

Key Recommendations



Upgrade the National Information and Communication Technology (ICT) master plan to improve coordination among various stakeholders. A comprehensive approach should be followed for the upgradation.



Prioritise existing government development projects and scrap unnecessary projects to streamline resource allocation and improve outcomes.



Remove business barriers and regulatory processes and simplify compliance to create an enabling environment for digital startups.



Increase investments in digital infrastructure to extend broadband and high-speed internet services to rural and underserved regions to bridge the urban-rural technological divide.



cpd.org.bd



[cpd.org.bd](https://www.facebook.com/cpd.org.bd)



[cpdbangladesh](https://www.linkedin.com/company/cpdbangladesh)



[CPDBangladesh](https://www.youtube.com/channel/UCPDBangladesh)

Centre for Policy Dialogue (CPD)

House 40/C, Road 11 (new)
Dhanmondi, Dhaka - 1209, Bangladesh
Telephone: (+88 02) 55001185, 55001990
Website: www.cpd.org.bd

Empowering the Youth Through Technology and Digital Literacy

Fahmida Khatun, Muntaseer Kamal, Foqoruddin Al Kabir and Preetilata Khondaker Huq

1. Introduction

In today's world, technology plays a pivotal role in shaping economic activities by driving growth in both industrial and service sectors. The Fourth Industrial Revolution (4IR) is an example of the transformative power of technological advancement, redefining economies, industries, and everyday life. Driven by artificial intelligence, robotics in industrial processing, and the Internet of Things (IoT), 4IR enhances efficiency and optimises productivity (Benassi et al., 2021; Venturini, 2022). The adoption of technology brings opportunities for economic growth with societal benefits by creating employment opportunities for youth and women. Adoption of technology also brings some additional challenges, including the displacement of certain jobs and special skill requirements. As a result, digital literacy has become nearly as essential as traditional literacy in recent times. Digital literacy has the potential to empower youth and women by providing access to education, economic opportunities, and social participation, thus fostering a more inclusive society. The question is whether Bangladesh is ready for this new digital reality and how the country will use this opportunity to empower women and youth by using technology.

This policy brief examines the opportunities and challenges of adopting technology and digital literacy as tools for empowerment. It presents a brief overview of the Government's existing policies and initiatives to empower youth and women through technology and digital literacy. Finally, a set of recommendations is proposed for fostering digital literacy among youth and women.

2. Selected Key Policies and Initiatives by the Government

The Government of Bangladesh (GoB) formulated several policies, rules, and acts and undertook various initiatives for facilitating the Information and Communication Technology (ICT) sector in Bangladesh. The aim of these policy documents, rules, acts, and initiatives was to create an enabling environment for the ICT in Bangladesh through skill development and job creation for youth and women. Some of the selected policies and initiatives are the National ICT Policy 2018, the National Skills Development Policy (NSDP) 2020, and the Women ICT Frontier Initiative (WIFI).

The Women ICT Frontier Initiative (WIFI) in Bangladesh was launched in 2017 with an aim to close the gender gap in the digital economy by providing women with the tools, skills, and support they need to succeed. This was an instrumental initiative in promoting digital literacy among women, especially in rural areas. The National ICT Policy 2018 was formulated to create an enabling environment for the ICT industry, focusing on skills development and employment opportunities for youth and women (MoPTIT, 2018). The strategy of the policy focused on transforming the country into a knowledge-based economy. The key focus areas of the policy are digital infrastructure development, e-governance, human resource development, cybersecurity, and entrepreneurship development. NSDP 2020 was formulated to develop the country's human capital and align workforce skills with the demands of the rapidly evolving economy (NSDA, 2020). The policy focuses on creating jobs in various sectors by promoting vocational and technical education. The key aspect of this policy is to create equal opportunity for marginalised groups, women, people with disabilities, and those living in rural areas.

