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DİJİTAL EŞİTSİZLİKTE KADININ KONUMU: TÜRKİYE'DEKİ POLİTİKA VE UYGULAMALARIN DEĞERLENDİRİLMESİ

WOMEN'S POSITION IN DIGITAL INEQUALITY: AN EVALUATION OF POLICIES AND PRACTICES IN TURKEY

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ÖZ

Hızlı teknolojik gelişmeler çağında, dijitalleşme modern yaşamın bir aracı haline gelmiş ve sosyo-ekonomik manzarayı önemli ölçüde dönüştürmüştür. Dijital araçlar, ekonomik ve sosyal alanlarda sosyal eşitliği sağlamak ve politikaları iyileştirmek için gereklidir.

Bu çalışma, dijital eşitsizlikte kadınların dezavantajlı konumunu ortaya koymayı amaçlamaktadır. Bunu yaparken, öncelikle dijital eşitsizlik kavramı açıklanmakta ve dijital eşitsizliğin nedenleri belirlenmektedir. Eğitim, yaş, engellilik, sosyo-ekonomik koşullar ve coğrafya gibi dijital eşitsizliğin kaynağını oluşturan unsurların yanı sıra, toplumsal cinsiyet ile dijital eşitsizlik arasındaki ilişki de açıklanmaktadır. Toplumsal cinsiyet, diğer eşitsiz hiyerarşik yapılar gibi, dijital eşitsizlik için de etkili bir kaynaktır. Dijital eşitsizlikte toplumsal cinsiyete dayalı sorunların ele alınma yolları araştırılmalıdır. Bu nedenle önce Türkiye'deki durum sonra da dünya çapındaki sosyal politika uygulama örnekleriyle birlikte çözüm yolları sunulmakta ve uygulanan politikalar tartışılmaktadır.

Bu çalışma, kadınların dijital eşitsizliği aşmaları için somut sosyal politikalar önermektedir. Çalışmanın sonuçları, kadınlar için planlanan sosyal politikaların sadece kadınların refahını artırmakla kalmayıp, aynı zamanda toplumun genel refahını iyileştirdiğini ve toplumsal gelişim seviyesini yükselttiğini göstermektedir. Ayrıca, gelişmiş ülkelerin genellikle kadınları yüksek teknoloji sektörlerine entegre etmeye ve ileri dijital beceri eğitimine odaklandığı, gelişmekte olan ülkelerin ise temel dijital okuryazarlık ve mobil internet erişimini önceliklendirdiği anlaşılmaktadır. Bu nedenle, uygulanacak politikaların yerel sosyolojik faktörleri dikkate alması gerekmektedir. Benzer şekilde, gelişmiş ülkelerde uygulanan politikalardan, bu sorunun kamu ve sivil toplum kuruluşları ve üniversitelerle iş birliği içinde karmaşık politikalar üretilmeden ve uzun vadeli stratejiler belirlenmeden çözülmesinin imkânsız olduğu anlaşılmaktadır. Çalışma, somut politika önerileriyle sona ermektedir.

Anahtar Kelimeler: Dijitalleşme, Toplumsal Cinsiyet, Sosyal Politika, Dijital Okuryazarlık, Örnek Politikalar.

ABSTRACT

In the age of rapid technological advancements, digitalisation has become a tool of modern life and has significantly transformed the socio-economic landscape. Digital tools are essential in economic and social domains to achieve social equality and improve policies.

This study aims to reveal the disadvantaged position of women in digital inequality. In doing so, the concept of digital inequality is first explained, and the causes of digital inequality are identified. Along with the elements that constitute the source of digital inequality, such as education, age, disability, socio-economic conditions, and geography, the relationship between gender and digital inequality is elucidated. Gender, like other unequal hierarchical structures, is an effective source of digital inequality. The ways to address gender-based issues in digital inequality should be investigated. Therefore, the situation in Turkey is presented, followed by examples of social policy practices worldwide, and the implemented policies are discussed.

This study proposes concrete social policies as a significant way for women to overcome digital inequality. The results of the study indicate that social policies planned for women not only enhance the welfare of women but also improve the overall well-being of society and elevate societal development. Additionally, it is understood that while developed countries generally focus on integrating women into high-tech sectors and advanced digital skills training, developing countries prioritize basic digital literacy and mobile internet access. Therefore, the policies to be implemented must consider local sociological factors. Similarly, it is evident from the policies implemented in developed countries that solving this issue is impossible without producing complex policies in collaboration with public and civil society organizations and universities and without determining long-term strategies. The study concludes with proposed concrete policies.

Keywords: Digitalization, Gender, Social Policy, Digital Literacy, Exemplary Policies.

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1. INTRODUCTION: WHAT IS THE DIGITAL INEQUALITY?

A According to Amartya Sen, any researcher investigating an issue related to equality must answer the question "equality of what?" Consequently, Van Dijk illustrates what was studied in terms of inequality before digital inequality with the following table (Van Dijk, 2006:222):

Figure 1. Inequality According to Van Dijk

Technological	Technological Opportunities
Non- material	Life Chances, Freedom
Material	Capital (Economic, Social, Cultural) Resources
Social	Position, Power, Participation
Educational Process	Capabilities, Skills

Resource: Van Dijk, 2006:222.

