Keeping Online Spaces Open

NEEDS ASSESSMENT REPORT

A Needs Assessment on Promotion of Digitally Literate and Cybersecure Users and Inclusive, Online Spaces of Engagement through Digital Security and Hygiene Training of Zambian Civil Society Organisations conducted by Bloggers of Zambia.

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Acronyms

CSO	Civil Society Organisations
FGD	Focus Group Discussion
GRZ	Government of the Republic of Zambia
HRDs	Human Rights Defenders
IDRC	International Development Research Centre
ITU	International Telecommunication Union
MOH	Ministry of Health
ML	Media Literacy
MISA-ZAMBIA	Media Institute of Southern Africa
NGO	Non-Governmental Organisation
7NDP	Seventh National Development Plan
QA	Quality Assurance
ToR	Terms of Reference
NGO	Non-Governmental Organisation
USAID	United States Agency for International Development
WHO	World Health Organisation
ZICTA	Zambia Information and Communications Technology Authority

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Executive Summary

As a precursor to strengthen the democratic foundations of freedom of speech and assembly in Zambia, funded by USAID Zambia, Bloggers of Zambia an independent, not-for-profit enterprise commissioned and undertook a needs assessment survey in four (4) provinces of Zambia namely Lusaka, Southern, Eastern and Copperbelt. The specific districts in which the study was conducted were Kafue, Lusaka, Mazubuka, Livingstone, Chipata, Petauke, Kitwe and Luanshya. The needs assessment was meant to identify and capture digital security behaviours, trends, and needs of at-risk users among the identified target groups in Lusaka, Southern, Eastern and Copperbelt provinces. This needs assessment study provides a basis for establishment and tracking of the impact of the programme areas of interventions over a period of time. The primary objective of the needs assessment was to establish benchmarks for the project at the inception of implementation to establish the conditions against which future changes can be measured.

Methods: The process of identifying quantitative targets involved the use of the Zig Zag method where the result areas, outputs and activities are described. These quantitative targets were translated into questions in a questionnaire which was administered to 1200 respondents randomly sampled from the 4 provinces- Eastern, Southern, Lusaka and Copperbelt provinces, 8 districts (Livingstone, Mazabuka, Kitwe, Luanshya, Chipata, Petauke, Lusaka and Kafue). A total of 300 respondents were selected per province (200 coming from an urban digitally savvy district while 100 were from a rural- less digitally savvy district). Further, of the 1200 respondents, the research targeted 600 female respondents and 600 male respondents. The surveys were administered to the 1200 respondents randomly selected from within the eight districts from public places such as bus stops, shopping malls, teachers from schools, among others. A zig-zag method was used to select the respondents in the communities or zones in each district. In addition, Focus Groups Discussions (FGD) were conducted in triangulating the data and enhancing the quality and were used to qualify the findings from the quantitative survey and better understand the reason behind respondents' feedback. The FGD conducted no more than 10 people in each district among the purposely selected civil society organisations.

The findings show immense opportunities for the project to develop holistic training and capacity building activities that must be underpinned by inclusive, collaborative and coordinated efforts at the community, district and provincial levels. This report, therefore, is a detailed presentation of

the process and outcomes of the needs assessment study. The report has been segmented into various components highlighted in the table contents.

Summary of Findings

- **Household Demographic and Socio-Economic Characteristics:** The majority of respondents were categorised to be in the age group of 18 to 30. The socio-demographic characteristics of the sampled population in all 8 districts was at 8.3 percent each for districts that were considered to be rural or periurban while the urban representation was at 16.67 percent each.
- **Distribution by gender:** The majority of respondents were males 50 percent and the least were females, 49 percent respondents. However, 1% of those interviewed preferred not to mention their identifiable sex.
- **Level of education:** 13 percent had completed primary education. 50 percent of the respondents had completed secondary education, while 30 percent of respondents had completed tertiary education. The majority of respondents were in formal or self-employment represented at 51 percent, while those unemployed at about 32 percent. The least representation was among the students.
- **Digital Access and Usage Internet Usage**: 58 percent of respondents had smartphones followed by 19 percent respondents who had ordinary cell phones with the least owned desktop computers.
- **Digital Security awareness & Knowledge:** 36 percent of those that were interviewed found searching and reading information online safe compared to about 13 percent who said searching and reading information online was not safe.
- **Perceptions and Beliefs on threats of being online:** The majority respondents 25 percent mentioned that significant threats to online were fraud and theft, while, 18 percent of respondents mentioned that the significant threats of online were untrue as this was merely malicious information.
- **Challenges on access to Internet:** The most common challenge was the stability and reliability in accessing Internet at 26 percent while, cost of the Internet connection at 22 percent and the least was fears of what might have online at 8 percent.
- Conclusion: It can be concluded that, based on the needs assessment, a high proportion of youth women and men in Zambia face online violence and are increasingly concerned about their safety in digital spaces. Most importantly, these findings indicate that the digital inequalities tend to build on historical income, knowledge gaps, digital access and gender inequalities. In some cases, such as in rural considered districts, the disparity in access to the Internet also widens the digital inequality gap, including the skills and gender gap among other factors.
- It is also worthy to conclude that only those who are on the Internet are able to participate in the digital economy, apply for jobs online or enrol in online educational courses to improve their skills; while the unconnected are left behind thus the need to increase Internet access in Zambia.
- In addition, the evidence gathered in this needs assessment shows that affordability is the main inhibitor to Internet access and use. Other issues are Internet enabled devices, unaffordable data services and digital illiteracy. This demonstrates that policymakers need to look beyond the supply-side issues when addressing broadband access and usage in Zambia. With data prices having been driven so low and population coverage being much

higher than Internet uptake figures, factors other than just access to signal or not are required to explain why many people in Zambia are still offline. It is therefore critical for policymakers to desist from implementing retrogressive social media taxes that are far more burdensome to the poor and instead focus on policies that improve affordability and digital literacy.

- The barriers to use for many people are therefore not only that they are not covered by a signal, but that people do not have the resources to get online even where they are. The fact that there is wider coverage than the percentage of the population online suggests that there are challenges with the current technology and business models, exclusive spectrum licensing and universal service strategies.

Recommendations

i. There is a need to reduce the disparity in access to the Internet among urban, peri urban and rural areas in order to reduce the digital inequality gap.
ii. There is need for further training and awareness in cybersecure uses as continued advocacy will stir up debate and conversations which ultimately can lead to a theory of change.
iii. The Internet rates should be reduced to further encourage sustainable use of more secure Internet facilities in accessing various online products and services.
iv. The cyber space should be more secured by devising mechanisms (safeguards) that will ensure that online users are fully protected not only through policy pronouncements but through a pragmatic manner.
v. There is a need to tackle the ethical concerns that have emerged as a result of the available online platforms, as well as the new wave of social media through stakeholder trainings and beneficiary engagements.
vi. There is a need to harmonise policy and legislation to match international standards that allow for free spaces.

1.0 INTRODUCTION

Bloggers of Zambia is an independent, not-for-profit enterprise that works in the following areas; Internet Governance and Digital Rights, Media Rights and Freedoms, and Online Creative Content and Platform Management. In doing this, Bloggers of Zambia has been convening and mobilising stakeholders (both local and regional) in Internet law and policy advocacy, police-media dialogue forums, direct meetings/lobbying with policymakers, research reports and training and other capacity building programmes for lawmakers, civil society organisations, bloggers, journalists, lawyers and others.

1.1 Project Background

The USAID Open Spaces project seeks to strengthen the democratic foundations of freedom of speech and assembly; build independent and new media; and safeguard a space for activists, human rights defenders (HRDs), and oppositional voices to protect shrinking democratic space in Zambia. Under the lead of FHI 360, with support from Internews and local partners MISA-Zambia, Panos, and Bloggers of Zambia, the project will support the production of quality, relevant content, strengthen the enabling environment for independent media, and advance social and online platforms that allow for free expression and access to information.

The goal of the project is to strengthen the democratic foundations of freedom of speech and assembly, and independent and new media, and safeguard space for activists, human rights defenders, and oppositional voices to protect shrinking democratic space in Zambia.

It is on this backdrop that Bloggers of Zambia will support the Open Spaces Zambia project under Objective 2: **Promotion of Digitally Literate and Cybersecure Users and Inclusive, Online**

Spaces of Engagement through digital security and hygiene training of Zambian Civil Society Organisations.

In doing so, Bloggers of Zambia conducted a needs assessment of the identified target groups to assess and capture digital security behaviours, trends, and needs of at-risk users.

1.2 Goal

To assess the needs and capture digital security behaviours, trends, and needs of at-risk users among the identified target groups in four provinces:

- Lusaka and Kafue districts in Lusaka province,

- Livingstone and Mazabuka in Southern province,

- Chipata and Petuake in Eastern province and

- Kitwe and Luanshya on the Copperbelt province.

1.3 Outcome: An understanding of digital security behaviours, trends, and needs of at-risk users in Lusaka, Southern, Eastern and Copperbelt Provinces.

1.4 Needs Assessment Objective
- The main objective of this needs assessment survey is to establish benchmarks for the project at the inception of implementation to establish the conditions against which future changes can be measured.

1.4.1 Specific Objectives
Specifically, the needs assessment intends to:

- Identify digital security behaviours and trends practised by the target group.
- Assess and identify digital security needs and knowledge gaps among the target group.
- Identify prevalent digital security concerns among the target group.

1.5 Context and Rationale for the Needs Assessment

The findings of this needs assessment on understanding of digital security behaviours, trends, and needs of at-risk users in Lusaka, Southern, Eastern and Copperbelt provinces and the access and

usage of digital and Internet by individuals have particular importance to Zambia's development aspirations. The 2030 Agenda for Sustainable Development recognizes that "The spread of information and communication technology and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies". While none of the Sustainable Development Goals (SDGs) is specifically about digital security behaviours, trends, and needs, several targets make reference to ICTs.

