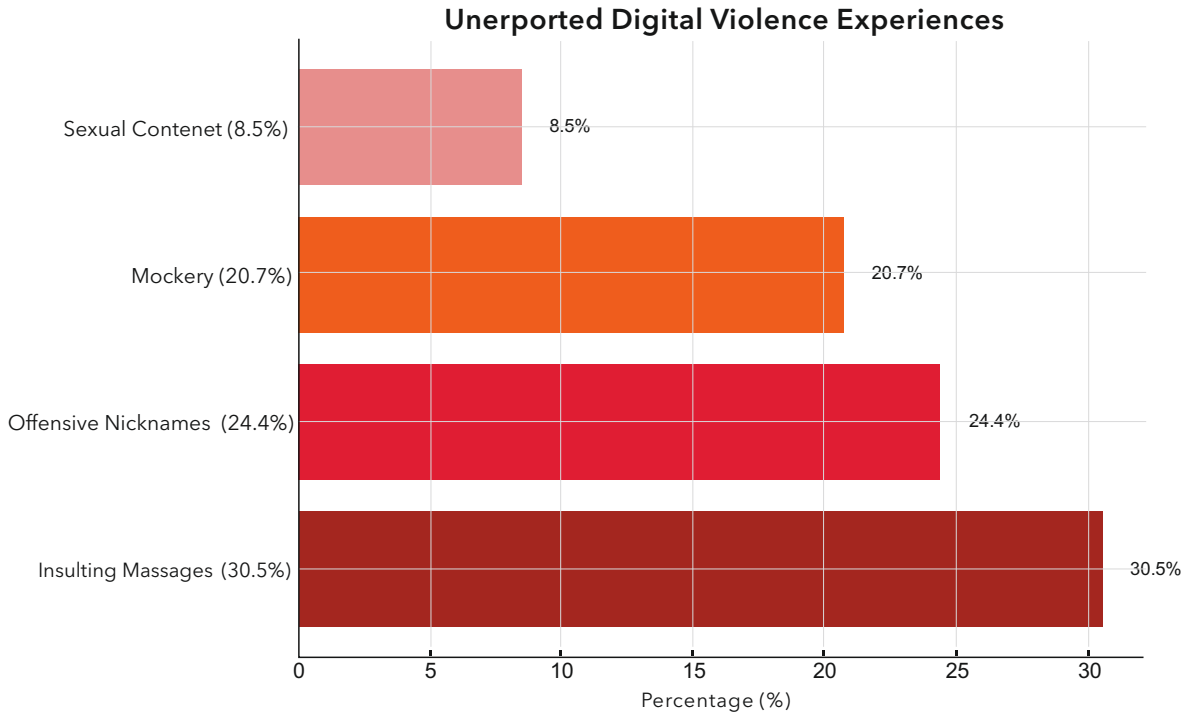
Qualitative interviews reveal the impact of these violations on children's psychological integrity:

- **K3:** *"They made fun of me in a group, I was very upset. I didn't know what to do. I quietly left the game."*
- **K5:** *"Someone wrote very bad things to me on the internet. I couldn't tell my mother, I was scared."*
- **K7:** *"They sent my video to someone else. Everyone in the game group was laughing."*

These statements show that digital violations create long-term emotional effects in children, such as shame, fear, social withdrawal, and loneliness. Digital spaces such as gaming and social media have become areas where not only access to information, but also fundamental psychosocial needs for belonging, validation, and socialization are met. Therefore, exclusion in these spaces is not merely an online experience but a fundamental social rupture that affects children's overall life satisfaction and development.

Children with disabilities are vulnerable to these violations not only at the individual level but also at the systemic level. The frequent invisibility of violence in digital environments, the complexity of complaint procedures, the limited accessibility of legal mechanisms, and the lack of knowledge about privacy further deepen this vulnerability.

In the interviews, a significant number of children stated that **they did not know what to do** when faced with digital attacks, **that they were hesitant to tell an adult**, or that they were unaware of a channel from which they could receive support. The data on this situation also overlaps with the quantitative findings. According to the survey results, most of the **participants who experienced direct forms of violence in digital environments—such as insults (30.5%), being given derogatory nicknames (24.4%), being mocked (20.7%), and receiving sexually explicit messages (8.5%)**—reported that they did not use complaint mechanisms, kept their experiences hidden, or did not know whom to approach. In the interviews, **especially participants K3, K5, and K7** stated that after such experiences they preferred to remain silent due to the emotional effects they felt, expressing feelings of shame and fear. This situation shows that the lack of digital literacy is not limited merely to an **insufficiency of technical skills; it also reflects a lack of knowledge among children regarding digital rights, complaint pathways, and legal recourse mechanisms**. For children with disabilities, **digital security, the capacity to respond to privacy violations**, and the ability to seek support remain weak—making them systemically vulnerable in digital environments.