Digital inequality is not only related to the lack of physical access but also to how individuals use digital tools and the benefits they derive from this usage (Ragnedda, 2017). Ragnedda conceptualizes digital inequality as a three-tiered structure and emphasizes that the third digital divide reveals differences in the social and economic benefits individuals gain from digital tools. In this context, the lack of digital capital may prevent individuals from fully benefiting from educational and employment opportunities (Ragnedda, 2020). Digital inequality refers to the disparities in access to, use of, and impact of digital technologies among different social groups (Hsieh et al., 2008). This issue stems from persistent social and economic inequalities and shows resistance to policy interventions aimed at addressing them (Mariniello, 2022). While technological advancements have the potential to improve services and communication, they have also exacerbated offline inequalities and widened the gap between different segments of society (Bonney et al., 2008). The digital divide, defined as varying levels of exposure to technological opportunities, significantly contributes to this polarization (Trappel, 2019). Efforts to address digital disadvantage through public policies have been made, but evidence suggests that these initiatives have not fundamentally transformed the situation (Hilbert, 2015). Policymakers must promote broader access to technology and ensure a more equitable distribution of its benefits to effectively combat digital inequality. Digital inequality, defined as the lack of access to and capacity to use digital tools, also contributes to gender inequality.

Digital inequality is fuelled by the digital divide. Although the Internet and information and communication technologies (ICTs) have become widespread, they are not adopted equally. Thus, the digital divide, defined by the OECD as the gap between different socioeconomic levels in access to ICTs and Internet usage, emerges (Stiakakis, Kariotellis, & Vlachopoulou, 2010). The digital divide is a phenomenon that deepens digital inequality and can produce inequalities even among those with Internet access due to differences in personal skills. The digital divide, like digital inequality, stems from similar factors. These can be listed as follows (Stiakakis, Kariotellis, & Vlachopoulou, 2010):

- Network Infrastructure: The availability and quality of physical and digital infrastructure.
- ICT Cost: The affordability of technology and internet services.

- Education: The level of formal education affects digital literacy and usage skills.
- Income: Higher income levels are associated with greater access to and use of ICTs.
- Age and Gender: Demographic factors influence ICT adoption rates.
- Support and Accessibility: The availability of technical support and ease of access.
- Location and Ethnicity: Geographical and ethnic differences affect ICT adoption.

Van Dijk's theory of digital inequality provides a significant framework for examining the societal impacts of disparities in access to digital technologies (Van Dijk, 2005). According to this approach, the digital divide is not limited to technological access alone; it also encompasses significant differences in the use of information and communication technologies and the outcomes derived from this use (Van Dijk, 2006). Van Dijk bases digital inequality on four barriers: motivation, access, skills, and usage (Van Dijk, 2006; Van Dijk, 2013).

Technological access inequality refers to the differences in individuals' physical access to digital devices and the internet. This level includes whether individuals have basic digital infrastructure such as computers, smartphones, or broadband internet. Van Dijk emphasizes that this divide is not limited to the possession of devices but also includes factors such as the quality and stability of these devices, the speed and reliability of internet connections (Van Dijk, 2005). Usage-based digital inequality concerns how frequently and in what ways individuals with access to digital technologies use these technologies. This level encompasses elements such as digital literacy, information search and processing skills, frequency of internet use, and the effective use of various digital tools and platforms. Van Dijk notes that educational level, age, socioeconomic status, and cultural factors are significant determinants in the use of digital technologies. These differences directly affect how effectively individuals can access information and communicate (Van Dijk, 2006). At the end of access and usage, skill-based inequality emerges. Inequalities in the benefits and outcomes derived from the use of digital technologies are fuelled by skills in areas such as personal development, professional opportunities, social participation, and economic advantages. Van Dijk argues that access to and effective use of digital technologies determine how successful individuals can be in social and economic life (Van Dijk, 2013). For example, individuals with high digital literacy can access better job opportunities, while those with low digital skills may be deprived of these advantages. This approach demonstrates the need to improve digital literacy and technological access; otherwise, social inequalities may further increase. It is essential to remember that digital inequality is a social issue and that significant social policies are included in the solutions. Digital inequality refers to the differences in access to, use of, and benefits from digital technologies among individuals or groups. However, the most effective way to develop policies addressing this inequality is to identify its roots. The literature on factors causing digital inequality highlights economic factors and educational levels. Additionally, geographical location, gender, age, and disability also contribute to digital inequality. It would be appropriate to explain these elements in detail.

The area where digital inequality is most pronounced is education. Digital technologies can accelerate the inclusion of children from different geographical and cultural backgrounds into education. Additionally, as seen during the COVID-19 pandemic, they can provide opportunities for remote learning, ensuring the continuity of students' development. However, periods like the pandemic are also times when the visibility and impact of digital inequality increase. Making education accessible to all children, regardless of their human and cultural capital, is only possible by eliminating or minimizing digital inequality. A report examining some of the policies and practices adopted by Organisation for Economic Co-operation and Development (OECD) countries to promote the equitable and inclusive use of digital tools in education (Gottschalk and Weise, 2023) emphasizes the importance of inclusive design and implementation of digital technologies. It also highlights the necessity for education systems to focus on capacity building, such as teacher training, and ensuring adequate resources for digital tools. Digital inequality both causes problems in accessing education and is a result of educational inadequacies. A study (Hargittai & Hinnant, 2008) found that individuals with a background of higher education levels and access to resources are more likely to use digital tools for capital-enhancing activities. This situation, known as the second-level digital divide, reveals differences among young adult internet users and reminds us that learning to use digital tools is a process that follows access to these tools (Yang, 2023).