In Zambia, the Seventh National Development Plan (7NDP) equally recognises the importance of ICTs as a catalyst for socio-economic development by enhancing competitiveness as well as being an enabler of good governance. A number of strategies aimed at leveraging ICTs for development are identified in the medium term development strategy. Recently, Zambia Information and Communications Technology Authority (ZICTA) also identified a number of actions in its strategic plan for the period 2017-2021 and they also conducted a survey in 2018 all aimed at contributing to the transformation of the country into a digital information society. All these initiatives point to the growing importance and needs of digital access and safety in the country.

Various studies have been conducted in other countries by governments and non-governmental institutions. For instance, a needs assessment on Digital Security Situational Analysis in Cameroon found that a high proportion of women in Cameroon face online violence and are increasingly concerned about their safety in digital spaces. However, many of these respondents are unaware of any legal protections offered to them. Additionally, they believed that they lack the appropriate knowledge to protect themselves in these digital spaces. Results from that needs assessment showed that there is a significant need for training programs aimed at building digital security awareness and digital hygiene skills.

A semi-structured questionnaire was developed which aimed at collecting information on digital security threats faced by women in Cameroon as well as the knowledge, attitudes and practices related to digital hygiene. Feedback was solicited from a number of experts and incorporated. The questionnaire was then programmed into a Google Form and shared with closed, private networks in Anglophone Cameroon. A total of 30 persons filled out the survey, including twenty-six women. The data from the questionnaire provided a snapshot which can enable the development of digital security training programs. Therefore, we as Bloggers of Zambia, we believe that the tools that were used in that needs assessment in Cameroon as questionnaires are appropriate to rapidly

collect information on the knowledge, attitude and practices related to digital hygiene and security in countries across Africa. This study from Cameroon will offered as a guide for this needs assessment as most questions acted as reference and improved upon to fit the environmental settings of the Zambian community. On the contrary, this study used a structured questionnaire and focused group discussion. The sample size is larger, and focuses on both women and men. Thus this needs assessment is more comprehensive and will get more insights on the digital security problem.

Another study by Internews in Niger in 2018, outlined the use and needs of information by identifying four main groups of people on the move present in Agadez: Nigerien migrants, international migrants, Sudanese asylum seekers and disabled migrants. It was found that among Men and women in all four groups had very limited access to information they needed and to trustworthy sources. As results from the Key informants in Agadez said that migrants not only lacked information, but that they were also systematically misinformed by people involved in the smuggling industry. Local authorities as well as the local population were mostly perceived with suspicion, distrust, or even fear. Through different questionnaires and data collection methods, the research team spoke to 615 people from migrant and displaced communities about their information needs. Another 31 key informant interviews (KIIs) were conducted with local authorities, civil society representatives (CSOs), communication experts, and humanitarian organisations in Agadez, Niger. As Bloggers of Zambia we conclude that there is an information gap among different population groups, hence the need to investigate more on this problem in Zambia also. This study will help to show any discrepancies that may be trending currently in Zambia in terms of information access through Internet access and usage. Similarly, this study will adopt the methods used by the internews study as we will purposely target civil organisations and communication experts to get more insights on the possible information gaps.

A study by the Centre for Digital Acceleration (DAI) in 2018 on Digital Inclusion and a Trusted Internet on The Role of the International Development Community in Balancing Internet Access and Cybersecurity. The results showed that the increasing risks online both real and perceived are often cited to justify a more centrally controlled and closed Internet. Conversely, the Internet's potential to drive positive socioeconomic change, especially when seen against the backdrop of a persistent digital divide, is cited as a reason for supporting universal access. Ultimately, the

development goals of inclusive economic growth and expanded access to information are best served by an open and inclusive Internet. As Bloggers of Zambia there need to assess the cybersecurity environment in Zambia. As various studies have shown that cybersecurity requires collaboration among different communities, law enforcement, civil society organisations, open spaces, communication experts, bloggers, and others. Hence this is one of the objectives for this needs assessments.

Another Study on Information Needs Assessment by Internews in Madagascar (November 10, 2021). The Study employed a mixed methodology integrating both quantitative and qualitative elements. For the qualitative aspects, the research involved interviews with key informants, focus group discussions, observations during field visits and extensive desk research. The qualitative methods used flexible tools (semi-structured interview guide, checklist, open-ended questionnaire, etc). For the quantitative method, two structured surveys on the needs of radio stations and media professionals were conducted. The study found that several interventions targeting the media sector have been initiated in the past offering training or stimulating content production.

However, while local expertise in Madagascar is available in many areas, professional media organisations are fragile and lack the institutional capacity to help structure the sector. Most of these organisations could make an essential contribution to strengthening the sector. Most of these structures have received only episodic funding which has had limited impact on expanding their work and their own capacity building. Thus, it is essential to find out the current training needs among communications experts and CSOs in Zambia, to ensure gaps are identified and possible recommendations are captured on capacity building that could be sustainable and offer value chain.

Consequently, the estimates from the needs assessment will also provide insights to establish benchmarks for the project at the inception of implementation to establish the conditions against which future changes can be measured on the promotion of access and usage of Digital Internet in Zambia. Further, the insights gathered from individuals will form a basis for monitoring and evaluation and project implementation as it will depict digital security behaviours, trends, and needs of at-risk users.

2.0 Literature Review

This section reviews previous literature on access, knowledge and usage of Digital ICTs and Cybersecurity. The section reviews literature based on the needs assessment objectives and goal. Key underpinnings necessary for this study are also discussed.

2.1 Overview of the Digital Policy Sector Experience in Zambia

Zambia became the fifth country in Africa, the first in the entire Sub-Saharan Africa, aside from South Africa, to have full access to the Internet on 22 November 1994. According to Robinson (1996: 191), this achievement followed three years of development of an electronic mail network serving noncommercial interests within the country at the University of Zambia (UNZA). At the time, the level of computer skills among the population was dismally low and training in Computer Science existed only at a lower level. In 1991 the Computer Centre at the University of Zambia received a microcomputer and modem to provide the "host" of the first University email system from the International Development Research Centre (IDRC)-funded ESANET project.

Information and communication technologies (ICTs) are increasingly important in achieving development goals and promoting citizen participation. Zambia is one of a number of countries in the Southern African region that have sought to include ICTs in their national development plans. Some recent policy initiatives are also expected to have translated into changes in the uptake of ICT products and services. Following the introduction of compulsory ICT subjects in schools by the government in 2015, barriers related to ICT literacy are anticipated to reduce. The removal of customs duties on smartphones by the government is also likely to support the uptake of the devices. The Government has also continued to invest in ICT infrastructure aimed at extending coverage and enhancing reliability of ICT services across the country. For instance the government through the SMART Zambia Initiative was scheduled to install up to 1009 communication towers across the country by the year 2020, (ZICTA, 2018).

Today, the ICT sector in Zambia is governed within the context of the National Information and Communication Technology (ICT) Policy launched in March 2006. It is the guiding document for ICT development in Zambia. The policy sees ICTs, such as Internet technology, as "an enabler to build an information centred society where everyone can create, access, utilise and share

information and knowledge leading to greater productivity, greater competitiveness and sustainable economic growth, a precondition for poverty reduction" (GRZ, 2006:1).

Notwithstanding, as uptake of ICT products and services continues to surge, cyber related risks and incidents are also expected to be on the rise. Particularly, the advent of digital financial services has presented new challenges relating to consumer protection. Cyber related risks and incidents have also been associated with the adoption of electronic commerce (e-commerce) transactions.

Although Zambia's journey towards the digital information age dates back many years, the launch of the ICT Policy in 2006 formally recognized ICTs to be critical in achieving national development. The 2006 ICT policy achieved much in terms of commitments and objectives set forth. However, widespread adoption of ICTs over the years has overtaken the gains of the 2006 ICT Policy. This has been compounded by cyber threats while extensive innovations have unleashed a new wave of cybercrimes. Additionally, other intervening policy measures intended to further leverage and accelerate the nation's move towards an information society and attain income status such as Vision 2030. As the world enters its fourth industrial revolution shaped by the immense transformational power of digital technology, it is argued that the countries that will stand to benefit are those that will harness the new technology while safeguarding individuals and national interest against a new kind of threat presented by cybercrime (GRZ, 2021).

Therefore, with the introduction of the National Cybersecurity Policy of 2021 in Zambia, which aims to establish a coordinated cybersecurity framework and enhance resilience of national ICT systems to cyber incidents in order to attain the desired transformation into a Smart Zambia that is underpinned by trust and confidentiality. The policy also aims at reforming the legal and regulatory framework on cybersecurity and cybercrimes in the country. In addition, Zambia enacted its first Data Protection Act (2021) and Cyber Security and Cybercrimes Act (2021) in March 2021. In addition, the Electronic Commerce and Transactions Act (2021) was reviewed and the e-Government Bill (2021) and the Postal and Courier Services Bill (2021) were drafted. In November 2021, Zambia ratified the African Union Convention on Cybersecurity and Personal Data Protection otherwise known as Malabo Convention which fosters harmonisation of the new cyber laws with other national frameworks and regional cooperation on matters of cybersecurity, cybercrime and data protection

Innovation continues to take centre stage in the ICT sector in Zambia as consumer tastes and preferences continuously evolve with the changes in technologies (ibid). For instance, online news has evidently gained prominence in the country as consumers have an opportunity to gain real time updates on new developments. Over-the-top (OTT) applications such as WhatsApp, Facetime, Messenger and Viber have equally gained prominence on account of their convenience, cost effectiveness as well as versatility and appeal.

2.2 Internet Governance

Mueller (2010) defines multi-stakeholder governance as a process where representatives from different public interest advocacy groups such as business associations and civil society organisations can participate in public policy deliberations in cooperation with governments.