Rights violations in digital environments are not merely the result of individual security gaps; they are the projection of multilayered structural inequalities into the digital sphere. These children face discrimination both in physical and digital public spaces; however, in digital environments this discrimination takes on a more invisible, complex, and permanent character. The solution to the problem lies not only in technical measures but also in a rights-based, protective, and participatory child policy.

To ensure the protection of children with disabilities in digital environments:

- Accessible complaint mechanisms should be developed,
- Customized content filtering systems for children in digital environments should be implemented,
- Digital rights education programs incorporating disability sensitivity should be provided for families (parents), children, and teachers,
- Inclusive digital literacy curricula that increase children's awareness of their rights to digital privacy and security should be developed.

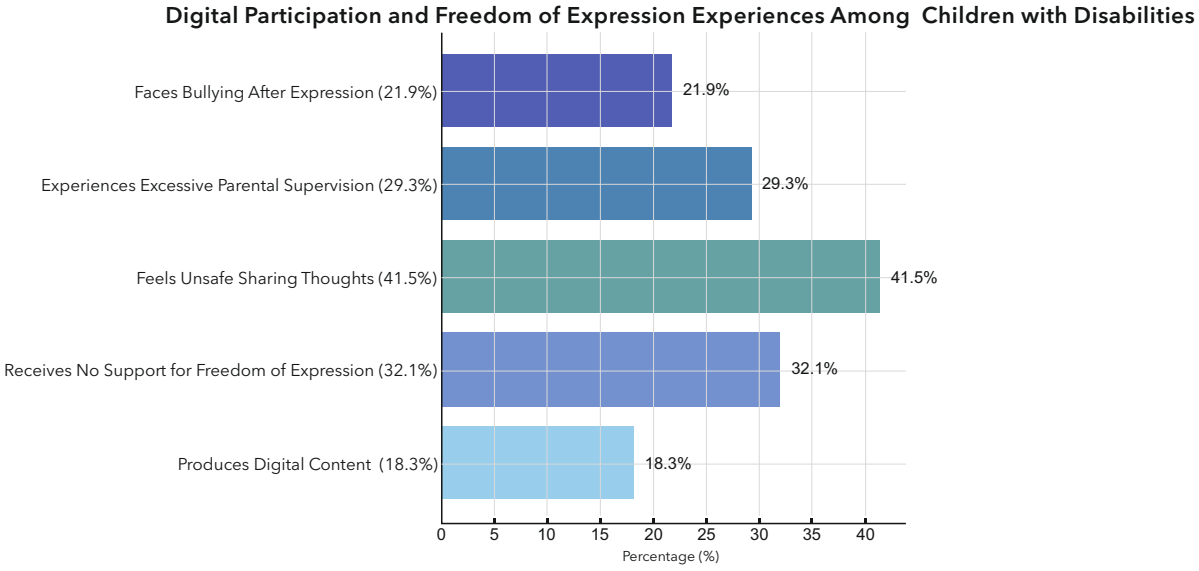
3.4. The Right to Participation and Visibility

Digitalization has not only facilitated individuals' access to information but also opened up a space in which participation and visibility rights can be exercised in new ways. In this context, digital environments are not merely platforms of consumption for children; they are also spaces of expression, representation, and social interaction. However, the research findings reveal that the digital participation rights of children with disabilities are severely restricted and that their digital visibility remains quite limited.

According to the quantitative data of the research, only 18.3% of the participants stated that they had previously produced any digital content (such as videos, blogs, or visual posts). This rate shows that children with disabilities largely remain in the position of passive consumers rather than active subjects on digital platforms. 32.1% of the participants reported that they did not receive support regarding online freedom of expression, while 41.5% stated that they felt insecure about sharing their opinions. In addition, 29.3% reported excessive parental control over social media use, and 21.9% stated that they faced online bullying when expressing their views. This situation reveals that the right to digital participation is not merely a technical matter but also a psychosocial, pedagogical, and structural issue.