Similar to traditional forms of inequality such as race, class, and gender, digital inequality is also fueled by economic factors. Access to education, another source of inequality, is directly related to socio-economic factors. For instance, economically disadvantaged groups and ethnic minorities often have less access to the internet (Robinson et al., 2015). Similarly, a study (Reinartz, 2016) found that socio-economically advantaged users utilize e-commerce more effectively than disadvantaged users. Additionally, it is a fact that older individuals are less familiar with digital technologies compared to younger individuals, and people with disabilities face additional challenges in accessing and using digital technologies.

The effects of geographical location, another source of digital inequality, became particularly evident during the pandemic, with individuals living in rural or remote areas having less digital access compared to those living in cities. Numerous academic studies have been conducted on digital inequality based on geographical location and age. These studies have investigated how factors such as access to technology, internet connectivity, and digital literacy vary across different regions and age groups (Hargittai, 2010; Robinson et al., 2002). Researchers have found that individuals living in rural or remote areas often face difficulties in accessing high-speed internet and digital resources compared to those in urban areas (Mossberger et al., 2003). Furthermore, older adults tend to experience digital inequality due to lower levels of digital skills and familiarity with technology compared to younger generations (DiMaggio & Hargittai, 2001). These studies highlight the importance of addressing digital inequalities based on geography and age to ensure equal access to digital tools and opportunities for all individuals.

Another factor that fuels digital inequality is gender inequality. There are significant differences in access to and use of digital technologies between women and men. Globally, while 83% of women own a mobile phone, women are 7% less likely to own a mobile phone compared to

men, and this gender gap increases to 18% in smartphone ownership (Gillwald & Partridge, 2022). In many countries, gender inequality leads to lower education levels for women and girls and less experience in digital content creation (Tyers-Chowdhury & Binder, 2021). This situation becomes more pronounced when considering the socio-economic differences of countries. The digital gender gap is much wider in low-income countries (Germain, 2023). Gender differences have also been observed in the use of digital tools, with a study showing that women generally rate their digital skills lower than men (Robinson et al., 2015). The inequality in access to digital tools and technology between men and women is based on many sociological factors such as socio-economic status, education, and cultural norms.

Digitalization significantly affects gender roles and expectations among women. Studies show that digital technology has the potential to close gender gaps by offering women economic empowerment, increased employment options, and access to information (Samanta, 2022). The blurring of traditional gender characteristics in executive roles has also been observed, with women more frequently experiencing discrimination and attributing their successes to personal qualities, while men highlight external factors (Beregovskaya et al., 2022). Digital tools enhance women's skills, boosting their confidence and empowerment, which is vital for macroeconomic growth (Nagpal & Bamezai, 2022). Despite digital advancements, gender stereotypes persist and influence student perceptions of gender roles in educational and work environments (Khanna, 2023). Overcoming these stereotypes through higher education in the digital environment is critical for social development and questioning traditional gender norms (Abdulina et al., 2021). Digital inequalities intersect with existing social inequalities, reinforcing these disparities and exacerbating disadvantages based on race, gender, and socioeconomic status (Robinson et al., 2015).

On the other hand, changes are observed in the economic and social lives of digitized women. Digitalization has opened new opportunities for women in economic participation and entrepreneurship, with digital platforms facilitating women's access to markets, financial services, and employment opportunities. Digital media and social networks significantly impact women's social interactions, relationships, and identities. Studies (Basu et al., 2022; Sreberny, 2015; Williams, 2016) show that digital platforms have become effective virtual spaces for activism, advocacy, and community building among women. Particularly, the risks and vulnerabilities associated with online spaces, such as cyberbullying, online harassment, and privacy concerns, and their disproportionate impact on women, should be analysed and prevented. Similar to how those with better digital skills and access generally have better opportunities and life outcomes (Robinson et al., 2015), digital literacy training is essential for understanding how to use digital tools effectively after gaining access to them. The subsequent section of this study will examine the impact of digitalization and the effective use of digital tools on women's socio-economic lives.

2. METHODOLOGY

This study adopts a qualitative research approach to examine the position of women in digital inequality and evaluate the policies implemented in Turkey and globally. The methodology is designed to provide an in-depth under-

standing of how gender-based digital inequalities manifest and how policy interventions address these disparities.

Data Collection: The research relies on secondary data sources, including academic literature, policy reports, and statistical data from international organizations such as the OECD, UNESCO, and the European Commission. Additionally, national reports from TURKSTAT and governmental institutions in Turkey are examined to assess the digital divide and gender-based disparities in access, skills, and digital literacy.

Data Analysis: A thematic content analysis is conducted to identify key themes related to digital inequality, gender disparities, and policy responses. By reviewing national and international policies, the study identifies patterns, best practices, and gaps in existing interventions. Furthermore, a comparative analysis is applied to contrast digital policy approaches in developed and developing countries, highlighting the specific challenges faced in Turkey.