He further illustrates that as economic and political implications of the Internet grew, it became more difficult to separate technical decisions from their social and economic implications. As a result, governmental bodies that previously were not involved in the governance of functional resources – such as naming and addressing -are now interested in extending their reach to these aspects of Internet governance. While recognizing that the private sector such as civil society organisations in Zambia has an important role in the development of the Internet at the technical level, and will continue to take a lead role, the fast development of Internet as the basis of information society requires that governments take a lead role, in partnership with all other stakeholders, in developing and coordinating policies of the public interests related to stability, security, competition, freedom of use, protection of individual rights and privacy, sovereignty, and   equal   access   for   all,   among   all   the   other   aspects,   through   appropriate [intergovernmental/international] organisations. Thus this needs assessment will assess the promotion of Digitally Literate and Cybersecure use and inclusiveness, through online spaces of engagement on digital security and hygiene among Zambian Civil Society Organisations.

Online content producers face considerably less government pressure than their traditional media counterparts, possibly because some web platforms allow them to publish anonymously and the ICT regulator does not have the full capacity to control them. As a result, social media platforms and citizen journalists have emerged as important sources of diverse information, and news consumers have become increasingly aware of alternative, diverse voices from online sources. The Zambian blogosphere and social media are vibrant, representing diverse, critical viewpoints and

opposition voices, and many mainstream journalists have turned to social media to express themselves more freely and publish articles and commentaries that would not be allowed by media houses. Zambian Bloggers Network and Bloggers of Zambia are currently the main civil society groups pushing for digital and bloggers' rights through training, advocacy, and activism.

2.3 Digital and Internet Access on Usage in Zambia

2.3.1 Access to ICT

Globally, mobile subscribers stood at nearly 67% at the end of 2019, while Zambia had a penetration rate of 95.4% mobile subscriptions based on the number of Subscriber Identification Module (SIM) cards purchased by consumers by the first quarter of 2020 (RIA, 2019). In 2021, the mobile phone penetration rate rose to 107%, a percentage that is attributed to the fact that people in Zambia often own more than one mobile phone and multiple sim cards (ZICTA, 2021). Zambia, like the rest of the world, is increasingly reliant and dependent on ICTs. The increase in connected devices and the amount of data generated and downloaded has increased dramatically leading to cybersecurity related issues and data protection among other things, for the users. Consequently, this needs assessment will look at the current trends of cybersecurity in the selected districts of Zambia, further it will also investigate the perceptions on digital safety and awareness from even those that are not users (the offline community).

The increase in the number of people connected to the Internet has also increased the number of active social media platforms such as WhatsApp, Facebook, Instagram and Twitter among others. These platforms have also led to an increase in the number of people causing harm to others on these platforms with fraudulent scams and theft. The scammers use these platforms to steal identities and impersonate others, cyber bully. Transmit pornographic content, perpetrate hate speech, insult, and abuse, falsely accuse and defraud others. Avid users of ICTs that include children and young adults have become primarily vulnerable to such vices. This emerging digital culture is placing the nation's cultural, social and economic wellbeing at risk (ibid).

As of December 2021, there were over 10.4 million Internet users in Zambia, a penetration rate of 56.3% percent, according to the Zambia Information and Communications Technology Authority (ZICTA). The vast majority of Internet users in Zambia rely on mobile Internet subscriptions (56%) compared to those who use fixed line subscriptions (0.5%).

Estimates from the International Telecommunication Union (ITU), however, identify an Internet penetration rate of 14.3 percent as of 2018. A 2018 survey conducted by ZICTA showed that 14 percent of mobile phone users used smartphones, and 71 percent of smartphone users accessed applications such as WhatsApp, Facebook, Twitter, and Messenger. Facebook remains the most popular social media platform among Zambians, with over 2.2 million users as of December 2019, which accounted for 12.3 percent of the country's population. The majority of Facebook users in Zambia, 58.5 percent, are men.

2.3.2 Cost of Internet

Zambia is among the pioneers of Internet in Africa and has been recording a significant growth in the Internet subsector, the growth in this sector however has resulted in an increase in retail price of the Internet and subsequently reducing Internet penetration by 2.9% (Habeenzu, 2009/2010). The increase in retail price of the Internet is largely attributed to lack of investment in ICT infrastructure which largely in Zambia is dependent on external providers. Additionally, Zambia is still among the highest in terms of Internet costs in Africa and the assumption is that this can impact on information access negatively.

Access to the Internet in Zambia is still prohibitively expensive for some people, particularly among marginalised rural communities and lower-income individuals. During the coronavirus pandemic, many people have lost their jobs or have had their salaries cut, negatively impacting their ability to access the Internet. The high costs of ICT ownership, digital literacy, and access to Internet services remain major barriers to access for many people, especially in rural areas. According to Cable, a UK-based telecommunications company, Zambia ranked 56 out of 230 countries based on the average price of 1 GB of data in 2020, at $1.36 in Zambia. As of 2021, Zamtel was the most affordable ISP, offering daily 1.3 GB internet bundles at 10 kwacha ($0.82) per day.

There have also been some noted changes related to the affordability of ICT services arising from more innovative pricing strategies. At the same time, a number of providers of ICT services have continued to invest in new areas as well as new technologies motivated by the need to extend their coverage and improve quality of service.

Despite the introduction of less-expensive social bundles (data for social media) and free Facebook, affordability remains a concern for many Zambians. According to the World Bank, as

of 2015, 58% of Zambia's population lived below the international poverty line of $1.90 per day. According to the Inclusive Internet Index 2020 report, Zambia ranks 83 out of 100 countries surveyed in affordability (cost of access relative to income and the level of competition in the Internet marketplace). The country ranked 71st in the report's Readiness Index, which looks at the capacity to access the Internet, including skills, cultural acceptance, and supporting policy.

Mobile companies in Zambia offer promotional data plans, such as social bundles that allow users unlimited access to social media platforms for a daily, weekly, or monthly period. Internet freedom advocates have criticised the practice of charging Internet users different rates to access different content and services for violating the principle of net neutrality, though the promotions encourage Internet use and help expand access in low-income areas. Airtel also offers Facebook Free Basics, which allows users to access a simplified version of Facebook for free and enables access to a few other websites such as Wikipedia, WikiHow, AccuWeather, Go Zambia Jobs, the Mobile Alliance for Maternal Action, and a women's rights group. Zambia was the first African country where Facebook launched this free service in 2014. In 2017, MTN Zambia launched Facebook Flex, a service that allows subscribers on the MTN network to access the full version of Facebook for free.

In July 2019, Parliament in Zambia adopted a motion to prohibit Internet providers from prescribing expiry dates on data bundles to protect consumers and enhance digital inclusion. As a result, all three mobile service providers are now offering expiry and non-expiry data bundles to their customers. While access to ICTs is steadily increasing, rural areas have lagged behind due to the high costs of hardware and software, poor network coverage, and high levels of illiteracy. The government and service providers have invested few resources toward expanding ICT infrastructure in rural areas.

2.4 Digital Literacy, Skills and Education

Digital literacy refers to the more subtle and situated practices associated with being able to create, understand and communicate meaning and knowledge in a world in which these processes are increasingly mediated via digital technologies." (Future lab, 2010). "Digital literacy provides a critical understanding of technology's impact on society and the individual, including privacy, responsible use, legal and ethical issues." (British Computer Society/ Royal Academy of Engineering, 2012).

A media literate person - everyone should have the opportunity to become one - can decode, evaluate, analyse and produce both print and electronic media. The fundamental objective of media literacy is critical autonomy in relationship to all media. Emphases in media literacy training range widely, including informed citizenship, aesthetic appreciation and expression, social advocacy, self-esteem, and consumer competence (Aufderheide, 1992, p. 1)

According to the Zambian Government (2019), poor cybersecurity among Zambian citizens puts both the individual and the country at very high risk of cyber-attack. Studies have shown that the greatest security vulnerability within an organisation or country is often the inadequate knowledge by individuals about the potential risks of their actions or lack thereof. For instance, the common habit of sharing personal identification numbers (PINs) and passwords voluntarily with strangers has led to loss of money. Thus this study will seek to find out the training needs and possible recommendations of the targeted civil society organisations on cybersecurity education.

Digital literacy and ICT education can guarantee a good cybersecurity culture and awareness among civil society organisations individuals. Generally though Zambia unfortunately has very low digital literacy levels especially among the old, young children, women and persons with disabilities. Despite ICT having been introduced as a mandatory subject in schools and use in day to day lives, most schools don't have enough appropriate ICT equipment and materials to cater for the demands of an often large population of learners. There is still a gap among different population groups. Similarly, individuals and organisations have found it expensive to enhance their knowledge in digital literacy and the lack of access to information on cberysecurity. Based on this literature, this assessment will assess the current and trending behavioural aspects towards Internet and cybersecurity by disaggregation of gender, age and area of residence.

The Zambian information society poses so many challenges that it has become rather obvious that media education is needed at all educational level and for every member of the changing public sphere. The study also underlines that "new media also afford the possibility of informal and peer learning of literacies through joint, creative activities of participation and community engagement that are fundamental prerequisites for citizenship" (Lunt et al, 2014, p. 148). The civic intentions of media education are as central and foundational to the field as is critical thinking (De Abreu et al., 2017, p. 8). In this study we will find out the existing media education trainings that will need be implemented by Internews Zambia, Bloggers of Zambia and Civil Society organisations.

2.5 Cyber laws, policies and protection in Zambia

Internet freedom in Zambia has currently improved with the new government, with no physical attacks or prison sentences for users in connection with their online activity. However, government efforts to control online spaces continued, with new disclosures about surveillance, accusations of connectivity restrictions, and plans for online media manipulation. Freedom of expression and other fundamental freedoms are also restricted offline. Members of the opposition are targeted for arrest and harassment, and freedom of assembly is not always respected.

The Zambian government does not place restrictions on encryption tools, but some government regulations threaten anonymous communications. Encryption tools used to prevent unauthorized access by a third party are uncommon in Zambia. They are mostly used by journalists and human rights defenders.