Qualitative interviews reveal the reasons for this limitation more clearly. Participant K8 (13 years old, a boy with a physical disability) stated: *"I want to share something on social media, but I don't know what to write or who will see it. My father says don't share, he says it will cause problems."* K5 (11 years old, a girl with a visual disability) expressed both lack of motivation and the problem of visibility with the statement: *"I made a video but no one watched it. I gave up on showing myself."* K2 (10 years old, a boy with a hearing disability) said: *"I wanted to tell something in my own voice, but I was afraid that no one would understand,"* expressing both communication anxiety and the fear of not being understood adequately in the digital environment.

These statements show that children are unable to be visible on digital platforms not only due to a lack of technical skills but also because they lack social support, receive little guidance, and are often judged. In particular, parents' protective and prohibitive approaches restrict children's spaces for digital expression and representation, leading to the silencing of children's voices in digital environments. In the study, 52.4% of parents stated that they did not approve of their children sharing content on social media. This rate reveals how the right to digital participation is constrained by family dynamics.



These barriers are not only individual or familial but also systemic and structural. The absence of supportive curricula in educational institutions regarding online freedom of expression limits children's ability to voice their opinions in digital environments. In addition, the lack of accessible designs on social media platforms restricts the opportunities for representation of children with disabilities, making it difficult for them to engage in activities such as commenting, sharing, or producing original content.

The right to participation is not only an individual form of expression but also the right to social inclusion, representation, and involvement in decision-making processes. For children with disabilities, being able to set their own agendas in digital environments, share their experiences, and develop digital citizenship practices ensures that they gain visibility not merely as users but as rights-holding individuals. However, existing digital platforms embody norms that exclude persons with disabilities, both in terms of accessibility and in community interactions.

In this context, the following strategies should be implemented to enable children with disabilities to exercise their right to digital participation:

- Creative digital workshops should be organized to encourage content production by children with disabilities.
- Accessibility campaigns should be developed on social media and digital platforms to increase children's representation.
- Awareness-raising programs should be provided for families regarding children's right to digital participation.
- Educational curricula should integrate content that supports students' online freedom of expression and right to representation.
- Platform providers should develop technical facilitators (such as subtitles, sign language, accessible interfaces) to encourage the active participation of users with disabilities in content creation and sharing processes.

In conclusion, the visibility of children with disabilities in digital environments is not merely a matter of expression but also a fundamental indicator of the recognition and implementation of children's rights in the digital sphere. For the full realization of the right to participation, digital environments must be redesigned not only to be accessible but also to be inclusive, safe, and child-friendly. This perspective holds critical importance for the establishment of digital equality and social justice.

3.5. Perceptions of Digital Rights and Psychosocial Implications

The experiences faced by children with disabilities in the digital world reveal a multilayered structure of inequality, deepened not only by technical deprivations but also by the erosion of their psychosocial integrity, the undermining of their self-confidence, and their exclusion from a sense of digital belonging. In this context, the perception of digital rights is not limited to what can be accessed, but is directly related to the extent to which children are socially recognized, accepted, and able to exist in digital environments. Inequality in access also permeates the forms of existence in the digital sphere, taking the shape of a structure that weakens children's digital self-worth.

