Exploring the Factors Contributing to Digital Communication Inefficiency in South Sudan's Government Institutions

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Abstract

The aim of this thesis was to explore the factors contributing to digital communication inefficiency in the South Sudan's governmental institutions. The current technological deficiencies and inefficiencies facing the government institutions in South Sudan necessitate the needs to explore the gaps in the day today communications. To do this, eight experts in the field of media, digital and strategic communications from variety of government entities were interviewed in the South Sudan capital, Juba, using the qualitative research method coupled with descriptive approach. The findings of the study revealed that low levels of literacy, poor digital communication structures, as well as high level of ignorance were the main factors contributing to digital communication inefficiencies in South Sudan and particularly South Sudan's governmental institutions. In addition, it was also found that ignorance among the South Sudanese government officials and line ministries to adopt to digitalization contributing to the underutilization of digital communication in the country was backed up by the level of hesitance among the officials to adapt to the use of digital related gadgets, for instance; emailing system. The ignorance was also attributed to the lack of mass sensitization and poor communication networks across the country. These include poor technological infrastructures like mobile telecommunications network, low capacity on the already available digital communication channels. The study calls for the National Communication Authority (NCA) to initiate and implement a bottom-up digital policy that transforms the capacity of all the government employees both senior government officials and the bureaucrats in the public institutions. This is the first study to investigate the issues of digital inefficiencies in South Sudan. Therefore, it contributes to debates and understanding of the current issues facing the public institutions in the realm of growing digital communication gaps in South Sudan and the region as a whole. Also, this is the first research in the field of communication to use the Global ICT enabled change theory, a theory which has never been used previously in this field and context; and this enhances public understanding on digital communications.

Keywords: Human Resources; Economic Development; HR roles; South Sudan

Introduction

The global analysis shows that the strength of any nation is not only measured by the means of their military capacity but also in the progress of its Information Communication Technology (ICT). According to the Business Monitor International (BMI), Kenya's Information Technology (IT) market was valued at $635 million at the end of 2020, with computer hardware sales totalling $360 million, while IT software sales were valued at $174 million and the balance on

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other services. Telecommunications and broadcast equipment also grew by 6% at the end of the year. Kenya is at the forefront of technological innovations in the region and is often referred to as Africa's 'Silicon Savannah.' The Government of Kenya (GOK) has invested heavily in the ICT sector and has recognized the sector as a key contributor to the country's Gross Domestic Product (GDP). Kenya is a regional leader in terms of broadband connectivity, general ICT infrastructure, value added services, mobile money, and mobile banking services. Tanzania is currently running a thriving economy and its one of the fastest growing economies in Africa due to efficiency and investment in digital economy, which has resulted into execution of strategic projects initiated by the Fifth Phase Government. The digital economy is the worldwide network of economic activities, commercial transactions and professional interactions that are enabled by information and communications technologies (ICT). It can be succinctly summed up as the economy based on digital technologies. However, in the past few years, South Sudan has been trying to connect to the World through digital means.

In September 2020, the South Sudan government announced the introduction of e-government services as part of its drive to tackle graft and ensure maxim efficiency, according to South Sudan's Ministry of Information, Communications and Postal Services. The initiative was in form of a partnership between the Ministry of Information, Communication, Technology and Postal Services and Crawford Capital, an ICT company operating in South Sudan. The rationale behind the e-government services was to strike a balance between economic objective ad health exigencies amid a corona virus pandemic which was changing the way governments operate. Under the new partnership, citizens were expected to access services for the acquisition of e–passports, e-visa and other immigration documents through government related e-government portals. Decades of conflicts have prevented the development of media and telecommunications infrastructures and have destroyed most of the past little infrastructure that once existed. A 2015 report and survey conducted by Internews, an international non-profit organization working in South Sudan, found that 34% of the population in South Sudan have never had access to radio, television, newspapers, internet or mobile phones as well as digital gadgets at all. On the same note, the same report shows that penetration of digital communications remains comparatively low relative to other East African countries, namely Kenya, Uganda, Rwanda and Tanzania. However, corporate actors are investing in basic infrastructures and preferred modes of interpersonal communication as people are partly shifting from traditional mean of communications to digital communications across South Sudan. These include Mobile Telecommunications Networks commonly known as MTN, a South African-based telecommunication network operating in South Sudan, Zain and Digital networks respectively. Zain is a Kuwaiti mobile telecommunications company founded in 1983 in Kuwait as MTC (Mobile Telecommunication Company), and later rebranded as Zain in 2007. Zain has a commercial presence in seven countries across the Middle East with 49.5 million active customers as of 31 December 2019. These include Kuwaut, Bahrain, Iraq, Jordan, Saudi Arabia, Sudan and South Sudan. However, in South Sudan, Zain is one of the leading operators in the country serving over 800,000 customers, according to its website. The mobile operator is part of the Zain Group, a leading telecommunications operator across the Middle East and Africa as a whole providing mobile voice and data services to over 46.5 million active customers as of June 30, 2014. In Lebanon, the Group managers 'touch' on behalf of the government while in Morocco, Zain has a 15.5 stake in Wana Telecom, now branded as 'INWI' through a joint venture. It is also listed on the Kuwait Stock Exchange.