According to the 2009 Electronic Communications and Transactions Act, individuals may use encryption, "regardless of the algorithm, encryption key length, or implementation technique or medium," provided that they do so in accordance with the act. Section 87 of the act prohibits the unauthorized release of a decryption key and the unauthorized release of data, while section 89 prohibits encryption to obstruct a law enforcement officer, is punishable by up to two years, a fine up to 60,000 kwacha ($3,300), or both.

Sections 22 and 23 of the 2009 Electronic Communications and Transactions Act establish a register of all cryptography providers. Unless they are registered with ZICTA, a person cannot provide cryptograph services or products. Provision of cryptograph services without registration is a criminal offense, punishable by imprisonment of up to seven years, a fine of up to 210,000 kwacha ($14,300), or both.

Anonymous communication through digital media is compromised by SIM card registration requirements instituted in 2012. Registration requires an original and valid identity card, such as a national registration card, to be presented in person to the mobile service provider. While the Zambian government stated that the registration requirements were instituted to combat crime, investigative reports from 2012 found that subscriber details may be passed directly to the secret service for the creation of a mobile phone user database. Fearing infringements on their privacy, some activists, politicians, and investigative journalists have used preregistered SIM cards. The practice, however, is a criminal offense in the country.

2.6 The role of civil society organisations in promoting media literacy, transliteracy and information literacy

The concept of civil society refers to a social context in which there is a broad range, great diversity, and high density of social networks and formal and informal organisations" (Newton, 2001, p. 208). In reflecting the role of CSOs, Newton (2001, p. 202) connects civil society with trust as the main component of social capital and argues that voluntary associations create the bonds of social solidarity that are the basis for civil society and democracy (2001, p. 206). The role of civil society through its emphasis of social ties "that involve social values, trust, and reciprocity; they are both and individual and a social good" (Dahlgren, 2009, p. 107). Intrinsic values are probably by far the most important characteristic of civil societies; in particular, intrinsic values are fundamental for civic engagement. Furthermore, being intrinsic is a universal value, existing to a certain extent in every political and societal system. It has the possibility to overcome most of the cleavages in our societies, and is able to bind and bond different actors.

Civil society organisations (CSOs) have always been recognized as relevant stakeholders of media and digital literacy in our societies. They are seen as the cornerstones of civic agency "premised on people being able to see themselves as participants, that find engagement meaningful, and that they experience motivation via the interplay of reason and passion" (Dahlgren 2009, p. 102). It is hard to think about societies without including civic cultures as "political patterns in Zambia, Revista Fuentes (2017), which identities of citizenship, and the foundation for civic agency are embedded" (Dahlgren, 2009, p. 102). But it is not just about political patterns. Civil society is also present in different concepts and models in sociology, communication science and cultural studies. They are also at the very heart of social capital (Putnam, 1993). As individuals, coming from different backgrounds we ought not to "bowl alone" but in joint activities in different contexts, networks and settings.

They empower citizens to speak out, solve problems and use their voices in effective ways is a prerequisite for engaged citizenship in digital culture" (Mihailidis, 2014, p. 151). In comparison with most of other stakeholders and actors such as state authorities, the public sector, academic research institutions, the media industry and the private sector, CSOs in most of the African countries such as Zambia remain the most cohesive societal actor in media literacy (ML) and media and information literacy (MIL).

Civil society associations and NGOs act as a bridge between other stakeholders and ensure dialogue between MIL communities, inside and outside schools. They foster MIL activities and training in informal and non-formal settings. They reach out to adults and disadvantaged groups and provide lifelong support. They tend to support MIL focus on citizenship and civic agency and can foster a vibrant public sphere engagement and empowerment outcomes in the digital context. Civil society professionals also need to enhance their role and develop their capacities in the new digital environment that makes their grassroots networks more efficient and their collective intelligence more distributed.

For instance, In August 2018, the Zambian cabinet approved for review the draft Cybersecurity and Cybercrimes Bill. Civil society organizations expressed immediate concern about the bill's potential to impinge on Internet freedom. In particular, the draft bill provides penalties of up to one year in prison, fines, or both for "any electronic communication, with the intent to coerce, intimidate, harass, or cause substantial emotional distress to a person." Analysts have expressed concern that such provisions could be used to crack down on legitimate online expression.

2.7 The Offline Community in Zambia

Prior to conducting their own nationally representative demand side survey, the Zambian Information and Communications Technology Authority (ZICTA) used inflated figures from the International Telecommunication Union (ITU) that suggested that there were 7.7 million Internet users in 2018, or 47% Internet penetration. The ITU estimates are derived from mobile operator supply side data provided to the regulator for administrative purposes. These figures are not appropriate for policymaking as they reflect the total number of active SIMs in a market rather than the number of unique subscribers. In a prepaid market such as the Zambian mobile market, mobile subscribers tend to use multiple SIM card to buffer against off-net charges or benefit from promotions. In such markets the only way to determine unique subscribers (or disaggregate users on the basis of sex or education or income or even rural and urban), is through nationally representative demand side surveys. In contrast to the supply side data, the 2018 ICT survey conducted by ZICTA indicated that only 14.3% of Zambians use the Internet. Therefore, this study will assess the needs and possible implications on the offline communities of Internet access and safety. Although it worth noting that this will be in just four provinces of Zambia and it cannot be generalized to the greater population but meant for the purposes of project implementation and learning.

The ZICTA findings are similar to the results obtained by RIA's 2017 – 2018. This needs assessment will compare results with the ZICTA 2018 report on Digital Access. The ZICTA survey valid other reports, that the majority of African countries have not yet reached the 20% Internet penetration rates required to benefit from positive network effects such as improved information flows.

Most importantly, according to a study by Research ICT Africa (RIA's) findings indicate that the digital inequalities tend to build on historical income and gender inequalities. In some cases, such as in Zambia, the disparity in access to the Internet also widens the income inequality gap, including the skills and gender gap. Only those who are on the Internet are able to participate in the digital economy, apply for jobs online or enroll in online educational course to improve their skills; while the unconnected are left behind. Therefore, Governments should look beyond improving infrastructure and reducing data prices to find alternative policies that bring the unconnected people online.

Despite the huge reductions in the cost of mobile broadband in Zambia, a 2018 ICT survey shows that more than 85% of Zambians do not use the Internet. The evidence gathered in this policy brief shows that affordability is the main inhibitor to Internet access and use. This is in line with the 2017-2018 After Access survey conducted by Research ICT Africa in 10 African countries showed that the main inhibitors of Internet use in Africa are lack of Internet enabled devices, unaffordable data services and digital illiteracy. This demonstrates that policymakers need to look beyond the supply-side issues when addressing broadband access and usage in Africa.

With data prices having been driven so low and population coverage being much higher than Internet uptake figures, factors other than just access to signal or not are required to explain why many people in Zambia are still offline. It is therefore critical for policymakers to desist from implementing retrogressive social media taxes that are far more burdensome to the poor and instead focus on policies that improve affordability and digital literacy. The barriers to use for many people are therefore not only that they are not covered by a signal, but that people do not have the resources to get online even where they are. The fact that there is wider coverage than the percentage of the population online suggest that there are challenges with the current technology and business models, exclusive spectrum licensing and universal service strategies. Thus this needs

assessment will seek to find out the barriers to Internet for those that belong to the offline community.

To protect the licensed mobile telecommunication operators from unregulated competition, the Zambian Government approved a tax on calls made over social media platforms, such as WhatsApp, Facebook Messenger and Viber. However, this tax has not been effected yet and there is currently no appetite for its enforcement, (Research ICT Africa 2019) although this tax did not come into effect.

3.0 METHODOLOGY
3.1 Sampling
The quantitative research targeted 1200 respondents randomly sampled from the 4 provinces-Eastern, Southern, Lusaka and Copperbelt provinces, 8 districts (Livingstone, Mazabuka, Kitwe, Luanshya, Chipata, Petauke, Lusaka and Kafue). A total of 300 respondents were selected per province (200 coming from an urban digitally savvy district while 100 were from a rural- less digitally savvy district). Further, of the 1200 respondents, the research targeted 600 female respondents and 600 male respondents.

3.2 Quantitative Data Sampling Procedure
The surveys were administered to the 1200 respondents randomly selected from within the eight districts from public places such as bus stops, shopping malls, teachers from schools, among others. A zig-zag method was used to select the respondents in the communities or zones in each district. The research assistant posed the questions to respondents and entered the responses directly onto the questionnaire using tablets.

Table 1: Respondents breakdown by sex and province/district

Province	Districts	Female	Male	Total
Southern	Livingstone	100	100	200
Southern	Mazabuka	50	50	100
Lusaka	Lusaka	100	100	200
Lusaka	Kafue	50	50	100

Copperbelt	Kitwe	100	100	200
Copperbelt	Luanshya	50	50	100
Eastern	Chipata	100	100	200
Eastern	Petauke	50	50	100
	Total	**600**	**600**	**1,200**

3.3 Qualitative Sampling Procedure

Qualitative respondents participated in Focus Group Discussions (FGDs). The Focus groups comprised of no more than 10 people in each district among the purposively selected civil society organizations. The target respondents were recruited through the help of local press clubs (referrals) and using the stakeholder mapping exercise that was conducted by Bloggers of Zambia as well as previous lists of project beneficiaries. The FGDs were purposive because of the CSOs that Bloggers has worked with before in the districts.

3.4 Survey Tools

The quantitative survey were administered using a questionnaire developed on Kobotool Box online survey tool which were installed on tablets for data collection. The qualitative research used Focus Group Discussions (FGDs) through a set of pre- identified questions to probe further into the digital security practices, needs and knowledge levels of the targeted communities. The FGDs were conducted to triangulate the data and enhance quality and were used to qualify the findings from the quantitative survey and better understand the reason behind respondent's feedback. The FGDs helped supplement the survey findings. The study team conducted one FGD of no more than 10 people in each district among purposively selected civil society organizations.