Limitations : The study is primarily based on secondary data and does not include primary field research such as interviews or surveys. While this allows for a broad analysis of existing literature and policy frameworks, further empirical studies, including qualitative interviews with women experiencing digital inequality, would enrich the findings. Future research may benefit from incorporating mixed-method approaches to provide both statistical and experiential insights into digital gender disparities.

3. DIGITALIZATION AND WOMEN

Despite the increase in digitalization worldwide in recent years, according to the OECD's 2018 report, the digital revolution has not spread equally due to women's lower access to resources and digital skills, a phenomenon defined as the digital gender divide (Faugoo & Onaga, 2022). Digitalization affects both the economic and social lives of women. Academic studies have shown that digitalization has significant impacts on women's lives, particularly in areas such as labour force participation, healthcare services, and access to technology (Shuangshuang et al., 2023; Pierce et al., 2023; UN Women, 2023). The importance of digital access for women's empowerment and well-being, as well as its potential to reduce inequalities and improve outcomes in various sectors, is particularly emphasized (UNESCO, 2019; Ekoh et al., 2023). Therefore, social policies planned for women yield results that enhance the well-being of not only women but also the entire society, raising the level of societal development. Similarly, reducing digital inequality for women contributes to the economic development of countries and regions.

A study examining the impact of digitalization, education, fertility, and Gross Domestic Product (GDP) on Female Labor Force Participation (FLFP) in BRICS economies evaluated the relationship between digitalization and women's labour force participation while also examining the effects of education, fertility, and economic growth (Shuangshuang et al., 2023). The study applied advanced panel data analysis techniques using annual data covering the years 1990-2020 for BRICS countries. The findings of the study are as follows:

- A positive relationship has been found between digitalization and FLFP. As digitalization increases, women's labour force participation also increases. This can be interpreted as women's economic independence increasing as their access to and

proficiency with digital tools improve at every stage, from the functioning of public institutions to job search processes.

- Education and GDP play a role in increasing FLFP in the long term. Women with higher education levels positively impact the country's economic development, i.e., Gross Domestic Product, as a result of their participation in the labour force.

- The fertility rate has a negative impact on FLFP. This is a significant problem for both employers and working women. As women who give birth withdraw from the labour force and take on motherhood duties, a negative relationship between fertility and labour force participation emerges. This is a very important issue that needs to be supported by social policies.

- The short-term effects of digitalization are smaller than the long-term effects. While digitalization has rapidly yielding effects, it is necessary to look at its long-term results in terms of both economic development and its impact on women's labour force participation. This proves that the processes of women's digitalization and their digital literacy training require long-term planning.

However, women's distance from digitalization can place them at a disadvantage not only in the economic field but also in the health sector. In a study aimed at examining the impact of the digital health application MyCare on disadvantaged pregnant women at University College London Hospital (UCLH), a tertiary healthcare unit based in London, the following significant findings were obtained (Pierce et al., 2023):

- The levels of usage and engagement with MyCare among disadvantaged pregnant women were found to be low.

- A significant portion of non-users consisted of individuals with refugee/asylum seeker status, mental health issues, or victims of domestic violence.

- The primary reasons for low engagement levels included lack of motivation, limited language options, low e-literacy levels, and the complex interface of the application.

Like other forms of inequality, digital inequality is fuelled by other types of disparities such as education level, refugee/asylum seeker status, and being a victim of violence. Since individual efforts are insufficient to escape this intertwined spiral of inequalities, social policies are needed.

4. WAYS TO OVERCOME WOMEN'S DIGITAL INEQUALITY: SOCIAL POLICIES

Social policy is a set of programs and regulations implemented by the state to enhance the welfare of society. These policies generally

aim to ensure social equality and justice in fundamental areas such as health, education, housing, social security, and employment (Blakemore & Warwick-Booth, 2013). Social policy is designed and implemented to improve the living standards of individuals and families, reduce poverty, and prevent social exclusion (Alcock, 2014). The primary objectives of social policies are generally as follows (Titmuss, 1974; Blakemore & Warwick-Booth, 2013; Alcock, 2014; Dickens, 2016):

- Social Justice and Equality: Ensuring fairness in income distribution and reducing social inequalities.
- Combating Poverty: Reducing poverty and ensuring minimum living standards.
- Social Security: Ensuring protection for individuals against risks such as old age, illness, and unemployment.
- Health Services: Ensuring access to healthcare services for all citizens.
- Education: Ensuring that everyone receives quality education.
- Housing: Providing adequate and suitable housing.

It should be noted that all these definitions of social policy are general depictions in the literature, as there are significant differences in the ways these policies are implemented from country to country. The implementation of social policies is usually carried out and financed by various organs and institutions of the state. These policies are critically important for enhancing social welfare and ensuring social peace. Additionally, many values that directly affect the development levels of countries are influenced by the outcomes of social policies. The most fundamental aim of social policy is to combat inequalities, and digital inequality, following economic and social inequalities, has a transformative power influenced by these inequalities.

