

Advancing Kenya's Digital Literacy Initiatives in Arid and Semi-Arid Lands

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Key Highlights

Digital literacy is an essential aspect in the development of any country. Digital literacy ensures that all individuals and communities who may be marginalized or underserved have access to and can effectively use digital technologies and the Internet. This policy brief focuses on interventions towards advancing the role of digital inclusion through literacy in unlocking the potential of Kenya's arid and semi-arid lands (ASALs).

Key highlights include:

- i) As of 2022, Kenya's Digital Literacy Programme was making significant strides in preparing students for the digital age, aiming to modernize the education system for the 21st century. Nearly 98.67 per cent of schools had implemented the programme nationwide. However, there are disparities among regions and the digital literacy level is below 50 per cent for ASAL counties. In Kenya's ASALs, Samburu has the lowest digital literacy rate. At the same time, Kiambu stands out with the highest digital literacy rate.
- ii) Digital divide in Kenya exists, and it deepens existing social inequalities, limiting access to education, employment, healthcare, and civic participation.
- iii) Current digital literacy efforts in Kenya are not cohesive, especially in reaching marginalized communities. The initiatives are not standardized, face insufficient funding, and have limited comprehensive approach. Existing policies prioritize basic skills, neglecting critical aspects such as critical thinking and cybersecurity. Coverage is limited countrywide, and access costs are high.
- iv) A proposed National Digital Literacy Framework can establish clear learning objectives and standards adaptable to various learning environments, benefiting from input from educators and technology experts. Targeted programmes for marginalized communities may have the potential to provide access to technology and training, with collaboration among local leaders and non-profit organizations to enhance programme effectiveness. Additionally, teacher training, offering continuous development, is crucial for effective digital literacy integration and should consider diverse teaching styles and student needs.

Introduction

In the 21st century, digital literacy has become a fundamental skill for individual empowerment, economic progress, and societal development. Technology's rapid advancement has transformed how we communicate, work, and access information. However, a digital divide persists, leaving a significant portion of the population without the necessary skills to navigate the digital landscape. This policy brief explores the critical need for comprehensive digital literacy programmes to bridge this gap and ensure equitable access to opportunities in the digital age.

Digital Literacy in Kenya

Digital divide is a multifaceted issue associated with disparities in access to technology, education, and resources. While the Internet has the potential to be a great equalizer, many people lack the basic digital skills. This divide deepens existing social inequalities, limiting access to education, employment, healthcare, and civic participation. The aftermath of COVID-19 pandemic reinforced the importance of digital literacy, as remote learning and telemedicine have become essential, leaving those without digital skills severely disadvantaged. The sustainable development goal

(SDG) target for Internet and broadband aims that by 2025, 60 per cent of youth and adults should have achieved at least a minimum level of proficiency in sustainable digital skills. Digital skills have been defined as skills that enable people to access, use, and benefit from the Internet, enhance Internet penetration, and access to employment and entrepreneur opportunities. It is estimated that by 2030, digital skills will be required in most of the jobs in Kenya. Limited knowledge and skills in ICT in the ASALs of Kenya are a significant barrier to households' Internet use, which prevents them from exploiting its benefits even during emergencies or disasters. Digital skills are measured from basic to intermediate to advanced levels. Basic skills, including hardware, software, and basic online tasks, form the foundation for functioning in society. Intermediate skills go further, allowing critical technology use and content creation, particularly for work-related tasks such as digital marketing. Advanced skills are specialized, including programming, Artificial Intelligence(AI), big data, and cybersecurity, often requiring advanced education and leading to higher-paying roles, particularly in ICT professions.

Digital Literacy levels

With a lowest digital literacy score of 27.56%, Samburu faces challenges in digital literacy, especially regarding computer/tablet usage, Internet access, and the presence of a Digital Learning Programme (DLP).

The moderate digital literacy cluster encompasses seven counties, each scoring between 30 and 40 per cent in digital literacy. Garissa, Wajir, Mandera, Turkana, West Pokot, and Isiolo form this cluster. While these counties exhibit moderate digital literacy levels, there is room for improvement in computer/tablet usage, Internet access, and presence of Digital Literacy Programme.