3.5 Training of Data Collectors/ Enumerators

Four data collectors/enumerators were hired per district, through a rigorous and transparent process to administer the survey tool. This was done by engaging those that Bloggers of Zambia has worked with in the past. A two-day training were be held to train the data collectors/enumerators on how to administer the questionnaire. The first day of the training was spent explaining the goal and objectives of the needs assessment as well as familiarizing the data collectors/enumerators with Kobotool box online survey tool, the questionnaire, consent forms and other specific aspects.

The second day was used for extensive role plays among the participants as well as an external role play outside of the training room with members of the public.

3.6 Data Collection Process

Data for the quantitative research were collected by data collectors/enumerators who were physically interviewed respondents based on the questionnaire. The enumerators manually entered this data onto the online questionnaire using Kobotool box. All enumerators were supplied with a log book and were physically supervised by a team lead from Bloggers of Zambia to ensure that they adhere to ethical requirements.

The qualitative study on the FGDs were facilitated by the Bloggers of Zambia team who interviewed participants in a two hour thirty minutes workshop held on the last day of data collection in every province (provincial capital/main district). All responses were recorded using an audio recorder and documented by a note taker (enumerator).

The questionnaire was pre-tested on the outskirts of Lusaka (Chongwe) to determine its effectiveness. The pre-test was done in order to test the time it takes to complete one questionnaire, check for issues of validity and chronological order of questions and to eliminate issues of bias.

3.7 Data Cleaning and Analysis

The following is a summary of our proposed quantitative and qualitative data analysis methods.

A comprehensive indicator based data analysis plan and Do.file were be developed after data collection tools have been validated. After processing and cleaning, the data was exported to Stata version 17 for further cleaning and analyses. The quantitative and qualitative survey responses were cleaned by checking any missing patterns, duplicates, spellings, among others. The data were collated and analysed by Bloggers of Zambia team and the Data analysis consultant using a quantitative and qualitative approach.

3.7.1 Quantitative Data analysis- After the data has been collected and cleaned (corrected) for errors, missing values, etc., the Survey team were use Stata Version 17 for analysis. The software has suitable analytical features such as chi-square, regression, correlation, and analysis of variance, among others. The analysis involved descriptive statistics such as means, percentages and frequencies. The data were then analyzed using descriptive statistics, frequencies, tables and graphs to be specific.

The Survey team disaggregated all data by gender, age, location, or other demographic information, as appropriate, including univariate and bivariate analysis were possible. Generally, the analyses were conducted in accordance to the objectives of the needs assessment study.

3.7.2 Qualitative Data analysis- In addition, the qualitative findings from the FGDs were be analyzed manually and using Atlas.ti version 7.5. For qualitative data, transcripts/summary sheets of FGDs were used as material for analysis of ideas, expressions, experiences, and viewpoints. The data analyst ensured that summary sheets show logical relationships/patterns or thematic areas emerging from discussions and how they relate to the project intervention.

The analysis of qualitative data were be done using a combination of framework approach and content analysis, which is the process of identifying, coding and categorising patterns in data. All recorded interviews were transcribed. Four researchers reviewed some transcripts for emerging themes and sub-themes to generate a consolidated list of themes and sub-themes which were used to sort (code) all data (transcripts and notes). This were be done using Atlas.ti software (Version 7.5.7). The Data analyst coded up to 4 different transcripts and datasets were be merged for inter-coder reliability analysis. This were done to get a common understanding of the codes to be achieved before coding the rest of transcripts. In addition, all codes were defined precisely to improve reliability of the data sorting process.

The resulting outputs were analysed using theme-by-case analytic tables. Relationships and networks between/among coded data were be explored while clusters of related codes were be compared, re-grouped and merged under emergent themes. Further, the codes and themes are mutually exclusive and were modelled as a web of interconnected issues, to conceptualise an overall picture or narrative of the findings. These qualitative findings were reported together with quantitative data and were useful in highlighting critical design issues that might have shown the prevailing results. These sets of data provided a body of knowledge to inform the further refinement of the possible future interventions to ensure success.

3.8 Data Quality Assurance
To reduce sources of bias and obtain valid and accurate responses from participants, we implemented a series of rigorous quality assurance (QA) methods for both quantitative and qualitative data. These methods are described below.

- **Enumerator's Training**: Central to overall quality assurance were be providing training for our enumerator. Each member of the quantitative and qualitative field teams participated in a 2-day training workshop before entering the field during which time they were receive a question-by-question instruction in research instruments, their purpose and their implementation along with instruction and practice in the research protocols related to, for example, skip patterns, coding and use of handheld devices (quantitative training) and sound interview/moderation, probing and participatory research techniques (qualitative training).

- **Instrument consistency:** Instrument calibration were also critical as it ensured accurate results. Instruments were be pre-tested during training. This resulted in re-phrasing of some questions, adjustment of vocabulary, or response options to better fit the local context.

- **Data checks:** For the quantitative data, we conducted routine quality and completion checks in the field during the survey implementation to ensure that the research assistants follow protocols correctly. Conducting regular spot checks allowed problems to be identified and resolved while the data collection team is on location. Each enumeration team included one Field Supervisor to manage/check that each record is completed according to guidelines. The Team lead oversaw all enumeration teams and were checked the data of each enumerator at the end of each day. The questionnaire programmer also provided daily updates from the system.

- **Qualitative data controls:** Qualitative data quality control methods included, among other things, standardizing introductory comments, audio recording to create a common set of expectations for respondents, holding discussions in venues where participants feel comfortable and secure. This helped the survey team to ensure that team members are following the interview moderation procedures agreed in training. After completion of each Focus Group Discussions, the survey team reviewed the transcripts from the transcribers individually. Additional information collected through this approach helped the survey team in the final analysis during the triangulation of findings.

- **Debriefings:** During the fieldwork, all teams in the selected districts held a debriefing after each field day to share notes, check data quality, ensure that instruments have been completed correctly and troubleshoot problems. Using the real-time, back-end verification

capabilities embedded into the mobile data collection platform, the Field Supervisors and Team Lead were verify the data collected and uploaded for that day.

3.9 Ethical Considerations

All enumerators were be trained in research ethics through a two day training in their respective districts of work allocation. This were done to ensure that the needs assessment survey is conducted ethically. Furthermore, the enumerators were administer informed consent procedures on each survey participant and documented them before each interview. All interviews were conducted in languages most understood by respondents and in the appropriate setting; all data enumerators were ensure confidentiality and privacy of the interviews.

In order to ensure adherence to ethical standards, enumerators and supervisors recruited were thoroughly trained and topics to be covered among others included: a session on research ethics, the need to obtain informed and ongoing consent for interview from participants, privacy and protection of identity of interviewees, conducting interviews in a safe environment and data safety.

3.10 Report Writing

A comprehensive report combining findings from both the qualitative and quantitative research were be developed and presented to the Consortium Members in March 2021. The report were include components on background to the activity, literature review, description of the methodology, major findings (identified needs, practices, trends among others), priority needs (and criteria used to determine such priorities) and an action plan to inform future digital security training interventions. The report used both narrative and tables/graphs to depict the research findings.

3.11 Limitations

No significant survey limitations are anticipated in executing this needs assessment. However, some challenges might arise, such as the following;

- In terms of managing effects emanating from the COVID-19 disease where targeted survey participants might be worried about catching the disease when hosting the research team during data collection. To mitigate this challenge, the survey team were adhere to all the guidelines recommended by Ministry of Health (MoH) and World Health Organisation (WHO) such as the use of face masks and hand sanitizers.

- Some indicators that were collected cannot be compared to the national/global level indicators due to differences in the phrasing; hence they are programme/project specific.
- The rains and storms are likely to disrupt the data collection occasionally and the daily targets might be affected. In case of this limitation we were add an extra day for data collection in order to reach the overall targeted samples.

4.0 PRESENTATION OF FINDINGS

This chapter presents both qualitative and quantitative findings of the needs assessment survey. For each indicator, quantitative findings were first presented. Qualitative findings will immediately follow. This method of presentation were chosen to facilitate triangulation in the interpretation of the data. The needs assessment first presents a summary of selected demographic indicators such as age, gender, district of residence distributions. This is followed by key findings on the different topics in all the sampled districts among the Eastern, Lusaka, Southern and Copperbelt provinces. The sequencing of topics are on Digital Access and Usage Internet Usage, Digital Security awareness & Knowledge, Training in digital safety and perceptions from the offline community on cybersecurity to assess the current prevailing situations, behavioural trends and possible needs. The evidence of the prevailing status on indicators were used for the before and after programme/project demands. Where necessary, these findings are disaggregated by gender, age, districts and statistical tests done to assess whether there are significant differences.

4.1 Demographic and Socio-Economic

This section provides insights into the demographic and socio-economic characteristics of all the households and individuals across the four provinces that were part of this needs assessments at the time. The demographic and socioeconomic characteristics that are presented include but are not limited to distribution of respondents with access to Digital Devices, distribution of Respondents by sex, distribution of respondents by District as well as the distribution of individuals disaggregated by age, literacy, employment status, and level of education attained. The demographic and socio-economic characteristics of the population are considered as they have potential to influence access and usage of Internet among individuals. They also provide a context to the prevailing environment where the overall assessment on access and usage of Internet was undertaken.

The results in the table below two show the socio-demographic characteristics of the sampled population in all 8 districts. The representing was at 8.3 percent each for districts that were considered to be rural or periurban while the urban representation was at 16.67 each. The major of the respondents were categorized to be in the age group of 18 to 30. This means that most of the population that was interviewed was a young population this is also in line with the Zamstats that Zambia is mainly consistued of a young population. In this survey young people are more at risk of cyber threats as it is the population that mostly uses the Internet in Zambia. Further, 50% of males were interviewed compared to only 49 percent of females as one percent of those interviewed didn't prefer to mention their identifiable sex. In terms of educational level most (50%) of the respondents completed high education and only about 30% completed tertiary education with 13 percent having completed primary education. The major of respondents were other in formal or self-employment represented at 51 percent, this was followed by those unemployed at about 32 percent the least representation was among been those that are students.