The most effective way to reduce digital inequality is through policy implementations created and executed in collaboration with various institutions, non-governmental organizations, and community participation. However, the policies that need to be implemented may vary depending on the source of digital inequality. A report examining some policies and practices adopted in OECD countries for the equitable and inclusive use of digital tools in education (Gottschalk and Weise, 2023) sought ways to combat digital inequality in education by following stages of governance, resource provision, capacity building, school-level interventions, monitoring, and evaluation. The same report also stated that to overcome digital inequalities in education, policies should be planned around providing equipment and devices, expanding internet access, supplying digital tools and resources, and promoting innovations in educational technology. Digital literacy goes beyond the basic skills needed to work effectively in digital environments, encompassing cognitive, motor, sociological, and emotional abilities. A study highlighted that 53% of the Ukrainian population lacks basic digital skills, leading to economic and social inequality, while another study on the Dutch population emphasized the significant impact of age and gender on the digital usage gap, underlining the evolving nature of the information society (Kryklii, 2021). According to a study by the European Commission, if women had the same level of employment in Information and Communication Technologies (ICT) as men, it is projected to contribute

approximately 9 billion Euros annually to the GDP in Europe (Berger & Frey, 2016).

Digital inequality disproportionately affects women, especially in developing countries where socio-cultural norms and economic barriers limit access to technology. Therefore, policies to address this issue must be designed according to the development level and cultural structure of the respective countries. Various social policies are implemented worldwide with different approaches in both developed and developing countries to solve this problem. For example, the European Commission's Grand Coalition for Digital Jobs project supports collaboration between educational institutions, businesses, and other public and private actors to attract students, including women, to ICT-related fields (Berger & Frey, 2016). Among the initiatives are public efforts such as regulatory guidelines for gender equality in the information society, the IV Plan for Equal Opportunities between Women and Men, and the III Strategic Plan for Effective Equality between Women and Men (Ayuso, 2023), efforts to increase internet adoption through broadband plans and legal reforms (Avilés et al., 2019), interventions to enhance gender equality in digital technologies (David, 2022), and the implementation of conditional cash transfer programs to promote women's economic empowerment and reduce gender inequality (Enríquez, 2021). These policies aim not only to provide women with access to technology but also to equip them with the agency and capacity to use technology effectively, highlighting the need for a comprehensive approach involving governments, the private sector, and civil society to achieve meaningful change in women's digital adoption and participation (Avilés, 2019). For instance, in Cuenca, Ecuador, there is a project conducted in collaboration with the María Amor Foundation to create a self-sustaining curriculum to teach digital literacy to women escaping domestic violence (Bimonte et al., 2018). In India, efforts have been made to train women entrepreneurs in digital literacy to help them sustain and grow their businesses, particularly in rural and semi-urban areas (Bhatt, 2023). Recognizing the importance of empowering Indonesian women through digital literacy, various initiatives have focused on enhancing women's capacity in technology through different competencies (Rustandi, 2022; Marini et al., 2020).

In its report, the European Commission emphasizes the importance of increasing women's participation in the digital sector and outlines the following steps taken by the European Union (European Commission, 2021):

- Digital Skills and Jobs Coalition: Aims to enhance women's digital skills through education and training.
- Women in Digital Scoreboard: Monitors women's participation in the digital economy and highlights areas that need improvement.
- EU Code Week: Encourages women and girls to participate in coding and digital activities.

According to the same report (European Commission, 2021):

- A significant gender gap persists in specialized digital skills, with only 19% of ICT specialists and approximately one-third of STEM graduates being women.

- The digital gender gap in internet user skills is closing, with 85% of women using the internet regularly compared to 87% of men.
- The EU has set a target to have 20 million ICT specialists by 2030, with gender convergence.
- Women in Finland, Sweden, Denmark, Estonia, and the Netherlands are the most digitally skilled women in Europe.

The European Union has focused on reducing the gender gap through gender-responsive policies, which have led to significant advancements in digital transformation and gender equality (Holotă and Drăgoi, 2023). The European Union examines the gender gap by analysing three indicators: the percentage of the population that has used the internet in the last twelve months, the percentage of the population that has used the internet to interact with public authorities, and the percentage of the population that has used the internet for online banking and e-commerce. Additionally, under the EU's Gender Action Plan (GAP) III, Feminist Digital Development (FDD) has been implemented to empower and include women (Sladkova & Bashir, 2022).

Both developed and developing countries recognize the critical role of digital inclusion in women's empowerment and economic development. However, strategies differ significantly. Developed countries typically focus on integrating women into high-tech sectors and advanced digital skills training, while developing countries prioritize basic digital literacy and mobile internet access. Both approaches emphasize the importance of multi-stakeholder collaborations involving governments, the private sector, and civil society to create sustainable and effective solutions.

5. EFFORTS TO OVERCOME DIGITAL INEQUALITY IN TURKEY: THE POSITION OF WOMEN IN THE DIGITAL FIELD AND EXAMPLES OF IMPLEMENTATION

The position of women in digital inequality in Turkey can be understood by evaluating the overall picture of digital inequality in the country. Digitalization trends in Turkey have shown significant changes with the rapid development and widespread adoption of technology. These trends indicate an increase in digitalization at both individual and institutional levels, and digital technologies have become an integral part of daily life. According to the data from the Turkish Statistical Institute (TURKSTAT, 2023);

- In 2023, the proportion of households with access to the Internet at home was 95.5%;
- The Internet usage rate among individuals aged 16-74 was 87.1%;
- The proportion of individuals who used the websites and applications of official authorities for private purposes and benefited from public services online in the last 12 months was 73.9%;
- The proportion of individuals who purchased or ordered goods or services online (e-commerce)