Digital Telecommunication Company, branded as "*Truly Junubia*", meaning truly South Sudanese, is a first South Sudanese owned telecommunication network founded in late 2021, with the purpose of facilitating communication and promoting the information communication technology (ICT) in Juba and many parts of the country. As a customer-centric company, it is also dedicated to providing a modern experience service by bridging the digital divide through meeting hopes & expectations of their customers. Despite South Sudan's government efforts to achieve digital communication efficiency in South Sudan, still the impact of digital communication is not yet known across the country. In South Sudan, most of the governmental institutions still operate manually despite the availability of digital communications channels due to lack of massive sensitization about the importance of the digital gadgets. The other factor contributing to the digital gap includes ignorance due to cultural norms. In South Sudan, indigenous cultures and traditional values conflict with the modern technological practices. Also, South Sudan's government officials are not comfortable with the use of technologies simply because most of them were educated in old Sudan where there was either no technology or minimum use of technology. Moreover, most of the government officials associated the use of technology with accountability and as a result, they fear to adopt digital technology because they see it as a threat and exposure to accountability. Based on the above cited facts, this research therefore aims to empirically investigate the factors contributing to Digital Communication inefficiency in South Sudan's Government Institutions, as well as strategies necessary to enhance digital communications in South Sudan. This is a focal of this research.

Research Objectives

Given those issues discussed above, the objectives of this research are as follows;

- The overall objective of this research is to understand the factors contributing to digital communication failures in public institutions in South Sudan.
- The second objective is to raise awareness on the importance of digital communication technologies among the government employees.
- The third objective is to understand the contributions of digital communication to the economic development
- The fourth objective is to develop strategies on how to address these discovered failures (inefficiencies), and make some possible recommendations for future effectiveness of digital communication in South Sudan government's institutions.

Research Questions

This particular research carries the following questions;

- What are the factors contributing to digital communication inefficiency in South Sudan Government's Institutions?
- What is the importance of digital communication technologies to the government employees?
- How does a digital communication contribute to national economic development?
- What need to be done to address the challenges associated with digital communication inefficiency in South Sudan government's institutions?

Methodology

In this study, we explored ideas, thoughts and feelings from the respondents using the qualitative research method. We captured changing attitudes within a target group such as consumers of a product or service, or attitudes in the workplace. The qualitative approaches to research are not bound by the limitations of quantitative methods. We also addressed the research questions as well as enabled deeper understanding of context, experiences and phenomena. In the related note, we tried to explore realities in the dilemma of digital communication impasse in most of the government institutions in the Republic of South Sudan; constraints and opportunities. The study also provided much more insights on digital communication inefficiency in South Sudan. We provided open ended questions that improved responses on the complexities hindering digital communication success in South Sudan.

Literature Review

The Concept of Digital Communication

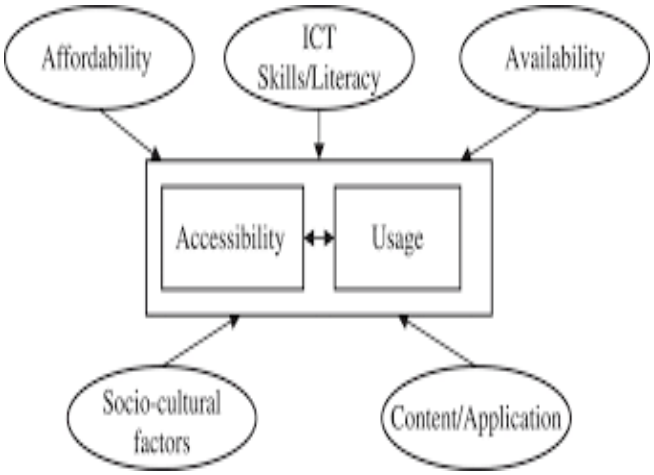
Communication is considered one of the most important interactivities among human beings. Due to the development of technology, many more types of communication have been introduced to satisfy the increasing contact needs of people. Together with the traditional media which everybody has been familiar with for a long time like television, newspapers, books to mention but a few, the whole world has experienced a considerable rise of digital communication. (Kemp 2020). Digital communication, which refers to any form of communication taking place through technology and electronic mediums, has marked a tidal wave of revolution in the 21st century (Nguyen, 2017). Mobile phones, social networking, and texting have changed the way people communicate. These forms of communication have created a new social structure governing how, when, and with whom people interact, according to Eastern Kentucky University (EKU), a public university in Richmond, Kentucky in the United States, 2020. Digital communication provides users with instant access to others on an unprecedented level. (Nguyen 2017). Many businesses prefer using email over a phone call because email provides a record of the message. (Townes Haas 2018). This means users need to think about what they say when using email. This is the same for many other communication methods like texting and social networking sites even after the information is deleted it continues to "live on" in cyberspace (Tolnaiova 2020). In some situations, speaking to someone face-to-face can talk time a lot of time compared to digital communication through emails, Teams, Zoom and Google Meet as they are cheaper than looking for the persons, according to Pew Research Center, 2018. Mobile phones and other devices allow for personal communication. Many parents now believe their children must have a cell/smart phone – so that they are able to reach their children at all times (Selingo, 2004). This has moved even to the primary level, as young students are now carrying a cell or smartphone.