Table 2: Percentage distribution of respondent's characteristics

Factor	%	No.
Distribution of Respondents by District		
Chipata	16.67	200
Kafue	8.33	100
Kitwe	16.67	200
Livingstone	16.67	100
Luanshya	8.33	100
Lusaka	16.67	200
Mazabuka	8.33	100
Petauke	8.33	100
Age as at last birthday		
18-30	55	661
30-40	26	317
41-50	13	153
51 & Above	5	60
Prefer not to say	1	8
Gender		
Female	49	590
Male	50	603

Prefer not to say	1	7

Education

None/Didn't Complete Primary	2.92	35
Primary	13.83	166
Completed High School	50.33	604
Completed tertiary education	29.83	358
Prefer not to say	3.08	37

Employment Status

Employed/Self employed	51.4	616
Employed/Student	4.25	51
Student	9.5	114
Unemployed	31.7	379
Prefer not to say	3.15	38

4.2 Digital Access and Usage Internet Usage

Most of the respondents had smartphones represented at 58%, followed with only 19% owing ordinary cell phones with the least owned desktop computers.

Figure 1: Shows the distribution of the type of devices that owned and used for Internet
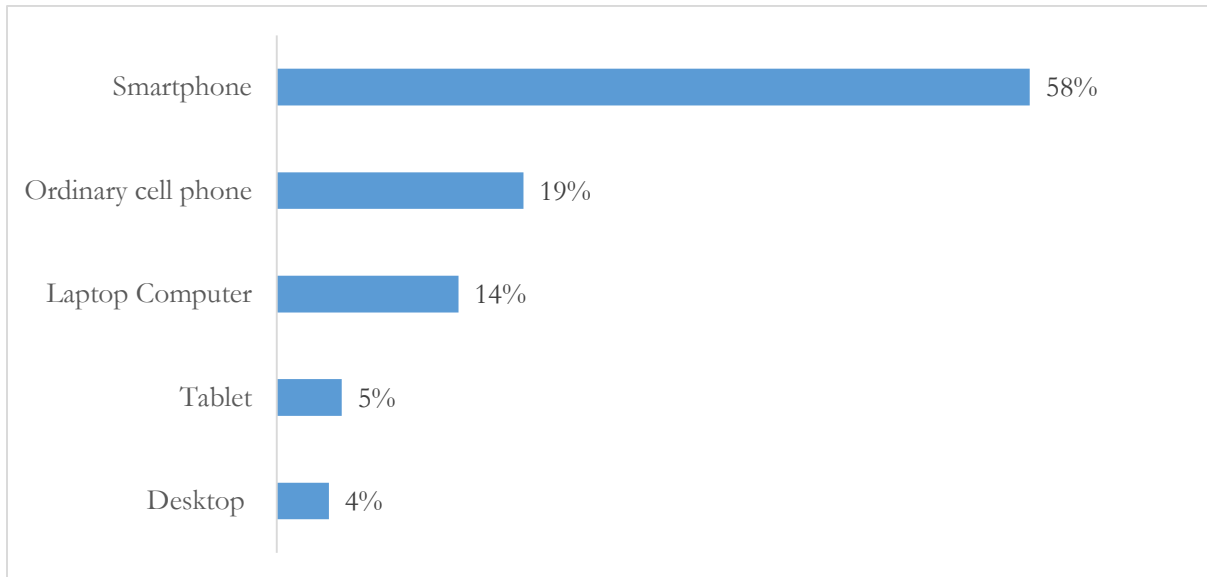
One Male Respondent from said: "All of us have access to digital devices such as computers and mobile phones".

Another respondent said "I have laptop, a smartphone and an ordinary phone I use all of these devices"

Most (65%) of the respondents accessed the Internet using smartphones compared to only 15% using a personal computer and the tablet was the least used at 4 percent.

*Figure 2: Percent Distribution of Respondents Access the Internet*
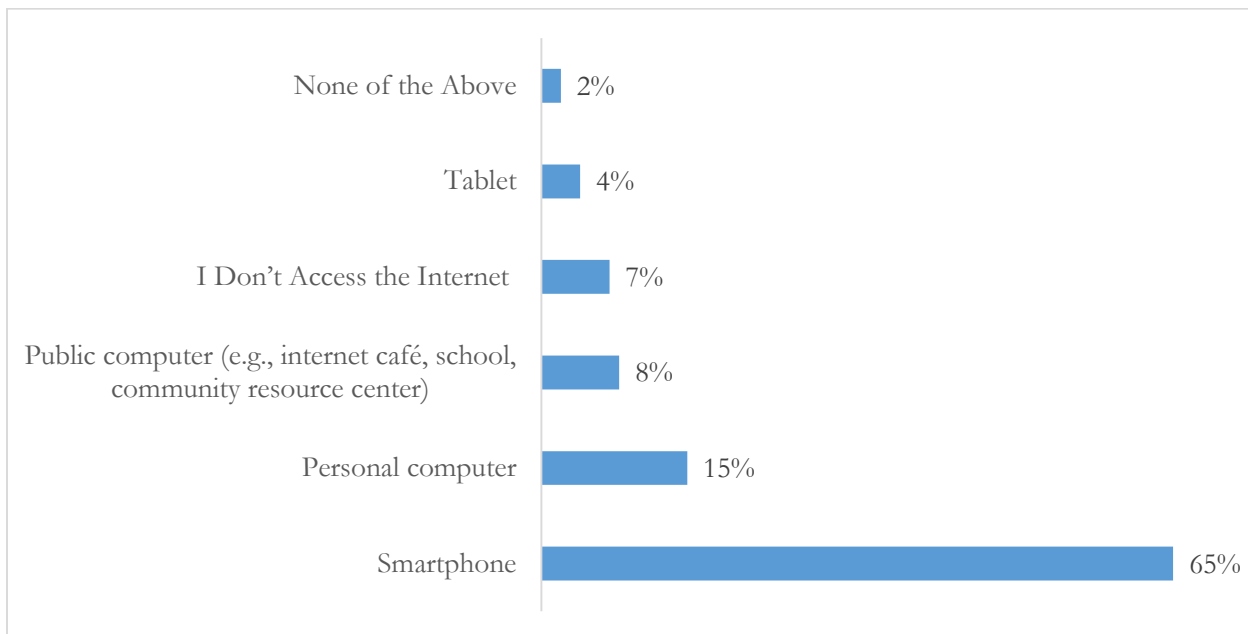
According to figure 3 to ascertain the frequency of using Internet it was found that most respondents use the service on a daily basis at 74 percent with only 8 percent never using the Internet.

Personally I use the internet ...its daily actually, maybe every minute.....hahahaha. So very often.

Another respondent said "there are variations on using the internet you find that you are also busy, if you have meetings for example and some of us for find that you are chairing a meeting from morning". During lunch you browse for few minutes or so.

*Figure 3: Percent distribution of the Frequency of using the Internet*
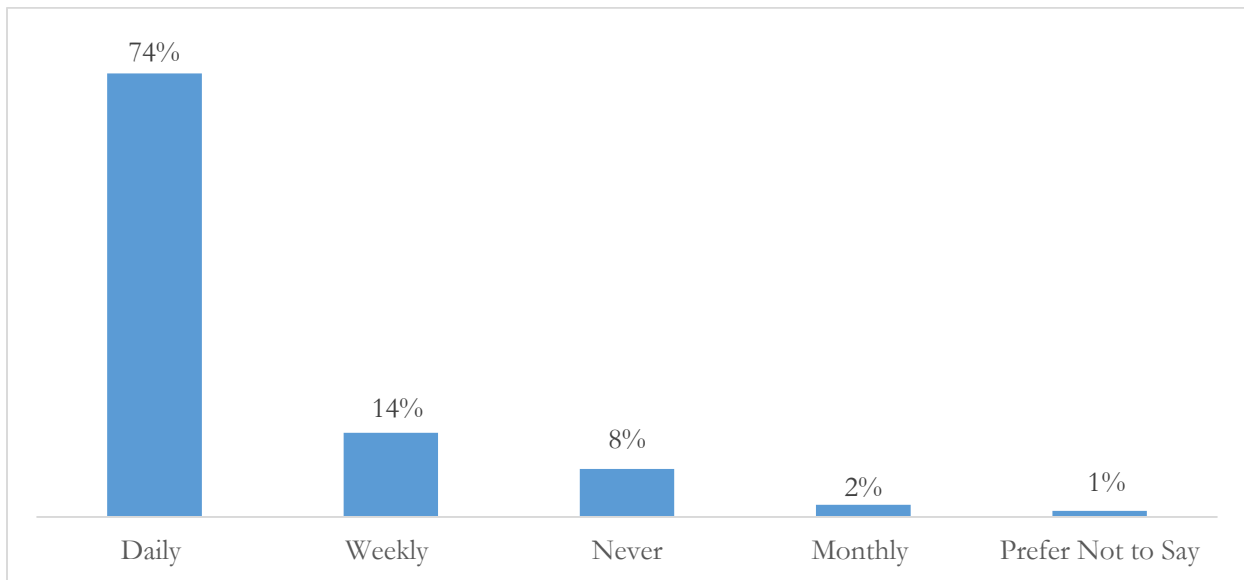
The results show that on average the respondents interviewed used 145 kwacha with the minimum been two kwacha and the maximum at K1500.

Figure 4: Average monthly Internet

One respondent said" for me the internet is very expensive that's why mostly I use office internet than personal data".

Another one added "on monthly I use a lot of data than before because of my work, I spent more…..i feel data is expensive nowadays"

Average Monthly internet Cost

Max, 1500

Min, 2
Avg, 145
The
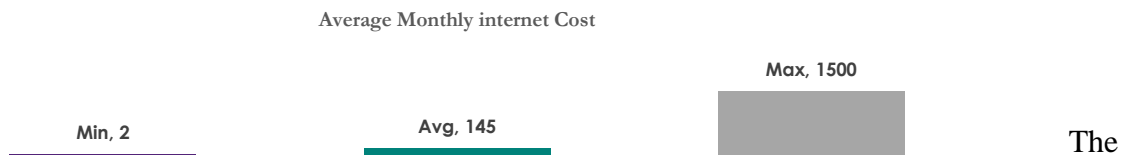
most used type of social media platforms the survey found that 38 percent of the interviewed population use Facebook, followed those that use Instagram and Tiktolk at 15% respectively. Very few use Linkedlin at 6%.