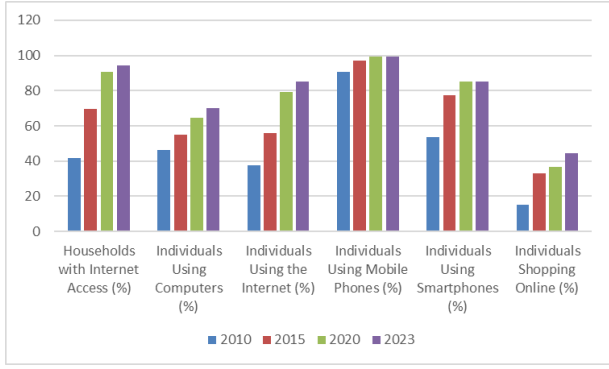
for private use in the last 12 months was 49.5%;

- The proportion of individuals who engaged in learning activities for educational, professional, or private purposes via the Internet in the last 3 months was 18.7%;

- According to the same report, the most used social media and messaging applications by individuals were WhatsApp at 84.9%, YouTube at 69.0%, and Instagram at 61.4%.

The increase in internet and mobile usage, the rise of e-commerce, digital payment systems, digital education and remote work, social media usage and content creation, digital health systems, smart transportation systems, and digitalization trends in environmental and energy management are significant indicators. These trends demonstrate that digitalization is rapidly advancing in Turkey and that digital technologies have become an indispensable part of daily life. These developments support individuals and businesses in adapting to the digital world and foster the growth of the digital economy. The digitalization process since 2010 can be observed through the following data:

Figure 2. Household Information Technology (IT) Usage Survey, 2023



Resource: TurkStat, https://data.tuik.gov.tr/Bulten/Index?p=Hanehalki-Bilisim-Teknolojileri-(BT)-Kullanim-Arastirmasi-2023-49407

Despite the observed increase in digitalization data over the years, there are significant differences in access to digital tools between men and women, as well as due to socio-economic conditions.

Figure 3. TurkStat, Survey on Information and Communication Technology (ICT) Usage in Households and by Individuals, 2023

Proportion of individuals using internet in doing interaction with public authorities and activities in the last 12 months for private purpose by sex, 2022, 2023

(%)

	Total		Male		Female	
Usage of e-government services	2022	2023	2022	2023	2022	2023
Contact/interact with public authorities/public services over the Internet for private purposes	**68,7**	**73,9**	**76,6**	**81,3**	**60,8**	**66,4**
Activities						
	64,4	**69,6**	72,4	77,8	56,4	61,4
Accessed information from public databases or registers	**22,0**	**24,0**	27,0	29,1	17,0	19,0
Obtaining information from websites or apps	**44,1**	**48,2**	50,3	54,6	37,9	41,8
Downloading/printing official forms	**32,4**	**30,6**	38,1	35,8	26,6	25,4
Making any appointment or reservation via a website or app with public authorities or public services	**48,5**	**51,3**	53,4	54,9	43,6	47,7
Receiving any official communication/document by public authorities via own account on an website or app	-	**18,4**	-	23,8	-	13,0
Submitting your tax declaration via a website or app for private purpose	**7,2**	**7,8**	10,0	10,5	4,5	5,2
Requesting official documents or certificates (e.g. graduation, birth, marriage, divorce, death, residence certificates, police or criminal records)	**21,2**	**24,7**	26,4	29,8	16,0	19,5
Requesting benefits or entitlements (e.g. pension, unemployment, child allowance, enrolment in schools, universities)	**9,3**	**11,9**	10,8	13,1	7,9	10,7
Making other requests, claims or complaints (e.g. report theft to the police, launch a legal complaint, request legal aid, initiate a civil claim procedure in front of a court)	**4,9**	**5,6**	6,3	6,8	3,5	4,4

TurkStat, Survey on Information and Communication Technology (ICT) Usage in Households and by Individuals, 2023

Since more than one option can be chosen, total may not be 100.

As seen in Figure 3, the usage rates of digital tools among women are lower compared to men. There is a significant difference, particularly in the rates of requesting transactions with public institutions via the Internet. Digital inequality in Turkey, as in many developing countries, is influenced by factors such as infrastructure, geography, socio-economic conditions, and demographic inequalities. Research highlights

that despite increasing internet penetration rates, inequalities in device access, internet access, and internet usage persist, with significant differences among gender, age, income, education, and regional groups (Bozan & Treré, 2023; Genç & Dülger, 2023). The country's digital transformation offers significant opportunities, but its full potential depends on the widespread adoption of digital technologies and the effective availability of ICT (Dalgic-Tetikol, 2022). As the tools used in daily life become more technological and digital, an increase in the level of development is observed (Gün, 2023). Therefore, individuals' internet access in their daily lives is an important datum:

Figure 4. The proportion of individuals using Internet by sex, 2022, 2023

Proportion of individuals using internet by sex, 2022, 2023

(%)