Theoretical framework

There are different theories that examined and elaborated about different essence of communications and its contributions to work simplification and transparency globally. Under this study, the main focus is centred on "the commonality framework for ICT-enabled change" (Iveroth, 2010). The foundation is also based on Iveroth's (2010) transactional-, translational-relational- and stabilizing processes model. These processes are extended with relevant organizational and change-communication theories. Extensions also derive from case studies

similar to Iveroth (2010)—research with an emphasis on similar global ICT change initiatives—but also other relevant, non-ICT change initiatives. This means, it also involves the suggestions and submissions put across by different scholars and existing literature on the impact of the digital communications across the world.

Figure 1.1 Framework for understanding Digital Communications



Source: Global ICT enabled change, 2010.

The application of information and communications technology (ICT) tools has transformed how service activities are conducted. (John Zysman, 2013). When activities are formalized and codified, they become computable. Processes with clearly defined rules for their execution can be unbundled, recombined, and automated. The codification of service activities allows the rapid replication, analysis reconfiguration, customization, and creation of new services—a process referred to as algorithmic revolution. Capturing the possibilities from services transformation presents new policy challenges for governments and regions. This theory is organized as follows. The first part depicts the dramatic and pervasive transformation of services that include ICT skills, accessibility and usage, availability and affordability as the other phase highlights on content or application as well as social cultural factors. The whole concept provides a framework for analysing and getting into ICT transformational world. This means that for digital communication to be realized accessibility, application and skills development must be prioritized (Feldman 2013).

Factors contributing to digital communication inefficiencies globally/digital divide

Globally, the digital divide in developing countries includes a lack of access to digital technology and internet service. It can also include a lack of accessibility to modern, high-quality new technologies such as mobile phones and Wi-Fi access, according to TechTarget, an American company which offers data-driven marketing services to business-to-business technology vendors, 2020. The US Federal Communication Commission's (FCC) 2019 Broadband Deployment Report indicated that 21.3 million Americans do not have access to wired or wireless broadband internet. As of 2020, BroadbandNow, an independent research company studying access to internet technologies, estimated that the actual number of US Americans without high-speed internet is twice that figure. According to a 2021 Pew Research

Center Report, smartphone ownership and internet use has increased for all Americans, however, a significant gas still exists between those with lower incomes and those with higher incomes. The digital divide is often characterized as a digital divide cascade which is nuanced into different types of inequalities including unequal capabilities, engagement, and use outcomes in addition to inequalities of access and use. This points to the importance of identifying and aiming to remedy inequalities in what people are actually able to do and achieve with digital technologies (Burtch & Chan 2019; Andrade & Doolin 2016). In settings with advanced infrastructures and economy, physical access is not a key source of digital inequalities and information system (IS) studies that examine issues of unequal access show that access gaps are closing with the exception of marginalized population groups. Nevertheless, there is still a stark difference between access (first-order divide) and actual use (second-order divide) (Bucea et al. 2020).

The latter relates to differences in digital skills, autonomy, social support and the aims of digital technology use (Rockmann et al. 2018). Going beyond socioeconomic demographics, additional personal contributing factors have been identified in the literature related to: (a) motivation, (b) personality traits (for instance, openness, extraversion, and conscientiousness), (c) digital skills. Many of the studies reviewed focus on the elderly who are also referred to as "digital immigrants" as opposed to "digital natives" that have been interacting with digital technology since childhood. Additionally, several studies focus on marginalized population groups. In the paragraphs that follow, the research present findings organizing them according to the different groups studied. However, it has also shown that these benefits are not within the reach of everyone, owing to the different dimensions of the divides in access to and use of these technologies. Divides in access, in uses and skills and in opportunities for inclusion in an increasingly digitalized world are reproduced along the main lines of the region's social inequality matrix, which includes socioeconomic status, stage in the life cycle, geographical location, ethnic or racial origin and gender inequalities, among other dimensions (ECLAC 2016). Therefore, it is also necessary to understand the new forms of power and the new public sphere emerging from the digital realm, dominated as this is by a few global companies. Although the digital space could be thought of as a continuation of the analogue space, it also involves new tools and forms of participation (ECLAC 2016; Claro et al. 2020). The digital revolution has changed and will continue to change consumption, production and business models. In addition to increasing the productivity and well-being of users, these changes can fit well with objectives of growth, employment, inclusion and environmental sustainability (ECLAC 2020c).