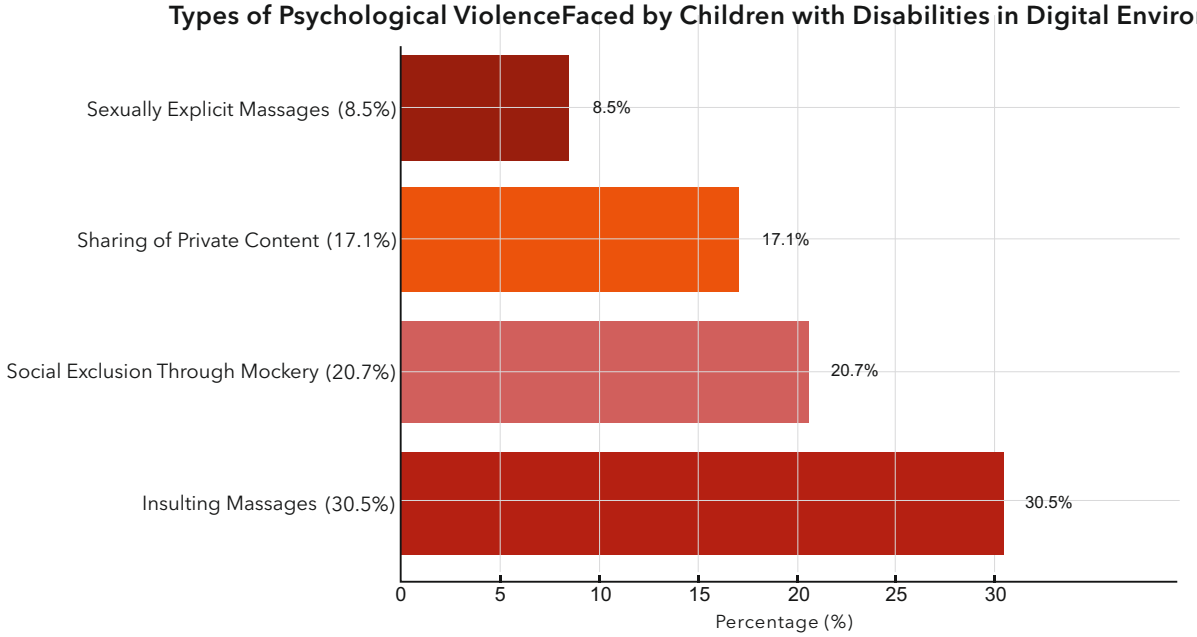
The experiences of the children who participated in the interviews show that in digital environments they face serious deprivations not only in terms of technical access but also in building social relationships, being able to express themselves, and establishing a sense of psychological security:

- **K3:** *"They made fun of me, I didn't know what to do, I was very upset."*
- **K4:** *"I felt bad, I left the game."*
- **K7:** *"They never invite me to play, I just watch."*
- **K1:** *"By the time I finish writing, it's already over, they don't wait for me."*

Such statements reveal that children are struggling to exist in digital environments where they are not only technically unable to access but also emotionally unable to be included. This situation increases feelings of loneliness, inadequacy, and invisibility, weakens children's social bonds, and makes their psychological resilience fragile.

30.5% of the children participating in the research reported receiving insulting messages in digital environments, 20.7% stated they were mocked and excluded from social groups, 17.1% reported that their private content was shared without permission, and 8.5% reported being subjected to sexually explicit messages. These rates demonstrate both the prevalence of psychological violence encountered online and its tendency to become normalized. Moreover, the fact that most of these violations were "not reported" by children is related not only to digital safety but also to the lack of psychological resilience and social support systems.

Types of Psychological ViolenceFaced by Children with Disabilities in Digital Environments



Digital environments have become spaces where today's children build friendships, develop group identity, and seek social acceptance. Therefore, being excluded from digital environments is not merely an online experience; it means the invisibilization of a child's social existence. Most of the participating children stated that they found themselves in a "spectator" position in these spaces, unable to participate actively and experiencing exclusion. In this context, the encounter of children with hearing and visual disabilities with inappropriate technological content (videos without subtitles, platforms incompatible with screen readers) constitutes serious barriers to their becoming active digital citizens.

The exclusion experienced by children with disabilities in digital environments is not only a matter of technological access. This exclusion is a multidimensional structural problem that directly affects psychosocial processes such as identity formation, social belonging, self-confidence, and emotional security.

Therefore:

- Digital environments should be re-envisioned not only as spaces for access to information but also as structures where emotional security, social participation, and identity development can be ensured.
- Inclusive digital designs should facilitate children's active participation and enable them to be not only spectators but also producers.
- Psychosocial support mechanisms should be restructured with an early intervention and empowerment perspective for children experiencing digital exclusion.

In line with these recommendations, digital environments can be transformed into a holistic child rights domain that encompasses not only cognitive but also emotional and social development.

CONCLUSION

This study comprehensively evaluates the digital experiences of children with disabilities through both qualitative and quantitative data, addressing the impacts of digitalization on children's rights from a disability perspective. The fieldwork, conducted across six districts of İzmir, demonstrates that owning digital devices is not sufficient for meaningful, safe, and equitable use. The findings reveal that digital participation is not only dependent on technical equipment but is also directly related to **accessibility, content compatibility, pedagogical support, digital literacy, and social support networks**.