	Total		Male		Female	
Latest usage	2022	2023	2022	2023	2022	2023
Internet users	**85,0**	**87,1**	**89,1**	**90,9**	**80,9**	**83,3**
Within the last 3 months	**83,4**	**86,0**	87,6	89,8	79,3	82,1
Between 3 months and a year ago	**0,8**	**0,5**	0,7	0,4	0,8	0,6
More than one year ago	**0,8**	**0,6**	0,8	0,7	0,8	0,6
Never used it	**15,0**	**12,9**	10,9	9,1	19,1	16,7

TurkStat, Survey on Information and Communication Technology (ICT) Usage in Households and by Individuals, 2023

In daily internet access, a usage rate disadvantageous to women is observed between men and women. Undoubtedly, there are multiple factors contributing to this. For instance, a consistent vision regarding ICT policies is required to promote broadband adoption among target groups in internet access (Özsoy et al., 2020). Similarly, one of the factors affecting the position of women in digital inequality is age. A field study conducted with 377 elderly women in southwestern Turkey (Adnan & Özbek, 2023) revealed that the challenges faced by elderly women related to technology use include dependency, security/fear, and stoicism, and that their digital competence levels can be improved through education. In Turkey, women are increasingly using digital platforms to combat patriarchy, violence against women, and femicides, with the digital space promoting communication and solidarity among women. A study (Comeforo & Görgülü, 2022) highlighted the successes and challenges of hashtag activism through 3,361 English tweets, 22,998 Turkish tweets, and semi-structured interviews with 26 women using hashtags on Instagram. Similarly, hashtags such as #ChallengeAccepted and #IstanbulConventionSavesLives have been effective in raising awareness about violence against women and demanding the implementation of the Istanbul Convention, demonstrating the power of digital activism in empowering individuals and collective movements (Dinçer, 2023). However, the increasing control of the government over digital spaces limits the capacity of activists in the digital realm to create significant social changes.

Policy-level efforts and initiatives for the digitalization of women in Turkey are conducted through various government programs, strategic documents, and international collaborations. Some important policies and initiatives in this regard include:

The ongoing efforts for a new Digital Government Strategy, which is a continuation of the 2015-2018 Information Society Strategy and Action Plan and the 2016-2019 National e-Government Strategy and Action Plan. The goals of the new Digital Government Strategy include promoting user-centered approaches, encouraging continuous learning and development opportunities for public officials, strengthening digital infrastructure to support the delivery of high-quality digital services, and fostering public trust by promoting ethics, transparency, privacy, and security in the reliable management and use of data in the

public sector (Digital Government Strategy, 2023).

Within the scope of the Women's Empowerment Strategy Document and Action Plan (2018-2023), strategies are being developed based on education, health, economy, participation in decision-making mechanisms, and media policies. Accordingly, important strategies have been formulated to facilitate women's participation in social and economic life by increasing not only their literacy rates but also their qualified literacy, collecting data and conducting research on gender equality in education, developing women's entrepreneurship, and especially promoting the use of information and communication technologies to strengthen women's economic positions, and increasing women's representation in decision-making processes. In addition, it is aimed to raise awareness by ensuring that women can use communication tools and media efficiently and critically, and to increase women's participation in digital literacy training (Women's Empowerment Strategy Document and Action Plan, 2024).

Additionally, it is observed that non-governmental organizations also contribute to the field of digitalization. The Digital Turkey Platform, a member of Digital Europe, and the Turkish Informatics Foundation, which examines the impacts of new technologies on social and economic life and produces projects with its stakeholders, contribute to the digitalization of society. Europe aims to become a "Digital Powerhouse" by 2030 and intends to lead with a highly skilled population and strong European businesses, supported by an innovative, inclusive, and secure digital democracy (Europe 2030). This goal is also stated in the Digital Europe manifesto. As a result, cooperation projects aiming to increase women's participation in the digitalization process are being carried out between the European Union and Turkey. These projects include digital skills training, entrepreneurship support, and digital literacy programs. Finally, the Women in Technology Association aims to increase the number of female experts, who are few and motivation in the technology sector, by focusing on education, sustainability, and research & measurement strategies, thereby integrating women into employment and production in technology (Women in Technology Association, 2024).

CONCLUSION AND RECOMMENDATIONS

Digital inequality is one of the significant sociological issues in contemporary social life. The continuation of women's unequal hierarchical position in the digital realm further emphasizes the importance of digital inequality. This study aims to reveal the disadvantaged position of women in digital inequality. Digital inequality has a complex nature, influenced by various factors such as education, age, disability, socio-economic conditions, and geography. As in other unequal hierarchical structures, gender is an influential source of digital inequality.

Overcoming digital inequality requires efforts at the policy level to produce social policies that address the issues during the educational process. Policies and initiatives aimed at promoting gender equality in the digital realm can be prevented. Policies should be implemented to address the digital gender gap and increase women's access to digital tools and opportunities. The potential of new technologies, such as artificial intelligence and blockchain, can be a means to advance women's economic and social empowerment. Projects

carried out in this regard provide valuable examples.

In a study on ICT usage among EU countries (Stiakakis, Kariotellis, & Vlachopoulou, 2010), two main dimensions were identified using Eurostat data: the skills dimension and the autonomy dimension. Accordingly, digital literacy is essential beyond mere access to digital tools. As in many other studies, long-term and inclusive social policies are required to address digital inequality, which is fundamentally influenced by socio-economic and demographic factors.