Digital literacy

Today's students are familiar with digital technology and they generally know how to access, create, and share digital information (Ting, 2015). Greene, Yu and Copeland (2014) revealed that for someone to be digitally literate, one may not only need to be able to search and manage, but also to scrutinise and integrate digital information. Although today's students are generally considered tech generation, many of them find it difficult to do so effectively (Ng 2012).Gilster (1997) supports the notion that to be digitally literate, one does not just know how t o search the information from the web, but also has the ability to understand and assemble information from different print and digital sources. Digital literacy involves the mastery of ideas, and it is not just about using the technology itself.

The European Framework for Digital Literacy (EDL), an outcome of the DigEuLit project, initiated to recognize the importance of digital literacy, defines digital literacy as follows: In its

description digital literacy refers to the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesize digital sources, construct new knowledge, create media expressions, and communicate with others in the context of specific life situations in order to enable constructive social action and to reflect upon this process. Martin (2006) and Jisc (2014) emphasise that digital literacy is context-dependent. They further suggested a seven-element digital literacy model: media literacy, information literacy, digital scholarship skills, learning skills, communications, and collaboration, career and identify management, and ICT literacy. Ng (2012) explains that digital literacy comprises three key dimensions; technical, cognitive and social-emotional. The technical dimension concerns the skills needed to use information technology (IT) proficiently. The cognitive concerns the skills needed to search, evaluate and synthesise digital information critically, and at the same time, to be conscious of any ethical, moral, and legal issues. The social emotional dimension concerns the skills needed to socialize online in a proper manner. Bawden (2008) explains that the concept off digital literacy is very broad and can include very specific skills and competencies to general awareness and perspectives. He distinguishes four components of digital literacy; underpinnings: the ability to read and write as well as to use software packages and computers, background knowledge – an understanding of how digital and non-digital information is created from various forms of resources and communicated; central competencies – the ability to assemble knowledge from multiple sources and attitudes and perspectives, the ability to learn independently as well as to exhibit good behaviour in a digital environment. Digital literacy needs to be renewed as digital technology evolves over time. According to Martin, 2006, it can be classified into three levels: Digital competence, digital know-how; digital usage, applications of digital competence; and digital transformation, creation of new knowledge as a result of digital usage. Prior et al. (2016) observed that students can exhibit different levels of digital literacy. Thus, assuming that all the students have the same level or a certain level of digital literacy can lead to a problem in online learning. In this way, what the students are able of doing might be different from the expectations of teachers.

Adoption to Digital Literacy

Digital technology has become an integrated part of education (Benson & Kolsaker 2015) and is changing the ways today's students learn (Coccoli et al. 2014). Digital technology includes a wide range of computing hardware and software, for instance, mobile devices, web tools, application software, communications and storage services to mention but a few. (Mohammadyari & Singh 2015; Ng 2012). Students use digital technology for learning activities as reading and sending emails, accessing learning management systems, reading e-journals, or e-books, doing online quizzes, participating in discussion forums, and so forth (Jones el al. 201; Waycott et al. 2010). Educational institutions are taking advantage of advances in digital technology to engage their students with various teaching and learning modes. (Porter et al. 2014). One such mode is blended learning (Porter et al. 2014) which integrates technologies into learning delivery process, and hopefully overcome some limitations of face-to-face classroom learning (Akkoyunlu & Soylu 2008). Blended learning allows students to learn anytime, anywhere, and in the way they want to. Complementing face to face classroom teaching with online learning (Coccoli et al. 2014), blended learning has become popular among educational institutions. However, Joy and Garcia (2000) caution educators against assuming that students would learn better from technology-based learning systems.