Figure 4: Type of social media platforms that respondents use.
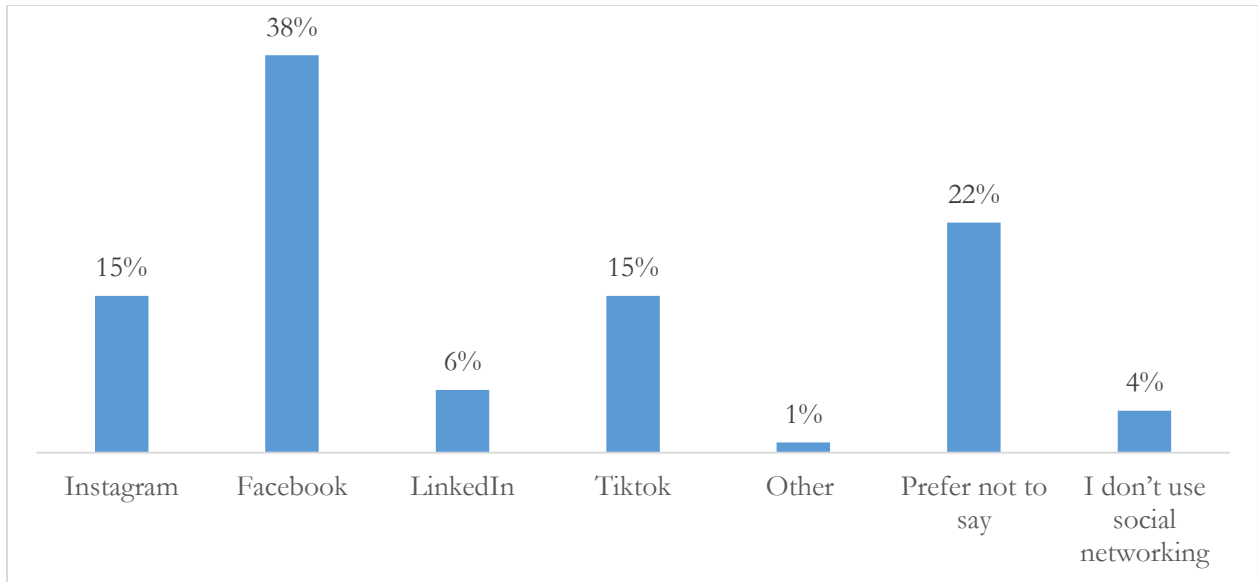
The social media platforms I have access to are Facebook and whatsapp, I think those are the main ones, I'm also on twitter but I don't use it, hahaha….. and whateslse, I also use Zoom? Is Zoom a social media, ah….i don't know. How zoom is not a social media platform.

*Another respondent I'm also on whatsapp, twitter and instagram. And yeah….recently snapcat.*

According to figure 5, the following results below that 26 percent of the respondents mostly use the Internet for social media interactions, followed by Learning and News at 16%, followed by those that use the Internet for watching videos such as watching movies and using it for business at 12%, with only 9 percent using it for music.

Ahhhh….for me I use internet for accessing news, communicating, official communicating and private communicating ……hahhahah…..and downloading books, reading books. And when you want to call you use for calls we use internet for me to call someone. So yeah I think those are the few things the internet is used for.

Respondent III "just to add on what my brother here has said, so our institution as media housing committee we use the internet mainly for meetings, we have got all these webinars, all

Figure 5: Percent distribution of what the respondents use the Internet for
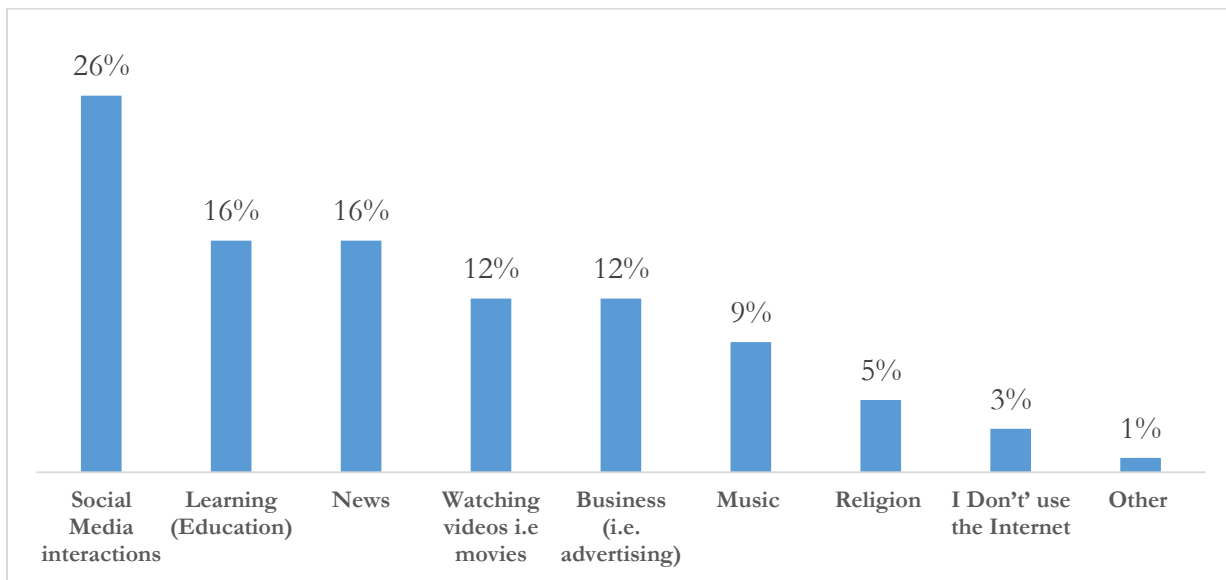
4.3 Digital Security awareness & Knowledge

Security for phones and email you need to secure that it difficult for people to just guess it. It was little difficult I was hacked on my yahoo account it was terrible, I lost a lot of information that account had to be closed and I had to open a gmail account from that time I have taken key interest to ensure that I don't experience the same. I remember there was a time during the elections when the Internet was done I had to use VPN to withdraw money because I was very broke…so the bank called me and said no no …..Advised me not to use unsecure channels people will get your passwords and they advised that I change the password for me to withdraw money using Internet. I change passwords after three months I think that the longer it stays the easy for people to guess

and access your accounts. If someone that I dojt know calls, I use truecaller to check the name of the person and that's when I answer the phone.

I am always careful with phone applications that are free but the consquences for that. Why is it free and why is it access to something that is illegal. Sometimes it's a work of a hacker to just get your details.

I have different passwords with every social media platforms. Try not to share my devices they mine alone. And I do a lot of back up on the hard drive. So each work has its own hard drive.

For payment service, before I put I have ensured that I have two factor authentication apart from that If I'm using someone else device I use a private oracle. I also avoid VPN. Apart from that I learn different ways people hack things.

For me I'm one person that has never been bothered to put passwords, don't put passwords unless where I'm requested to…like Internet like facebook. Even my computer is as the outside world. So you can get it and see whatever you want. That's the life I live I don't want a complicated life……..the only passwords I have is banks issues, airtel because I'm forced to. If the time when my calls were hack, I let it open and if wanted I used to say let them come and listen if they want to.

These phones don't give your phone to an agent. Otherwise e that's why by giving that agent. It is better you do it yourself.

According to figure six, 36% percent of those that were interviewed found searching and reading information online safe compared to about 13 saying it is unsafe.

For me based on the work that I do. I'm I think for me I question everything that is posted everything that is shared online. So I have to ensure I verify whatever information is shared before I comment. I make sure that if it is something not credible I make sure I won't not even comment because when you comment it means you have endorsed that. I can't share or comment on something that is not credible.

Figure 6: Distribution on Safety on searching for and reading information online
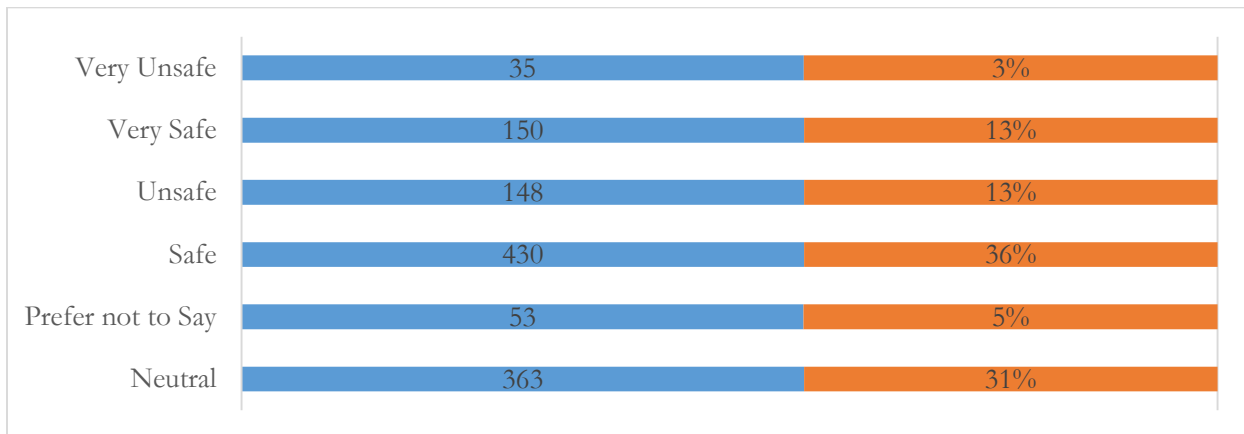
On safety on sharing information online 33 percent said they feel safe sharing information online and 31 percent said they don't feel safe sharing information online. From the results it shows that most people felt unsafe sharing information online 57 percent in total.