While these policies and initiatives are promising in promoting the use of technology for empowering youth and women, challenges lie with infrastructure gaps, digital literacy issues, gender inequality, inconsistent implementation of policies, and slow adoption of advanced technologies. Bangladesh needs substantial investment in bridging the infrastructure gaps in accessing technology equally in urban and rural areas. There has been a disconnect between the policy objectives, such as promoting social equity, ensuring universal technology access, enhancing the use of technology in education, and building domestic capacity—and governmental efforts to meet these goals. In the recent past, the government has been more focused more on building hi-tech parks across the country, which will not effectively address the objectives stated in the policies. Besides, there has been a lack of emphasis on investment in the ICT sector for educational and skill development. While government policies and initiatives have shown some success in increasing service sector productivity, there remains weakness in implementation of

the policies and initiatives in reducing the digital divide, digital literacy, and creating decent employment opportunities for the youth and women.

3. Employment Statistics in Bangladesh

Bangladesh currently has a 65.52 per cent population falling under the working age (15-65 years) group (BBS, 2023). This indicates that the country is currently reaping the advantage of the demographic dividend. The youth population plays a vital role in this advantage, as 28.82 per cent of the country's total population is in the 15-29 age group (BBS, 2023). While the country's unemployment rate is 3.5 per cent, the youth unemployment rate is 8 per cent, and the rate of youth (age group 15-29 years) in 'Not in Education, Employment, and Training' (NEET) category is 22 per cent (Table 1). It must be noted that the rate of youth unemployment exceeds the national unemployment rate of 3.5 per cent. While the current demographic dividend is an opportunity for the country to accelerate economic growth by creating job opportunities for the youth, a significant portion of youth is still out of the job market. The country must adopt strategies that capitalise on this demographic resource.

The global comparison of data shows that Bangladesh performed better in terms of unemployment rate, youth unemployment rate, and youth in NEET than most of the comparable countries. However, while the global female unemployment rate was 5.54 per cent in 2022, Bangladesh's female unemployment rate was 7.77 per cent in 2022 lagging behind India (4.59 per cent), Myanmar (3.40 per cent), Pakistan (7.71 per cent), the South Asia region (5.80 per cent), and the Asia and Asia Pacific region (4.24 per cent) (Table 2). Bangladesh also lags behind India, Myanmar, Pakistan, South Asia, Asia and the Asia Pacific, and the world in terms of the female youth unemployment rate. This indicates that women in Bangladesh continue to face greater challenges in accessing employment opportunities.

Table 1: Rates of Unemployment and NEET in Bangladesh

Year	Male	Female	Total
National Unemployment rate (%)	3.5	3.6	3.5
Youth unemployment rate (%)	5.2	2.8	8.0
NEET Youth aged 15-29 (%)	16.2	27.1	22.0

Source: BBS (2023).

Table 2: Unemployment and NEET in Bangladesh and Other Countries (2022) (ILO Modelled Estimates)

Country/Region	Indicator								
	Unemployment rate (%) (15+ Age)			Youth unemployment rate (%) (15-24 Age)			NEET youth (%) (15-24 Age) *		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Myanmar	2.83	2.49	3.40	9.62	10.21	8.81	15.02 (2020)	8.88 (2020)	20.72 (2020)
Pakistan	5.55	4.90	7.71	9.68	9.19	11.16	34.56 (2021)	13.59 (2021)	56.42 (2021)
Bangladesh	5.25	4.04	7.77	15.94	13.71	20.61	14.96 (2022)	10.47 (2022)	19.13 (2022)
India	4.82	4.91	4.59	17.83	17.53	18.87	25.76 (2022)	11.16 (2022)	41.84 (2022)
Nepal	10.92	9.97	12.50	20.54	18.93	23.45	34.76 (2017)	21.16 (2017)	45.82 (2017)
Sri Lanka	6.33	4.57	9.92	25.24	20.90	33.73	18.05 (2022)	13.54 (2022)	22.32 (2022)
Bhutan	5.95	4.40	7.97	29.59	25.48	33.51	18.62 (2022)	14.35 (2022)	22.51 (2022)
Southern Asia region	5.29	5.12	5.80	16.39	15.78	18.38	28.02 (2022)	12.19 (2022)	44.98 (2022)
Asia and the Pacific region	4.55	4.74	4.24	14.21	14.52	13.62	21.25 (2022)	11.66 (2022)	31.70 (2022)
World	5.28	5.10	5.54	13.33	13.30	13.38	20.95 (2022)	13.31 (2022)	29.07 (2022)

Source: ILO (2024).