Theoretical Review

Schroeder (2018) points out that social theory needs one comprehensive mediatisation theory of social life, since the internet and media shape social change. So far, social science and its sub-disciplines have generated several theories on the effects of the internet and media on social change, looking at economics, politics and culture separately. The effects of the internet and media on economics, politics and culture might be seen as separate because the media are a subsystem of society: they connect people, but not people to social developments as a whole. However, a mediatisation theory of social life should consider that different effects on different spheres. Critical Analysis of Digital Communication Literature Sonderfenster, DC Lead "· Nr. 12/ 2020, 2 spheres depend on a common digital infrastructure and on processes and services competing for the same – and limited – users and consumers' attention. Ragnedda (2017) updates scholarly analyses of the digital divide by delivering a study informed by Weber's sociological approach. His angle stresses that the digital divide not only reflects existing inequalities but also amplifies them in the offline world, as people affected are missing the new opportunities for well-being. Key to this understanding is the set of expertise, experience, skills, knowledge, digital literacy and access allowing for the conversion of digital capital into economic, social, cultural, personal and/or political capital. Gerbaudo (2018) looks into the contemporary topic of "participationism", a radical democratic creed coupling universal participation in policy-making with the possibility of disseminating power inside the digital parties, both enabled by the adoption of new digital technologies. Such a creed glorifies participation as the ultimate source of political legitimacy, while vilifying representation. Gerbaudo's critical assessment of digital parties' practices and particularly of the Five Star Movement in Italy shows that participationism remains an ideal. In reality, digital party staff assigned to the management of decision-making platforms set the content, timing and framework of online consultations, leaving members only the option of expressing a preference over a limited and largely predefined set of choices, while party officials filter and choose selectively among proposals coming from members. Hence, digital political participation in these cases is reactive rather than active and truly participatory.

Zuboff's (2019) work on "surveillance capitalism" is probably one of the most celebrated academic works of the last decade. Her interesting analysis proposes a transformation of a capitalist system supported by the use of power to exploit labour, into one that uses power to extract and commercialise human experience. Her vision of contemporary society is premised on two realities: one is Google's – and other tech giants' – business model, which has been progressively adjusted in order to profit from the collection and analyses of users' information in order to predict and influence behaviour. The second is the "full-blown ideology of inevitability" (Zuboff 2019: 220) diffused by tech-giants and upheld by neoliberal economic principles, which silently convince many people that waving some fundamental rights is the logical and unavoidable consequence of technological change. Inspired by these books, the contributions written for the CADCL course and selected for this issue of the Salzburger Sonderfenster chose either a "problems-vs.-solutions" or a "good-vs.evil" rhetorical approach to comply with the requirements of being critical and looking at the different sides of the issue explored. For all of the hype that tends to accompany new communications technologies, most end up providing new ways to do the same in the unique digital ways, hence not time wasting. Perhaps, there are reasons to believe the internet is different. For many people (especially young adults), the sheer volume of communications they send daily through e-mail, text messages, and social media almost certainly exceeds their volume of face-to-face exchanges (Perrin & Kumar, 2019). The

nature of these communications is highly diverse, encompassing audio and visual exchange that is synchronous and asynchronous alike. And the impact of digital communication also seems largely unprecedented—on outcomes as diverse as political activism (Earl & Kimport, 2011), subjective well-being (Kross et al., 2013), and the maintenance (Ellison et al., 2007) and emergence (Rosenfeld et al., 2019) of relationships.

Strategies for addressing digital communication gaps

Policy-making is considered instrumental for closing the digital gap and a mix of policy measures has been suggested in prior research. In general, policy initiatives can include subsidies targeting specific digitally disadvantaged segments as for instance rural populations (Talukdar & Gauri 2011). For instance, governments can apply strong intervention policies to provide equitable ICT access also in rural areas (Park et al. 2015).

Furthermore, digital divides may be addressed at scale by crafting policies to equip underprivileged groups with better communication skills (reading, writing, and software use) enabling meaningful engagement with digital platforms (Burtch & Chan 2019). Government policy makers can collaborate with schools to support students from low-income households through the provision of home computers aiming to reduce the effect of socio-economic inequalities among students (Wei et al. 2011). Policies raising the priority of IT, protecting property rights, and enhancing freedom of the press and openness, can help to stimulate educational advances, labor-force participation and income growth, all of which contribute to advancing technology use (Pick & Azari 2011). Policy measures should allow room for local adaptations, as contextual and local elements seem to play a role for technology users and could influence policy success (Racherla & Mandviwalla 2013). Effective evaluation mechanisms make it easier to develop new policies addressing digital divides (Chang et al. 2012) helping policy-makers to refine initiatives targeting certain segments of society, such as elderly people and socio-economically disadvantaged groups (Hsieh et al. 2011).

Contemporary workplaces can help by taking greater responsibility for IT education of their employees even when they are close to retirement. Developing the digital skills of seniors while they are still employed is important for preventing digital exclusion after retirement (Rockmann et al. 2018). Overall, employment has a pivotal role in explaining citizen usage of e-government initiatives (Sipior et al. 2011). As an employee, an individual may have access to the Internet at the place of employment. Furthermore, employment demands may increase the confidence of an individual in performing new tasks. Thinking beyond workplaces, policies that leverage existing communities, social structures, and local actors can also help in reducing digital inequalities (Racherla & Mandviwalla 2013). Such policies can stimulate public/private partnerships with grassroots organizations that already have “hooks” in local communities. Moreover, long-term government policies could set a goal of encouraging growth in social capital within communities (Pick et al. 2018).