There is a particular lack of qualitative studies in academic research in this field. As Van Dijk has pointed out, while quantitative studies provide numerical data on the big picture, qualitative research is needed to understand and overcome digital inequality (Van Dijk, 2006:232). Additionally, individuals in the digital society must learn to use digital tools effectively to combat information disorder and manipulation (Çelik, 2023). Women must have digital skills to be involved in the policy-making process. Some policy recommendations that can be implemented in this area include promoting digitalization and making internet access more affordable, encouraging women to pursue higher education and increasing the level of compulsory education, and investing in digitalization and education to increase women's participation in the workforce (Shuangshuang et al., 2023).

Additionally, to mitigate the effects of fertility, which has a reducing impact on women's labour force participation, public policies such as providing postnatal care, mandating childcare facilities at workplaces, and offering salary increases proportional to the number of children a woman cares for can be implemented. Various countries have successfully implemented policy measures to increase women's participation in the digitalization process. The policy measures that can be used to increase women's participation in the digitalization process include:

Labor Force Participation and Entrepreneurship: Financial support, grant programs, and low-interest loans should be provided for women entrepreneurs. Additionally, women entrepreneurs should be encouraged to receive training in digital marketing and e-commerce. The flexible working models brought by digitalization (remote work, flexible working hours) can increase women's participation in the labour force. Legal regulations should be made to popularize these models. Incentives can be provided for employers to increase female employment. For example, companies that increase the number of female employees can be given tax reductions or other financial incentives.

Financial Support and Incentives: Special funds should be established to support women's digital entrepreneurship projects through digital entrepreneurship funds. These funds can help women bring their digital business ideas to life. Microfinance and microcredit programs are the best examples of this. Microfinance and microcredit programs should be provided to support women's small-scale digital ventures.

Legal and Institutional Regulations: Legal regulations are essential to ensure gender equality. These laws should aim to combat discrimination and biases that hinder women's participation in the digitalization process. Particularly, public and private sector organizations should develop institutional policies to increase women's participation in the

digitalization process. These policies should support women's career development and help them enhance their digital skills.

Awareness and Cultural Change: Campaigns should be organized to raise awareness about the importance of women's participation in the digitalization process. These campaigns can help raise societal awareness about gender equality and the importance of digital skills. Successful female digital entrepreneurs and professionals should be introduced as role models and guide other women through mentorship programs.

These policy measures can be significant steps to increase women's participation in the digitalization process and ensure gender equality. Additionally, some of the various programs that can be implemented for women's digital literacy training include:

Digital Literacy Training: Women should be educated on computer usage, internet access, email usage, and basic software programs. Women should be provided with information on internet security, data privacy, and protection against online fraud.

Advanced Digital Skills: Women should be taught programming languages (Python, Java, HTML/CSS, etc.) and coding skills. Women should be trained in data analytics, big data management, and data visualization.

Digital Entrepreneurship and E-Commerce: Women should be provided with knowledge on digital marketing strategies, social media management, and content creation. Women should be trained on e-commerce platforms, online sales techniques, and digital business management.

STEM Education Programs: Programs that encourage women to receive education in Science, Technology, Engineering, and Mathematics (STEM) fields should be organized. These programs can include scholarships, mentorship, and career guidance. Additionally, basic training in robotics, artificial intelligence, and machine learning can be provided.

Lifelong Learning and Continuous Education: Online education platforms (Coursera, edX, Udemy, etc.) should be used to enable women to continuously update their digital skills. Certification programs should be offered to women to document their digital skills.

Mentorship and Networking: Mentorship programs should be provided to women to develop their digital skills and advance their careers. Networking events should be organized to connect women with other professionals working in digital fields.

Community Centres and Local Education Programs: Digital literacy training should be organized in local community centres. These centres should be located in easily accessible places for women. Additionally, mobile education units should be created for women living in rural and remote areas. These units can bring digital literacy training to women.

Although this study presents policy recommendations for addressing digital inequality among women, it is essential to support these recommendations with concrete examples to enhance their applicability. In this regard, digital inequality in Turkey should be examined in a more sector-specific manner. For instance, recent statistics from the Turkish Statistical Institute (TURKSTAT, 2023) reveal that the participation of women in the

information and communication technology (ICT) sector remains significantly lower than that of men. Similarly, research highlights that while women in Turkey increasingly engage in e-commerce and digital entrepreneurship, their access to advanced digital skills and training opportunities is still limited (Bozan & Treré, 2023). To further strengthen the applicability of policy recommendations, examples of sectoral initiatives aimed at improving women's digital literacy and employment in Turkey should be considered. For instance, targeted digital skill development programs in collaboration with universities, the private sector, and public institutions could help bridge the gender gap in digital employment. Additionally, policies encouraging the integration of women into high-tech industries and facilitating their participation in digital financial services could significantly contribute to reducing digital inequality. Future research should focus on more comprehensive quantitative and qualitative analyses to assess the impact of digital policies on women's economic and social inclusion.

In conclusion, this study highlights the transformative potential of digitalization in reshaping women's economic and social empowerment. By addressing challenges related to access, representation, and online safety, policymakers, activists, and stakeholders must work together to harness the full benefits of digitalization for women's empowerment and gender equality in the digital age. Additionally, women face difficulties in leveraging digital platforms due to issues such as gender biases and online harassment. These challenges must be identified and overcome through policies and education.

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