*Note: Data was presented as per availability and comparability.

4. Access to Technology

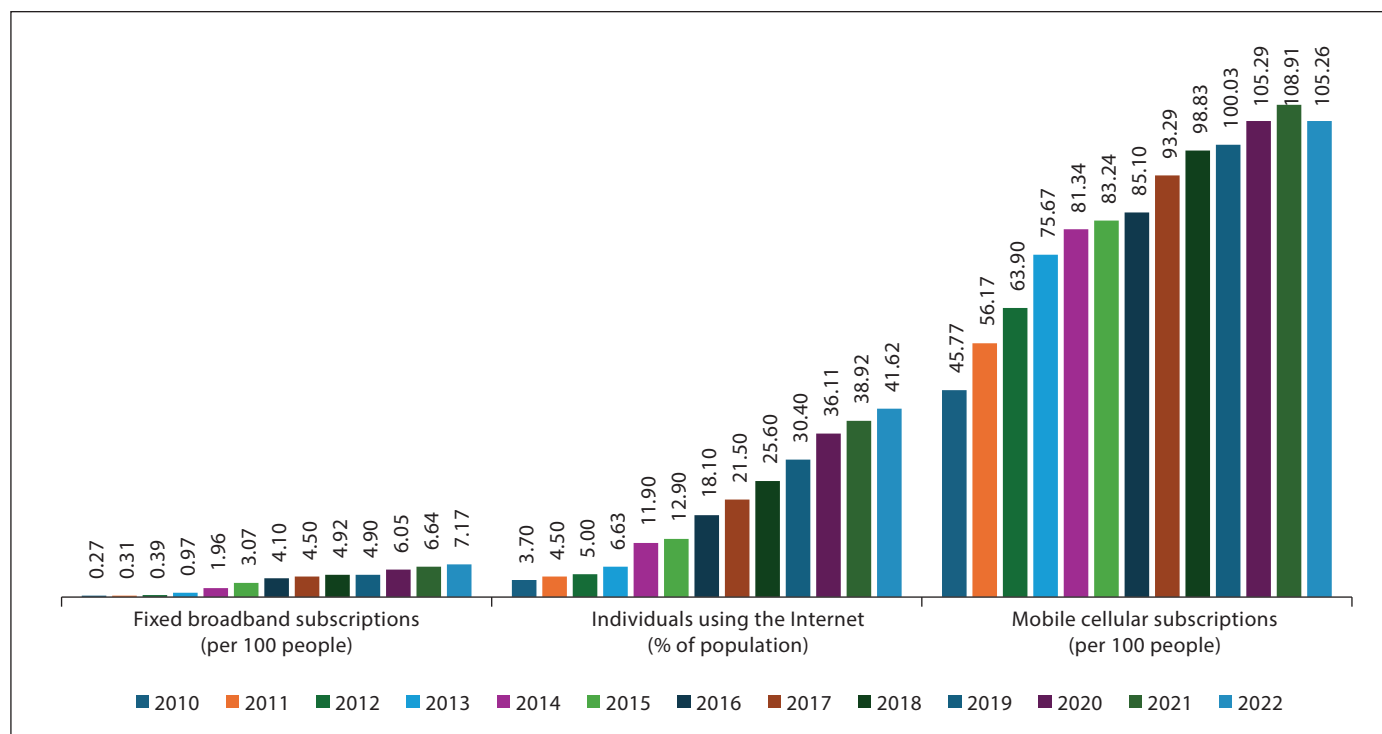
Analysis of various indicators related to access to technology in Bangladesh from 2010 to 2022 shows a gradual improvement. For instance, fixed broadband subscriptions per 100 people in 2010 were 0.27, which increased to 7.17 in 2022. Similarly, individuals using the internet (percentage of population) and mobile cellular subscriptions (per 100 people) were 3.70 per cent and 45.77 in 2010, which increased to 41.62 and 105.26 per cent, respectively, in 2022 (Figure 1). The numbers show a decent improvement in access to technology in terms of the selected indicators.