The high digital literacy cluster comprises 21 counties, all boasting digital literacy scores exceeding 40 per cent. Marsabit, Kwale, Kilifi, Taita Taveta, Kajiado, Makueni, Kitui, Machakos, Embu, Tharaka Nithi, Meru, Laikipia, Baringo, Narok, Nakuru, Migori, Nyeri, Kiambu, and Elgeyo Marakwet belong to this cluster. These counties exhibit strong digital literacy levels, with

Table 1: Share of Internet usage, tablet/computer use and schools with DLP (%)

County	% of the Population Age 3 Years and Above Using Internet	% of Population Age 3 Years and Above Using a Computer/Laptop/Tablet	% of Schools with Digital Literacy Program	Digital literacy score(%)
Tana River	8.9	3.2	100.00	34.950
Isiolo	14.2	5.3	83.00	31.280
Garissa	12.2	4.6	93.87	33.660
Wajir	8.3	2.9	100.00	33.650
Samburu	9.7	4.1	76.71	27.560
Mandera	7.8	2.7	100.00	33.420
Marsabit	8.3	3.0	100.00	33.690
Turkana	6.9	2.4	98.88	32.694
Kwale	12.4	4.6	99.45	35.385
Kilifi	15.1	6.6	100.00	37.170
Taita Taveta	23.9	9.6	100.00	40.010
Kajiado	33.1	16.2	99.75	46.353
Makueni	16.1	6.1	100.00	37.270
Kitui	13.6	4.9	99.60	35.920
Machakos	25.8	11.8	99.76	42.388
Embu	22.1	9.4	100.00	40.390
Tharaka Nithi	18.8	8.2	99.52	38.784
Meru	19.3	7.1	99.72	38.536
Laikipia	22.6	9.5	98.97	40.271
West Pokot	8.1	3.0	100.00	33.630
Baringo	15.3	6.2	99.69	37.957
Narok	12.0	4.1	99.84	35.212
Nakuru	26.8	11.6	99.71	42.597
Migori	14.3	6.1	99.67	36.634
Homabay	15.2	6.8	100.00	38.120
Nyeri	29.9	13.7	99.49	44.292
Kiambu	42.7	21.8	98.27	51.002
Lamu	19.4	6.2	97.85	39.975
Elgeyo Markakwet	14.2	5.5	100.00	36.460

scores reflecting proficiency in computer/tablet usage, internet access, and Digital Literacy Program presence.

Within this high digital literacy cluster, Kiambu stands out with the highest Digital Literacy score of 51.00 per cent, indicating exceptional digital literacy. Nyeri follows closely with a Digital Literacy score of 44.29 per cent, while other counties in this cluster display varying degrees of digital proficiency.

Government initiatives

Various government initiatives at the national and county levels and efforts from the private sector have been put in place to enhance digital skills and literacy in Kenya. The digital literacy programme, for example, ensures that every student is well-equipped for the digital era, aiming to modernize the education system into a 21st century model. Ajira Digital Programme is a national government initiative to empower over one million young individuals to access digital employment opportunities. An important aspect of this initiative is emphasizing education and skill development tailored for the constantly changing landscape of online jobs. The programme has achieved notable success by granting Kenyans access to various online digital job opportunities and fostering partnerships and collaborations that have proven beneficial for the country. It collaborates with 56 established digital platforms, offering various services, from business development to ensuring efficient technology access.

Current efforts to address digital literacy often lack cohesion and fail to effectively reach marginalized communities. While various initiatives are in place, they often have no standardization, adequate funding, and a comprehensive approach. Additionally, there is limited awareness among policy makers regarding the urgency and impact of digital literacy on overall societal development. Furthermore, existing policies primarily focus on basic digital skills, overlooking the importance of advanced digital literacy, including critical thinking, media literacy, and cyber security. The coverage across the country is also limited in addition to the high cost of access.

Policy Recommendations

The National Digital Literacy Framework can provide clear learning objectives and standards, and ensuring adaptability to diverse learning environments. This could be supported with the following interventions:

- i) Targeted programmes for marginalized communities: Digital literacy programmes can focus on providing access to technology and training. Collaborating with local leaders and non-profit organizations may enhance cultural sensitivity and programme effectiveness.
- ii) Teacher training and curriculum integration: Educators can receive continuous training to integrate digital literacy effectively. Training programmes may need to be tailored to suit different teaching styles and student needs.
- iii) Public-private partnerships: Partnerships can fund digital literacy initiatives, but ethical guidelines may be necessary to ensure equitable distribution of resources and opportunities.
- iv) Awareness campaigns: Awareness campaigns can utilize diverse media channels to reach a wider audience. However, understanding the cultural nuances of different regions may be crucial for the message's effectiveness.
- v) Monitoring and evaluation: A robust monitoring system can track programme outcomes and participant engagement, but it may require regular reviews and adjustments based on evolving digital trends and community needs.
- vi) Internet expansion: Expanding Internet coverage can enhance accessibility, especially in remote areas. However, environmental factors and infrastructure challenges may influence the feasibility and effectiveness of such expansions.

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KIPPRA Policy Briefs are aimed at a wide dissemination of the Institute’s policy research findings. The findings are expected to stimulate discussion and also build capacity in the public policy making process in Kenya.

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