Although the majority of children own smartphones, they are unable to fully engage with digital content due to the lack of disability-specific software (such as non-functional screen readers, lack of subtitles, and ergonomic mismatches). Qualitative interviews indicate that children face exclusion not only on a technical level but also **psychosocially**, encountering risks such as digital violence, cyberbullying, privacy violations, and social stigmatization. This highlights that the digital environment is not only a space for accessing information but also a critical domain for emotional security, social belonging, and the right to development.

Another significant finding of the study is that digital inequality has both spatial and socio- economic dimensions. In districts such as Torbalı, Karabağlar, and Bayındır, infrastructure deficiencies, low levels of parental education, and limited household income deepen digital exclusion and hinder continuous and quality access to digital environments for children. The low level of digital literacy among families prevents them from providing digital guidance and protective support, leaving children disoriented and vulnerable to risks.

Based on the data collected, this study demonstrates that access to digital rights for children with disabilities is **not merely a matter of individual capacity or technical ownership but should instead be understood as a multidimensional and structural issue of inequality**. The protection, participation, and empowerment of children in digital environments require **the development of rights-based, inclusive, accessible, and sustainable policy frameworks**.

In this context, ensuring that the rights of children with disabilities in the digital world are visible, operational, and equitable must be seen not only as a result of technological advancement but also as the outcome of holistic, **child rights-based social policies**—and structural transformations aligned with this vision must be implemented without delay.

POLICY AND PRACTICE RECOMMENDATIONS

Based on the research findings, the following multidimensional policy and practice recommendations have been developed to strengthen access to digital rights and ensure protection against digital violence for children with disabilities:

1. Accessible Digital Design and Technological Adaptation

- Digital content and platforms must be developed in line with universal design principles and made mandatory.
- For visually impaired children, tools fully compatible with screen readers; for hearing-impaired children, content with subtitles and sign language support; and for physically disa bled children, ergonomically accessible digital tools should be widely implemented.
- Accessibility criteria must be established as binding standards for public procurement and educational content.

2. Combating Digital Violence and Protective Mechanisms

- Special protection policies and accessible complaint systems should be established to address digital violence, harassment, and privacy violations targeting children with disabilities.
- Awareness programs on combating digital violence should be developed for parents, teachers, and children, and guidance services should be strengthened.
- Child-friendly, anonymous, and accessible online reporting platforms designed for use by children with disabilities should be implemented.
- To enhance access to justice for children with disabilities facing violations of their rights in digital environments, bar associations' capacity to provide free legal support should be increased, and such support should be offered in accessible formats.
- The Turkish Human Rights and Equality Institution, the Ombudsman Institution, and relevant national monitoring mechanisms should develop child- and disability-friendly application procedures to ensure effective, safe, and accessible complaint channels. In this context, monitoring processes should be conducted in accordance with Article 33 of the United Nations Convention on the Rights of Persons with Disabilities, in a participatory manner that considers the views of children with disabilities and is supported by independent structures.

3. Strengthening Digital Literacy

- The national education curriculum should integrate modules on digital rights, safety, and media literacy tailored for children with disabilities.
- Teachers and guidance counselors should receive in-service training on delivering accessible digital content and providing support to children with disabilities.
- Digital parenting and guidance workshops for families should be expanded.

4.Reducing Local Inequalities and Investing in Infrastructure

- Digital access opportunities must be increased in disadvantaged areas; cooperation with local governments and NGOs is essential to reduce intra-urban digital divides.
- Municipalities should establish neighborhood-based digital support centers to provide guidance services to children with disabilities and their families.
- Social service systems should update their risk assessment and referral mechanisms to include digital access deprivation.

5.Data Production, Monitoring, and Rights-Based Evaluation

- Regular data collection on the digital experiences of children with disabilities should be conducted, disaggregated by age, gender, type of disability, and spatial factors.
- The Turkish Statistical Institute (TÜİK) and the Information and Communication Technologies Authority (BTK) should include disability-disaggregated data in digital inclusion indicators.
- Policy-making processes should be carried out with the participation of children, and strategies on digital rights should be shaped based on children's perspectives.