Proper training and education can help mitigate digital inequalities (Van Dijk 2012). For instance, platform operators can provide coaching services for underprivileged populations (Burtch & Chan 2019). Furthermore, information campaigns also have a significant role to play, digital divides may be narrowed if vendors engage in trust-building campaigns (Fox & Connolly 2018). Integrating digital education into curricula can also contribute to reducing digital inequalities (Reinartz et al. 2018), and education campaigns can stimulate the adoption and usage of ICTs bridging rural-urban digital gaps. Rural communities typically lag in digital

skills, and digital literacy training programs can improve digital engagement in rural communities. Digital literacy programs targeting senior citizens can help them develop the necessary skills and abilities to use digital mobile devices so that they could be part of the Digital Society (Carvalho et al. 2018; Fox & Connolly 2018; Klier et al. 2020). Educational efforts for the elderly must be practically oriented in order to show directly what is to be gained by becoming more digital (Holgersson & Söderström 2019). In addition, social networks, friends and family are important for supporting the training of disadvantaged people in technologies; family emotional and cognitive support can increase the elderly's digital capabilities, reduce computer anxiety and increase trust and motivation for learning (Xiong & Zuo 2019).

The design and development of ICT solutions should take into account individual differences for creating proper stimuli to different user groups. For instance, the use of governmental e-services can be improved by making them more engaging, interactive, and personal to address a country's or region's cultural norms (Zhao et al. 2014). This makes the role of appropriate design for overcoming the digital divide a center of attention. Lameijer et al. (2017) propose that design-related issues should be considered and evaluated to better understand technology adoption patterns among elderly. Also, the study by Klier and colleagues showed that there is a potential to shift older individuals towards a more active engagement with digital media by ensuring ease of use in the design of digital services (Klier et al. 2020). Furthermore, the needs of groups with disabilities ought to be taken into account when designing information systems for the general public (Pethig & Kroenung 2019). It is important to integrate assistive functionalities in general IS to emphasize authentic inclusiveness. Overall, research points to the importance of functionalities that suit the needs of specific user groups to stimulate the use of digital technologies.

Discussion and Conclusion

This research section discusses the main findings obtained findings throughout the research meant to fulfil the project objectives explained in chapter one of the research project. Based on findings, the study found out that ignorance among the South Sudanese government officials and line ministries to adapt to digitalization is one of the factors contributing to the digital communication insufficiencies in the governmental institutions. This is backed up by the level of hesitance among the officials to adapt to the use of emails and other digital related gadgets. The ignorance was also attributed to the lack of mass sensitization and poor communication networks across the country. These include poor technological infrastructures like mobile telecommunications network in South Sudan, low capacity on the digital communications. Nevertheless, this means that majority of the employees are not maximally equipped with necessary skills and knowledge on digital communications.

Secondly, the same situation can be attributed to the failure of the Ministry of Information, Communication, Technology and Postal Services to fully capacitate and sensitize the people on the importance of digital communications in the current ICT world. Furthermore, the fact that the digitalization workshops for the general public are not conducted also turn out to be one of the setbacks preventing digital communications from being adopted by many South Sudanese. The interviewees also identified high level of skills gaps as key challenge to the success of the digital communications in South Sudan. According to one of the interviewees, there is little bit of gap in skills building. The interviewees attributed that the Ministry has got the ICT institute, and the institute has never been efficiently operating due to also lack of capacity. This means that most

of the people do not have that capacity. This is attributed to the failure by the Ministry of ICT to have corroborated with the public universities like the University of Juba to mention but few. Most government institutions do not have the right infrastructures in place to handle the digital communication. Lack of skilful ICT personnel is also a challenge. This is one of the most critical factors and it is connected to the lack of proper ICT equipment in the country. Furthermore, digital Communication is not prioritized in the annual budget of the government. This is because it is seen as minor topic especially by most of the constitutional post-holders. In this case, lack of priorities in the government challenges the call for digitalization in the country. On the other hand, the research found out that lack of proper coordination and awareness in the government system as far as digital communication is concerned is one of the factors contributing to digital communication failures in the government settings.