However, comparing the data of these indicators with other South Asian countries shows a gloomy picture. While there is an opportunity to create employment for Bangladesh's growing youth by using technology, the country lags in various indicators of access to technology compared to other South

Asian countries. The rate of the population using the internet in Bangladesh is 41.62 per cent, while 86.84 per cent, 83.91 per cent, 50.11 per cent, and 49.56 per cent of the population in Bhutan, the Maldives, Sri Lanka, and Nepal, respectively, are using the internet (Table 3). Bangladesh is also behind the Maldives and Sri Lanka in terms of fixed broadband subscriptions and mobile cellular subscriptions.

Bangladesh faces the challenge of the digital divide in accessing technology by men and women. Considering the percentage of mobile phone owners and mobile internet users, a significant gap prevails between the male and female population. While 86 per cent and 33 per cent of adult males have mobile phones and use mobile internet, respectively, only 61 per cent and 16 per cent of adult females have mobile phones and use mobile internet, respectively, in Bangladesh (Table 4). This indicates that Bangladesh needs to overcome the challenge of the digital gender divide in accessing technology.

Figure 1: Access to Technology in Bangladesh



Source: World Bank Group (2024).

Table 3: Access to Technology in South Asian Countries (2022)

Country	Individuals using the internet (% of population)	Fixed broadband subscriptions (per 100 people)	Mobile cellular subscriptions (per 100 people)
World	64.40	18.43	108.10
Bhutan	86.84	0.63	94.89
Maldives	83.91	17.40	136.54
Sri Lanka	50.11	9.64	143.08
Nepal	49.56	4.83	-
Bangladesh	41.62	7.17	105.26
Pakistan	32.95	1.28	81.75
India	-	2.35	80.65

Source: World Bank Group (2024).

Table 4: Mobile Phone Ownership and Mobile Internet Use in South Asia (% of Total Adult Population)

Country	Gender	Mobile Owners (%)	Mobile Internet Users (%)
Bangladesh	Male	86	33
	Female	61	16
India	Male	79	42
	Female	63	21

(Table 4 contd.)

(Table 4 contd.)

Country	Gender	Mobile Owners (%)	Mobile Internet Users (%)
Indonesia	Male	80	49
	Female	72	42
Myanmar	Male	78	58
	Female	68	41
Pakistan	Male	81	37
	Female	50	19

Source: GSMA (2020).

5. Way Forward

It is essential to provide young people with the tools to participate in the digital world to decrease unemployment, foster innovation, drive economic growth, and promote social inclusion. In this case, the broader digital divide must be addressed to ensure all youth benefit from technology by facilitating digital inclusion through affordable internet access, digital literacy initiatives, and meaningful opportunities in the digital economy. Addressing the digital gender divide requires removing barriers to connectivity and equipping women and girls with the skills needed to succeed in the digital age.

Against this backdrop, the Centre for Policy Dialogue (CPD) organised a roundtable discussion with the participation of relevant stakeholders, experts, and professionals working on the ICT sector in the country. In addition, a regional consultation was held with experts from South and Southeast Asia. Based on the discussions, the following set of recommendations has been prepared for the policymakers to overcome the challenges in empowering youth and women through the use of technology. The recommendations are categorised under three thematic areas viz. policy-level interventions, governance interventions, and financing interventions.

Policy Interventions

- Strengthening the coordination among government agencies and reshaping the existing policies and initiatives***

The National ICT Master Plan 2041 should be reshaped for better coordination among various stakeholders. Currently, fragmented efforts across various ministries, private sector entities, educational institutions, and Non-Governmental Organisations (NGOs) often lead to duplicative projects, inefficient use of resources, and missed opportunities for synergy. A more cohesive approach would streamline processes, ensuring that each stakeholder's contributions are aligned towards shared objectives and maximise the impact of ICT initiatives.

