

***Augmenting Digital Literacy for
Effective e-government Service
Delivery in Africa: Experience
from East African Countries***

“..... technology use can only amplify existing human capacity and intent: it cannot act as a substitute where human capacity and intent do not exist” Kentaro Toyama (2011)

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Introduction

- The world and African countries in particular have witnessed an increased adoption of e-Government services.
- digital literacy is a key pillar for effective use of e-government service delivery,
 - SDG target 16.7, calls for ensuring “responsive, inclusive, participatory, and representative decision-making at all levels.”
 - The Africa’s comprehensive Digital Transformation Strategy (2020–2030) stresses on the need to ensure digital literacy among the populace for the realization of the Africa Agenda of the “Africa we want” (AU, 2020; UNECA, 2017).
 - The WBG “Digital Economy for Africa Initiative (DE4A)” seeks to ensure every African individual, business, and government is digitally enabled by 2030.
- While there are constant investments in e-government, there are fewer attempts made to identify digital illiteracy as the key barriers to effective use of e-government services. (Agostino et al., 2020; Magayane et al., 2016; Agostino & Arnaboldi, 2016).

Objectives

- i. To examine the dynamics in the digital skilling and digitalization of government services in East Africa;
- ii. To assess the trend of digital skilling and ICT growth and emerging implications in adoption and usage in East African countries
- iii. To analyse the centrality of public engagement in determining effective use of e-services in in East Africa

Context

- The unprecedented development of digital skills has provided an opportunity to boost productivity in East Africa, but progress has been highly uneven. The digitalisation of firms and economies has driven both the supply of and demand for basic digital skills in most East African countries. Intermediate and advanced skill supply and demand remain confined to specific sectors, like finance, health, energy, agriculture, transport and infrastructure. Specialised and digital entrepreneurial skills are lacking throughout the region, with Nairobi as an exception. A rise in digital service exports is creating a growing demand for intermediate and advanced digital skills from online labour (Begazo, et. al. 2023).

- Digitalisation initiatives and digital skills are varied among East African countries with Kenya taking the lead as indicated by the E-government Readiness Index and Network Readiness Index

- The literatures indicate that efforts to promote digital inclusion has/ is emensely being undertaken in the aspects of ensuring availability and access to infrastructure; Affordability of digital technologies, developing policies and laws for Online freedom and data protection but the Digital Skills Gap Index reports indicate Awareness and digital skills to be inadequately addressed

	Kenya		Uganda		Tanzania	
Component	EGDI (out of 1.0)		EGDI (out of 1.0)		EGDI (out of 1.0)	
	2021	2022	2021	2022	2021	2022
Overall EGDI	0.5326	0.5589	0.4499	0.4424	0.4206	0.4169
Human Capital Index (HCI)	0.5812	0.5641	0.5395	0.5631	0.4659	0.51
Online Services Index (OSI)	0.6765	0.6821	0.5824	0.5169	0.5529	0.47
E-participation	0.5952	0.5795	0.5714	0.4091	0.5595	0.2727
Rank	116	113	137	144	152	153

UN E-Government Knowledge base (2024)

	Kenya	Uganda	Tanzania
	Score (%)	Score (%)	Score (%)
Overall NRI	46.86	31.33	36.31
Government online services	64.87	46.61	41.42
Adoption of emerging technologies	50.77	29.80	37.57
ICT skills in the education system	57.43	N/A	39.39
Rural gap in use of digital payments	65.69	61.87	53.84

Network Readiness Index (2023)

Digital skilling initiatives among East African Countries

- **Kenya initiatives:**

- *Kenya Vision 2030*
- *National Skills Development Policy 2020*
- *Kenya Digital Masterplan 2022-2032*
- *Presidential Digital Talent Graduate (PDTG) Internship; Ajira digital initiative and Whitebox Initiative:*
- *Strengthening Citizen-Centred Public Service in Kenya through Huduma Centres*
- *Establishment of the E-citizen platform*
- *The Sessional Paper No.14 of 2012:*
- *The Sessional Paper No. 1 of 2019:*

Kenya initiatives cont'd

- *Kenya National Policy on Gender and Development 2019*
- *Digital Literacy Programme*
- *National Skills Development Policy 2020*

• **Tanzania initiatives**

- *Tanzania Vision 2025:*
- *Tanzania's Mini Tiger Plan of 2011/12–2025/26:*
- *The ICT policy of 2003 Revised in 2024*
- *National e-Government Strategy in 2009 revised in 2013 and 2022*
- *The Nifanyeje? - The One Stop Shop for Information*
- *Establishment of the National Digital Education Strategy 2024/25 – 2029/30*