The research also discovered that digital illiteracy is also contributing to the failures of the digital communication in South Sudan. In this way, many will get to realize that there is a big force in the government that's little bit out of the age of the digital technology. This means that there is a lot of digital illiteracy among the government employees. This challenges the digital communication in the Republic of South Sudan. Furthermore, the research figured out that there is huge gap in skills building. The Ministry of Information, Communication, Technology and Postal Services got an ICT institute; however, the ICT institute has never been efficiently operational due to also lack of capacity. Most of the people do not have the required capacity as well. But this requires skilled personnel to manage the facility. The improvement of the sector would require partnering with the academic institutions to bridge the gap. The other issue diagnosed during the course of the study is hesitance to accepting new things. South Sudanese have got a tradition or culture of not accepting new things. In nutshell, many people do not want to see transparency in the systems. So, some of the resistances to the functionality of the digital communication include turning away from accountability because the digital communication bridges the gap. On the other hand, there are scenarios where government generate revenues and they are corrupted by few individuals. This means, most of the people do not want those loopholes to be closed. This is where they get some of the money that they get for themselves as individuals, but at the end, it is because of the salary and wanting to forgo accountability.

In the perspective of the digital illiteracy, the research found out that people are ignorance about the digital communication especially at the top level of the policy making process, so this means that ignorance is a critical setback to digital communication in the country. On the related note, many people in South Sudan especially policy makers do not see the significance and power of digital communication. One of the challenges diagnosed during the study is that South Sudan does not have efficient infrastructures, efficient digital infrastructure. In other parts of the World, infrastructure facilitates development and if there is an existing infrastructure, you have it, one can easily talk of coverage. For the case of South Sudan, the country would start talking about delivering digital communications delivering services. But at the movement Juba city only is 100 percent covered with communication infrastructures as opposed to other states. As a result of the study, the Ministry of Information and Communication disclosed that they were working hard to improve the digital infrastructure. These include strengthening collaboration with the partners like World Bank (WB) to enrol out a broadband network for the country. The Ministry of Information and Communication, Technology and Postal services is also using the Universal Service and Access Funds to extend the communication services to the rural areas since most of the digital operators in South Sudan are owned by private companies. The fibre optics providers are also private. Secondly, the Ministry of Information, Communication and Postal Services are

considering possibilities to develop the digital market in South Sudan. In that regard, the Ministry is trying to link the country to the region, trying to link to the East Africa Region, as the country is already a member of the region. Through the Eastern African digital integration project; South Sudan is trying to link there so that skilled personnel are developed to develop digital market. South Sudan has come out with the regulations, for the electronic transaction. In that agreement, the Central Bank of South Sudan should be having oversights over these banking services or money transfers, Mobile money is being adopted in South Sudan through MTN Mobile network. South Sudan is also taking steps to develop a 10 -year digital strategy, especially digital foundation for South Sudan. The digital strategy is a holistic kind of plan, for the development of the whole digital economy of South Sudan, and by that the government is trying to source money from the various foundations and well-wishers so that the initiative is achieved to enhance digital transformation of South Sudan.

The government of South Sudan is already up for the e-government. There is also a draft strategy for the e-government in most of the government institutions. These include e-health, e-services, e-visas, e-taxes. This is being geared to improve service delivery across the country. The Ministry of ICT is also working hard to establish what is called Digital National Authority (DNA). The authority will be putting standards for regulating digital transformation in the Republic of South Sudan, both in the government or private sectors respectively. Additionally, South Sudan is also benchmarking with Kenya, especially with the ICT Authority of Kenya so that the country establishes digital national authority to regulate the transformation of digital communication. Already, there is Cybercrimes and data protection provision 2021, so the country also needs to do the benchmarking to see how to improve the provisional order, all those are the pearls of the digital communication. According the Ministry of Foreign Affairs and International Cooperation (MOFA & IC), the department of ICT in the Ministry was undertaking possibilities to meaningfully achieve a strategic plan which they started to implement since 2020. But due to lack of resources, most of the plans have not been accomplished. However, during the course of this research, the two institutions are headed to implement the digital policy, by putting in place right infrastructure and investing in the education sector to reduce digital illiteracy.

The research found out that there is a need to build the capacity of the personnel at the National Communications Authority (NCA) including financing their policy. To the respondents, this would improve the understanding of the digital communication in the Republic of South Sudan. On the other hand, setting up digital structures in all the ten states and three administrative areas to support the development of the digital communications also turned out one of the strategies to address the digital communication failures. Under the strategy, the states of South Sudan would be equipped with tools and necessary knowledge to enhance digital communication. The interviewees also cited out that high literacy level was needed to increase effective participation of different line ministries using digital gadgets. These include emails, meeting tools for instance, Zoom, Teams, Google Meet to mention but a few. Presently, 83% of the country's population lives in rural areas, and 78 percent of the households depend on tradition means of communication, as opposed to the modern ones like Facebook, Twitter, Instagram and WhatssAp among others.