- Reprioritising existing projects and scrapping unnecessary government development projects***

Reprioritising existing government development projects and scrapping unnecessary projects can streamline resource allocation and improve outcomes. In such cases, the evaluation of project impact and feasibility should be strengthened to reap tangible project outcomes such as job creation, skill development, and contribution to the economy. To improve project monitoring and accountability, the implementation of e-governance by creating a digital tracking system should be prioritised. This will improve trust in the digital system and stimulate public participation in the process.

- Engaging youth and women in the decision-making process for inclusive development***

The government can form advisory councils to engage youth and women in the decision-making process. The youth advisory council may include representatives from diverse youth groups to provide insights on policies impacting education, employment, digital innovation, and social welfare. A women's advisory council can be formed by women from various backgrounds, including entrepreneurs, rural women, and representatives of marginalised communities. Together, they can contribute to policy discussions on issues like healthcare, safety, economic participation, and equal rights.

- Fostering regional cooperation***

A regional body can be created to address shared challenges related to technology, such as digital literacy and infrastructure gaps. In addition, the regional body can encourage knowledge exchange on best practices and common issues, and conduct collaborative research on emerging technologies.

Governance and Accountability Interventions

- *Creating an enabling environment for digital startups*

To create an enabling environment for digital startups in Bangladesh, focus should be given to removing key business barriers and fostering a supportive ecosystem by simplifying regulatory processes and compliance. The government can focus on building a one-stop digital portal where potential entrepreneurs can get help related to access to finance, tax incentives, and other services in opening startups. Indonesia has demonstrated how targeted government programmes, such as creating regulatory sandboxes, can nurture digital talent and promote innovation, which has led to a bustling digital economy. By allowing fintech startups to operate within a controlled environment, the government fosters innovation while ensuring compliance with consumer protection regulations.

- *Bringing the freelancing market under the formal sector*

The current freelancing market is a potential source of job creation and revenue generation. The government should focus on bringing this market under the formal sector. Formal mechanisms are needed to regulate the gig economy and extend social protections to informal workers. However, there is a lack of data and statistics on this market. The Bangladesh Bureau of Statistics (BBS) can work on generating a database on this potential market.

- *Strengthening digital security to ensure female participation in the digital economy*

Ensuring digital and social security can enhance youth and women's participation in the digital economy. As more people engage with online platforms for work, education, and commerce, protecting their privacy, personal data, and online interactions becomes essential. Hence, cybersecurity education will be an essential tool.

Financing Interventions

- *Improving the digital infrastructure*

The government should prioritise infrastructure investments to extend broadband and high-speed internet services to

rural and underserved regions to bridge the urban-rural digital divide. A collaborative initiative between the public and private sectors can be taken to make the internet more accessible across the country. Public Wi-Fi zones are one way to increase internet accessibility.

- *Raising awareness regarding women's participation in the ICT and engineering sector through the education system and training programmes*

Women are reluctant to enter the engineering and technology sector due to social norms. As a result, the number of female students in engineering universities is less than male students. The government should focus on raising awareness among the students in secondary and higher secondary levels by including these issues in the textbooks. In addition, establishing mentorship programmes will help women further their careers in Science, Technology, Engineering, and Mathematics (STEM) fields. Furthermore, access to online learning platforms and subsidised training programmes for rural women needs to be increased.

- *Creating decent jobs for youth and women*

Creating decent jobs for youth and women is a challenge for Bangladesh. To overcome the challenge, special emphasis should be placed on STEM education and digital literacy skills as this will create better opportunities for decent jobs, and will also create opportunities for them to participate in the global labour market. Emphasis should also be given on entrepreneurship development by the youth and women. In this case, the government should ensure easy access to finance, by offering grants, low interest loans, and tax incentives to encourage startups led by women and youth. In addition, regulatory processes for starting and doing business need to be simplified for new small businesses owned by women and youth.