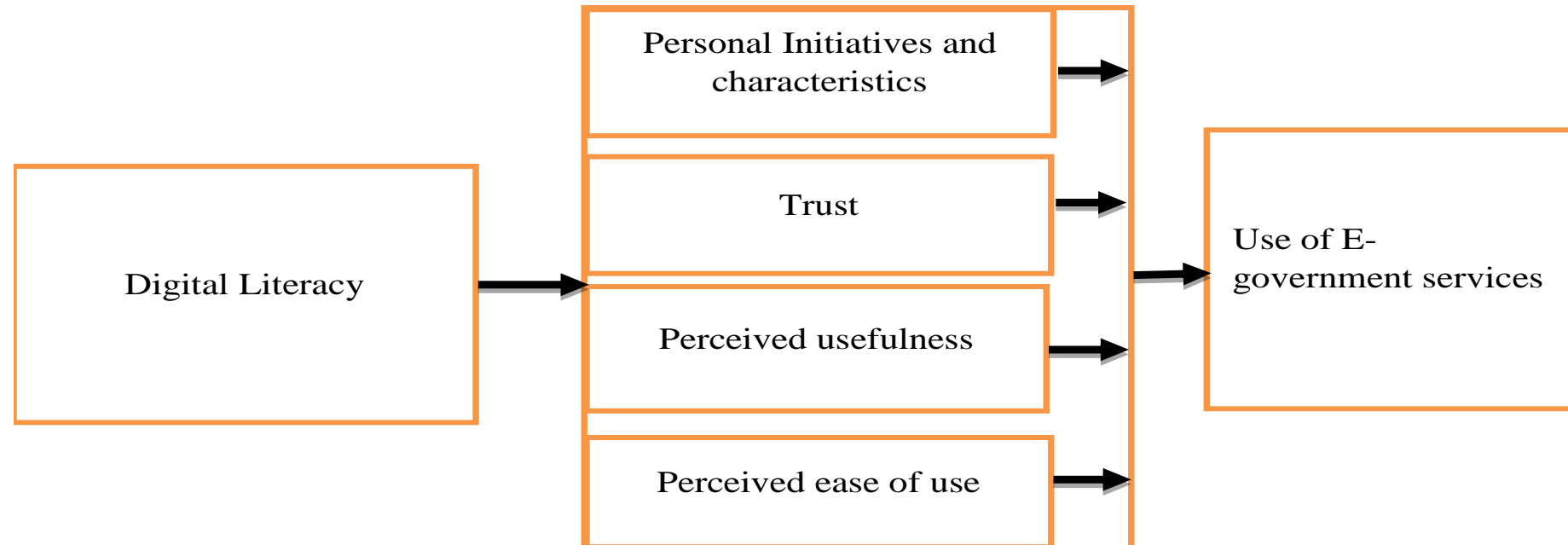
Uganda Initiatives

- *Uganda Vision 2040:*
- *Third National Development Plan (NDP III) 2020/2021- 2024/2025:*
- *Digital Transformation Road Map 2023/2024 - 2027/2028:*
- *Establishment of Implementation Strategy for the Pilot Digital Skills Acceleration Programme 2023/2024 - 2025/2026*
- *Use of Libraries to promote digital literacy*
- *Development of the Education Digital Agenda Strategy 2021–2025*

Gaps

- Little is known on how the use of digital technologies to interact with the e-government services is largely dependent on digital literacy.
- The approach regarding digital skilling out of the formal education system is in some cases addressed under the approach of digital skilling in the formal education system while it ought to be treated differently (Bashir and Koji, 3030)
- There is no nationally recognized body standard for coordinating courses that are for beginners with no prior computer or internet experience
- Digital skilling in disadvantaged localities to improve the digital and informational literacy of disadvantaged children, youth and adults through multimedia computer system is still a big challenge.
- There is no special programme to assess the pace made in increasing number of digital savvy citizens.

Findings and discussion: Does digital literacy matter?



- **Influence of Digital Literacy on Personal Initiatives to use e-government services**

- Study conducted in South Africa by Fasasi & Heukelman (2017) concluded that high digital literacy and a low digital divide could help to build effective e-government sustainability in developing societies.
- A study carried out by Samuel et al. (2020) in developing countries found that citizens with digital literacy in cities found mobile digital technologies as useful and easy to use to find e-government services
- An individual's digital literacy influences the use of e-government services. Building digital literacy through ICT preparedness and training, as well as creating awareness, is fundamental to advancing the compelling utilization of digitalized services.