The government of South Sudan needs to take steps and measures to empower locals in basic communication skills through their digital communication engagements in various sectors so as to boast their skills. Efforts to develop digital capacity in South Sudan in ending illiteracy would

need to take into account the diversity and ensuring gender parities among the South Sudanese in rural and urban areas of different social groups. The government must commit to gender mainstreaming at the highest level and allocate sufficient financial and human resources for proper implementation, monitoring, and evaluation of the ICT engagement that involve all the genders. The pertinent multiple challenges in the South Sudan should not be used as excuses eliminating the women and children in the fight for digital communications across the country. In this regard, the National Communication Authority must prioritize a digital policy targeting all the South Sudanese irrespective of gender, age, social norms and tribal affiliations. In the interest of this particular research, the government of the Republic of South Sudan particularly the Ministry of Information, Communication Technology and Postal Services needs to boost the digitalization of the entire country and the government ministries through engagement in major ICT infrastructural development with the aim of linking the whole country. The recommendation includes paving the routes for the fibre optic cables connecting the major big cities of South Sudan. Alternatively, it is also recommended to install the digital communication system in remote areas where fibre optic cables have not yet reached. There is also a need for the government of South Sudan to create and boost an intranet system in all government institutions to avoid external intrusion into sensitive government data. Meanwhile, the appeal is done with the help of the National Communications Authority (NCA); the chance enables the government to enhance its data storage system. The government also needs to invest more on cyber training of government officials in areas of digital diplomacy and communications by putting more money in the improvements of personnel skills in digital communications and ICT facilities in all government departments. South Sudan government should engage the international players in digital communications to boost its capacity. For example, the capacity of the available partners on digital technology should be assessed and diagnosed and the country use it as an avenue to learn from their experience; build the capacity of the personnel at the National Communications Authority including financing any digital communications-related policy. This enriches the capacity of the communications workforce in South Sudan and embark on the digitalization in the country; set up structures in all the ten (10) states and three administrative areas to support the development of the digital communications. By that, the country is able to take town to the people; put up digital communication campaigns in a bid to embark on clear measures to promote and encourage digital adoption and flexibility; and create digital centres or institutions through National Communication Authority (NCA) across the country to respond to cases of trainings of the inactive workforce. This can begin with full resumption of the ICT College to impart knowledge on the government workforces in a bid to build their communities; find possibilities to collaborate with media fraternity and communications experts on how to achieve digital literacy in the Republic of South Sudan. Critically, most of the South Sudanese now recognize digital technology as one of the modern ways to communicate, therefore there is a need for the introduction of digital technology in the various primary and secondary schools and other high institutions of learning as one of the pillars of the study in the Republic of South Sudan. By that, most of the students will massively learn about it and educate their communities in return. The Ministry of Information, Telecommunication and Postal services should embark on the recruitment of young ICT oriented fellows to inject in new ideas for improving digital communications in the country as a whole. Furthermore, the government of the Republic of South Sudan should make mandatory the email system for all the government institutions to make officials keep importance communications on Gmail accounts. In addition, the Ministry of Foreign Affairs and International Cooperation, in collaboration with Ministry of Information,

should always sit, and review digital skills of the diplomats they send out to represent the country. This is because there is always a need to send a digital minded person who would keep track of the modern communication as opposed to being analogue and digitally inactive. Equipping the line service ministries with digital personnel to ensure maximum digital compliance in the system is another way of ensuring equal access to mobile telecommunication operators across the country. This would enhance the capacity of the locals to understand more on the importance of digital literacy.

Categorically, the study concluded that the digital communications ignorance has huge impact on the operations of most governmental institutions across the country. The study revealed that the failure has interfered with some of the governmental information that could have been stored for quite a long time for reference purposes and review of the information flow throughout the work. The noncompliance to it affects the entire system and that's the information flow within the system. It also prevents accountability and transparency in the system. Furthermore, the same digital communication inefficiency interferes with another crucial element of socialization and networking internally, which is keep track record of the past communications. South Sudan as a country has either less or rare opportunities to ensure that state structures, institutions, strategies, budgets, M & E were enriched to meet the aspirations, priorities, and needs of the South Sudanese. In the perspective, the government of South Sudan should amicably invest in the ICT ministry particularly through NCA in a bid to boost the country's digital capacity. It should at the same sometimes be conducive for the country to accept new talents that bring in vast expertise on the ICT such that the people learn from such talents. It will be a room for the country to learn new ways to build the digital communication. The communication flow in South Sudan can reflect and inform the participation of the locals into the societal development. The people should therefore adopt the digital communication for transparency and accountability purposes. Lastly, South Sudanese not only prioritize the implementation of the revitalized peace agreement on the resolution of the conflict in South Sudan on the provisions cited in the document, but also, ensures a strong digital communication channel to improve the service delivery across the country.

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