References

- Bangladesh Bureau of Statistics (BBS). (2023). *Labour Force Survey*. Retrieved from https://bbs.portal.gov.bd/sites/default/files/files/bbs.portal.gov.bd/page/b343a8b4_956b_45ca_872f_4cf9b2f1a6e0/2023-10-25-07-38-4304abd7a3f3d8799fbc59ff91007b1.pdf
- Benassi , M., Grinza, E., Rentocchini , F., & Rondi , L. (2021). Patenting in 4IR technologies and firm performance. *Industrial and Corporate Change*, 31(1), 112-136. <https://doi.org/10.1093/icc/dtab041>
- International Labour Organization (ILO). (2024). *ILOSTAT*. Retrieved from: <https://ilostat.ilo.org/data/#>
- Ministry of Posts, Telecommunications and Information Technology (MoPTIT). (2018). *National ICT Policy*. Retrieved from https://ictd.gov.bd/sites/default/files/files/ictd.portal.gov.bd/policies/0b508068_d74f_45a1_864a_516536af3060/%E0%A6%A4%E0%A6%A5%E0%A7%8D%E0%A6%AF%20%E0%A6%93%20%E0%A6%AF%E0%A7%8B%E0%A6%97%E0%A6%BE%E0%A6%AF%E0%A7%8B%E0%A6%97%20%E0%A6%AA%E0%A7%8D%E0%A6%B0%E0%A6%AF%E0%A7%81%E0%A6%95%E0%A7%8D%E0%A6%A4%E0%A6%BF%20%E0%A6%A8%E0%A7%80%E0%A6%A4%E0%A6%BF%E0%A6%AE%E0%A6%BE%E0%A6%B2%E0%A6%BE%20%E0%A7%A8%E0%A7%A6%E0%A7%A7%E0%A7%AE.pdf
- National Skills Development Authority (NSDA). (2020). *National Skills Development Policy*. Government of the People's Republic of Bangladesh. Retrieved from <https://nsda.portal.gov.bd/sites/default/files/les/les/nsda.portal.gov.bd/npfblock/2020-12-21-14-24-8c85b4482cf8516df94dd6471eaf30a4.pdf>
- GSMA. (2020). *Connected Women: The Mobile Gender Gap Report*. Retrieved from <https://data.gsmainelligence.com/research/research/research-2020/the-mobile-gender-gap-report-2020>
- Venturini , F. (2022). Intelligent technologies and productivity spillovers: Evidence from the Fourth Industrial Revolution. *Journal of Economic Behavior & Organization*, 194(February 2022), 220-243. <https://doi.org/10.1016/j.jebo.2021.12.018>
- World Bank Group. (2024). *Data Bank, World Development Indicators*. Retrieved from: <https://databank.worldbank.org/source/world-development-indicators>

In today's world, technology plays a pivotal role in shaping economic activities by driving growth in both industrial and service sectors. Digital literacy has the potential to empower youth and women by providing access to education, economic opportunities, and social participation, thus fostering a more inclusive society. The question is whether Bangladesh is ready for this new digital reality and how the country will use this opportunity to empower women and youth by using technology. This policy brief examines the opportunities and challenges of adopting technology and digital literacy as a means of empowering youth and women. Given the current context, a set of recommendations is proposed for promoting digital literacy among these groups.

Authors

Dr Fahmida Khatun is the Executive Director of the Centre for Policy Dialogue (CPD), Dhaka, Bangladesh. She can be reached at: fahmida@cpd.org.bd

Mr Muntaseer Kamal is a Research Fellow at the CPD. He can be reached at: muntaseer@cpd.org.bd

Mr Foqoruddin Al Kabir is a Senior Research Associate at the CPD. He can be reached at: kabir@cpd.org.bd

Ms Preetilata Khondaker Huq is a Programme Associate at the CPD. She can be reached at: preeti@cpd.org.bd

Series Editor: *Dr Fahmida Khatun*, Executive Director, CPD.

Disclaimer: *This policy brief is based on research funded by (or in part by) the Gates Foundation. The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Gates Foundation.*