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TABLES AND FIGURES

Table 1. Demographic Characteristics of Children

		Frequency	Percentage
Type of Disability	Physical Disability	41	50,0
	Visual Impairment	24	29,3
	Hearing Impairment	17	20,7
Gender	Female	29	35,4
	Male	53	64,6
	Literate	14	17,3
Mother's Education Level	Primary School	33	40,7
	Middle School	11	13,6
	High School	16	19,8
	University	7	8,6
	Literate	10	12,2
Father's Education Level	Primary School	21	25,6
	Middle School	22	26,8
	High School	25	30,5
	University	4	4,9
Owned Digital Devices	Smartphone	62	88,6
	Computer	27	38,6
	Tablet	26	37,1

	Min.	Mak.	Ort.	SS
Age	8,00	18,00	13,23	1,98
Age of First Exposure to Digital Media	5,00	15,00	9,67	2,47

Table 2. Children's Experiences in Digital Environments

	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Someone opened an email account using my name (MSN, Yahoo, Gmail, Mynet, etc.).	1	1,2	81	98,8
Someone secretly opened a social media account in my name (Facebook, Twitter, etc.).	2	2,4	80	97,6
Friends or others used my personal information online.	1	1,2	81	98,8
Friends or others sent me virus-infected emails.	9	11,0	73	89,0
Friends or others used my passwords without my knowledge.	3	3,7	79	96,3
Friends or others attempted to secretly access my email accounts using my passwords.	3	3,7	79	96,3
Someone tried to log into my games using my passwords.	9	11,0	73	89,0
I was threatened online.	4	4,9	78	95,1
I received unpleasant messages online.	10	12,2	72	87,8
My photos were published on websites without my permission.			82	100,0
My photos were emailed to others without my permission.	1	1,2	81	98,8
Unpleasant news about me was published online.	2	2,4	80	97,6
False rumors about me were spread online.	2	2,4	80	97,6
I received insulting messages online.	8	9,8	74	90,2
I was mocked online.	7	8,5	75	91,5
I was called bad names or nicknames online.	6	7,3	76	92,7
People said things to me online or by phone that they wouldn't say to my face.	7	8,5	75	91,5
I received threatening messages via mobile phone.	4	4,9	78	95,1
My photos were sent to others via mobile phone without my consent.			82	100,0
I received disturbing messages via mobile phone.	7	8,5	75	91,5
False rumors about me were spread via mobile phone.	1	1,2	81	98,8
I received insulting messages via mobile phone.	2	2,4	80	97,6
I was mocked via mobile phone.	5	6,1	77	93,9
I received disturbing phone calls.	8	9,8	74	90,2

Table 3. Interrelation Between Social Exclusion and Access to Digital Rights

	Never		Rarely		Sometimes		Often		Always	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
My family does not have enough money to buy me new clothes.	23	28,0	30	36,6	17	20,7	8	9,8	4	4,9
My family does not have enough money to buy my favorite food.	21	25,6	30	36,6	18	22,0	9	11,0	4	4,9
My family does not have enough money to cover the cost of social (entertainment) activities.	21	25,6	29	35,4	21	25,6	8	9,8	3	3,7
My family does not have enough money to get medical care.	29	35,4	27	32,9	13	15,9	9	11,0	4	4,9
My family does not have enough money to afford a comfortable home.	19	23,2	22	26,8	10	12,2	12	14,6	19	23,2
I can easily go to the hospital when I am sick.	8	9,8	10	12,2	11	13,4	13	15,9	40	48,8
I can easily access child-friendly social services.	8	9,8	15	18,3	19	23,2	11	13,4	29	35,4
I can easily access health services.	7	8,5	12	14,6	10	12,2	13	15,9	40	48,8
I can easily access social care services.	8	9,8	14	17,1	10	12,2	17	20,7	33	40,2
I take private lessons outside of school.	37	45,1	18	22,0	12	14,6	14	17,1	1	1,2
I participate in organized leisure activities.	20	24,4	31	37,8	13	15,9	16	19,5	2	2,4
I am part of a sports team.	47	57,3	15	18,3	8	9,8	9	11,0	3	3,7
I do sports and exercise.	23	28,0	28	34,1	7	8,5	21	25,6	3	3,7
Unpleasant news about me was published online.	4	4,9	13	15,9	10	12,2	25	30,5	30	36,6
False rumors about me were spread online.	12	14,6	28	34,1	10	12,2	13	15,9	19	23,2
Insulting messages were sent to me online.	13	15,9	21	25,6	9	11,0	14	17,1	25	30,5
I was mocked online.	8	9,8	21	25,6	20	24,4	17	20,7	16	19,5
I was called bad names or nicknames online.	12	14,6	22	26,8	11	13,4	17	20,7	20	24,4
Things that would not be said to my face are said online or via mobile phone.	8	9,8	21	25,6	16	19,5	13	15,9	24	29,3

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