- **Influence of Digital Literacy on a person's trust to use e-government services**
- Abdulkareem & Mohd Ramli (2022) investigated the usefulness of trust in the e-government service delivery in Nigeria and indicated that trust in e-government predicts the public value of e-government and mediates the relationship between the quality dimensions and the public value of e-government.
- A study by Abdulkareem and Oladimeji (2024) found that digitally literate citizens are likely to find e-government services more useful as they are better able to validate the accuracy of online government information.
- In the study conducted by Ladislas (2022) in the Democratic Republic of Congo, it was found that low digital literacy had greater impact on e-government low adoption and use.

- **Influence of Digital Literacy on Perceived Usefulness of E-government services**

In a study conducted in Tanzania by Linje et al. (2022), it was found that some citizens, and even some leaders, were still full of pessimistic orientation regarding the use of government electronic services; they were disinterested and lacked interest and confidence in using government digital services. The respondentsaid:

- *“I can’t and I have no courage of putting things there, I have been a leader for more than ten years, I have not applied this, and I don’t think I will.” (Linje et al., 2022, p. 257)*
- A study by Lin et al. (2011) in Gambia concluded that perceived usefulness has strong influence on user-intention towards e-Government products

- **Influence of Digital Literacy on a Person's Perceived Ease of Use of E-government services**
- A study conducted by Kasyoka, et al (2022) on the way digital literacy influences the implementation of electronic tax administration systems amongst Small and Medium Enterprises in Nairobi City County found that there is a statistically significant positive relationship between digital literacy and the ease of use of e-tax administration systems.
- **Discussion**
- Top down oriented initiatives are largely studied on how they lead to successful implementation of e-government rather than how the bottom up approaches have been successfully applied to yield expected results of e-government service delivery

- Despite an increase in mobile phone usage in the selected cases of Uganda, Kenya and Tanzania, studies have revealed that a large portion of the population cannot use digital technologies to search for information because they lack the necessary skills in digital technologies(Salam et al., 2018).
- e-government developers fail to actively involve citizens in the implementation of e-government, the vast majority of people are unaware of such e-services that are offered(Kagoya & Mbamba, 2021).
- People's lack of faith in digital services is responsible for their low use of government-provided e-services, because access to these services depends on individuals' confidence in their security (Dewa & Zlotnikova, 2014).

- The pessimistic orientation of citizens regarding the use of government electronic services exacerbated by being disinterested as well as lack of interest and confidence in using government digital services. To emphasize, the researcher quotes the councilor:
- *“I can’t and I have no courage of putting things there, I have been a leader for more than ten years, I have not applied this, and I don’t think I will.” (Linje et al., 2022)*

- **Conclusion**

- The main obstacle to successful use of digital technologies among the citizens to access e-government services is inadequate or the lack of digital literacy among the people.

- **Recommendations**

- First, “Digital-first and digital-by-default” strategies prevalent among most African countries run the risk of leaving behind the most marginalized citizens
- Second, stakeholder engagement and communication is key: A stakeholder engagement plan and an elaborate communication plan need to be incorporated in the plan for citizen ‘buy-in’ and support for successful implementation.
- Third, there is a dire need to have a streamlined coordination between Ministry responsible for information, communication and information technology and the Ministry of Education to explicitly acknowledge the unique challenges citizens face in accessing and benefiting from ICT opportunities.

- Fourth, marginalised citizens are least able to make effective use of e-Government services as illustrated in the following quote:

“Even if differential access to technology could be countered through a universal allocation of technology, disparities among people, such as better education, refined social skills, and influential connections all translate to a greater ability for the better-off to use technology for their own purposes ... The greater one’s skills and capacities, the more value technology has (Toyama, 2011)”

- Fifth, policy makers should prioritize interventions in the implementation of a comprehensive roadmap for actualising digitalisation aimed at enhancing digital literacy among women and addressing cultural and religious practices that restrict their opportunities to engage with digital platforms by providing women, with the tools to increase their knowledge and skills to mitigate cultural barriers

- Six, bridging the digital divide begins with education. The authorities responsible for ensuring extension of ICT to underserved areas among others, should forge the public-public partnerships to foster equal access to digital literacy tailored programmes for addressing unique needs and learning preferences of the different categories of citizens to develop the skills needed by the citizens to thrive in the digital era.
- Finally yet importantly, citizens should give prime importance to digital literacy by having a nationally designated authority to spearhead elementary digital skills aiming at equipping the general public with elementary digital skills