I always turn off my location if unless I'm using google maps. Then when I'm not on the internet, I switch it off.

3.3.1   Distribution on Safety on sharing information online
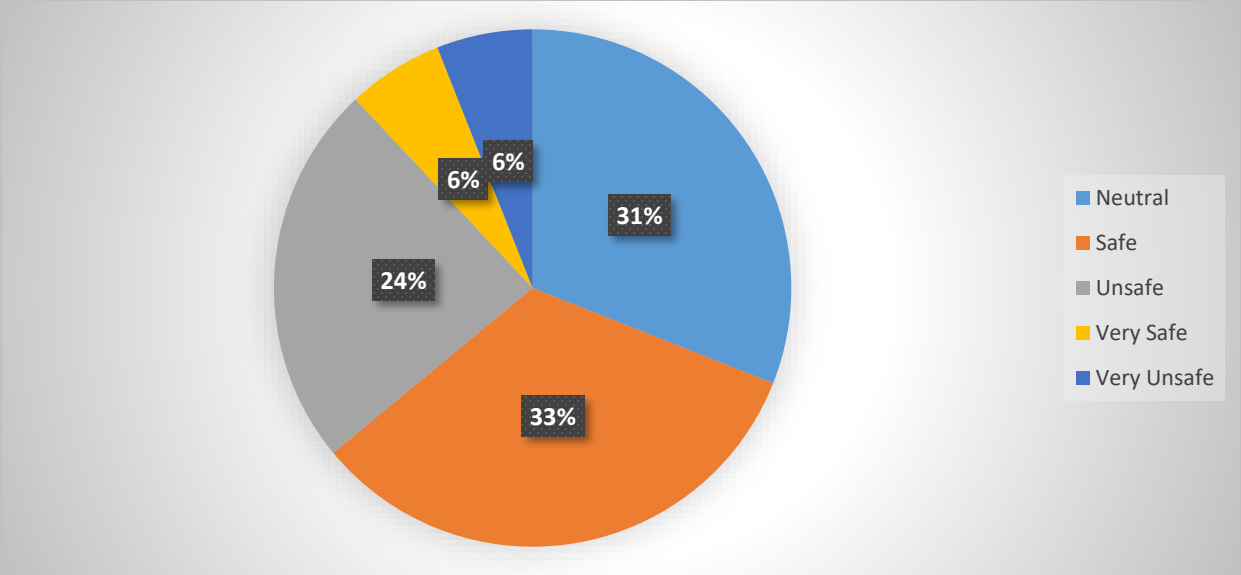
3.3.2 Distribution Respondent's Perceptions and Beliefs on the most significant threats of being online

The most mentioned significant threats of being online were fraud and theft at about 25%, followed by bad, untrue or malicious information at 18 percent,

> *"The threats am aware of are Phone trapping and hacking of my communication. I think I have suffered email hacking. Misperception and bullying is there but we are managing. kaili Is part of expression. So I think there cyber bullying. The interface when some is listening to your calls, I'm not very conservation when someone is but when someone is talking to you but tells you to please cut I think someone is trapping our conversations".*
>
> *Identity fraud, revenge pornography, then there a lot of security threats am aware of....so its coming from cyber spamming, malware, disinformation and misinformation.*

Table 3: Percent distribution on the most significant threats of being online

Responses	Percent
Fraud and theft	24.89
Bad, untrue or malicious information	18.02
Tracking or spying	13.04
Harassment or bullying	17.67
When information is removed or censored	2.27

Physical violence or legal repercussions related to online behavior	6.52
Unethical or immoral content	15.04
Prefer not to Say	0.76
Don't Know	1.79
Total	100

Forty one percent of the respondents said they didn't know which online information is factual or true and 40 percent responded and said they knew factual information online.

Table 4: Table Showing Distribution of How Respondents know which online information is factual or true

How do you know which information is factual or true?	Frequency	Percent
Don't Know	175	15%
No, I don't know how to tell what is factual or true online	496	41%
Prefer Not to Say	53	4%
Yes, I know how to fact-check information online	473	40%
Total	1,197	100%

On the knowledge of the online threats is exposed to viruses at about 27 percent, followed at hacking at 26 percent, online impersonation was reported at 16.92 percent. Malware attacks were at reported at 9 percent.

Table 5: Distribution of Respondents knowledge on the following online security threats

Knowledge on online threats	Percent
Viruses	26.59
Malware	8.94
Phishing|	5.40
Denial of service attacks	3.82
Trojan horse attacks	5.84
Hacking	25.80

Online Impersonation	16.92
Other	2.18
Prefer not to Say	4.52

The respondents said that they protect their devices through the use of strong passwords at about 43 percent, followed by those that have knowledge on biometric thumb security and that they periodically change their passwords at 17.38 percent with only 6 percent of the respondents reporting that they don't use any security features.

From the qualitative the following responses were given

"With my phones I make sure I have complicated passwords so that people don't caught up with that. I also don't post my NRC on Facebook. With my airtel money I know that these days someone would call you and say that you have received money wrongly should be airtel itself to send you message. Someone should not call you and say you have wrongly received money it should be airtel. So atleats Im aware I don't post my current location of this meeting on facebook until when I have left."

I had alot of information when I was on yahoo. My password was very very weak. Similarly with the phones I change passwords to ensure ….i believe that the longer it stays the easier for someone to try hack my password.

Table 6: Distribution on Respondents protect their phone, tablet, computer from online security threats.

Responses	Percent
Strong password	42.83
Change passwords periodically	17.38
Biometric/thumb print to unlock	19.90
Regular device and software update|	9.73
No security feature activated	6.32
Other	2.18
Prefer not to say	1.66

On distribution of passwords, with a combination of capital and small letters, numbers and punctuation majority (n= 659) at 55% of the respondents said they do use this conations. With 445 (37%) saying they don't use this combination and 5% preferred not to say.

For passwords I use complicated ones so that no know can swindle. I know a lot of people that were swideled.

Figure 7: Distribution on the use strong passwords, with a combination of capital and small letters, numbers and punctuation.
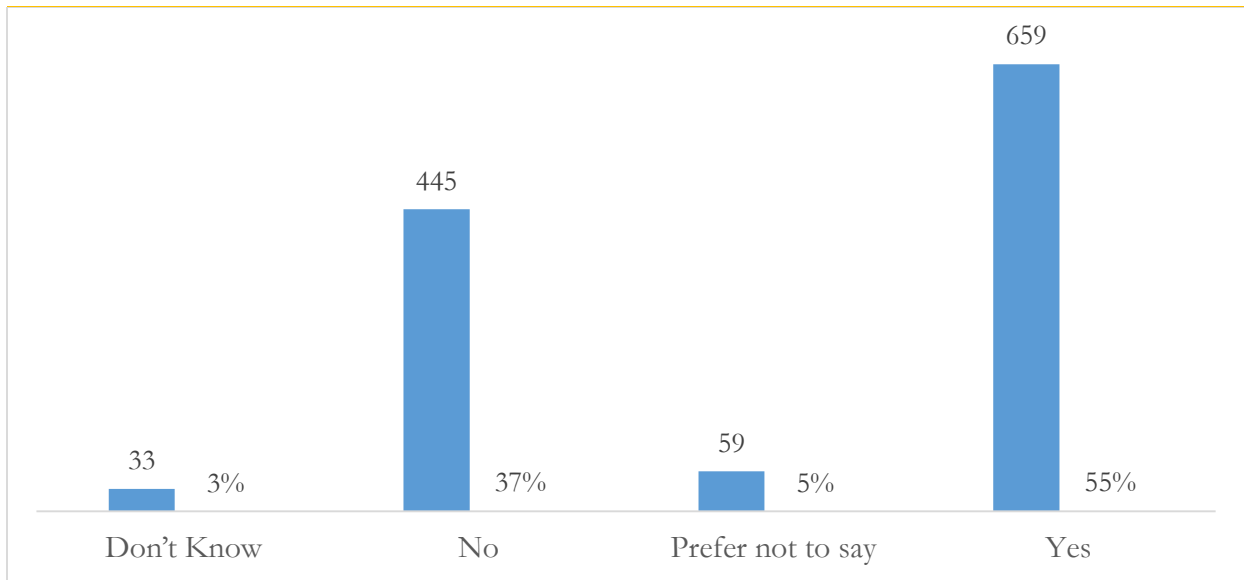
The respondents were asked if they use a notebook in order to remember passwords. The 74% of respondents saying they use a notebook while 21 percent use a note book.

Table 7: Distribution those that physically write passwords in a notebooks

3.3.8 Distribution of those that physically write their passwords in a notebook.	Frequency	Percent
Don t Know	29	2
No	880	74
Prefer not to say	38	3
Yes	250	21
Total	1,197	100

The respondents were asked if they click on any anonymous links. The majority of the respondents were aware of this danger represented at 69 percent while 22 still click the links on emails, webpages and other Internet mediums.

Table 8: Distribution if the respondents click on anonymous links in your email or on webpages

click on anonymous links in your email or on webpages	Frequency	Percent
Don't Know	77	6

No	828	69
Prefer not to say	28	2
Yes	265	22
Total	1,198	100

To find out if respondents had installed antivirus on their devices. The results show that 607 (51%) had no installed antivirus on their devices while 484 (40%) had antivirus installed on their devices. While 84 (7%) didn't know whether their devices had antivirus.
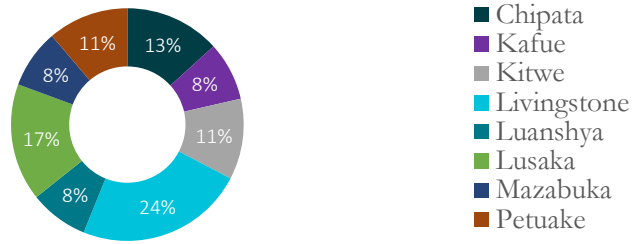
Figure 8: Distribution you have an antivirus installed on respondent's device
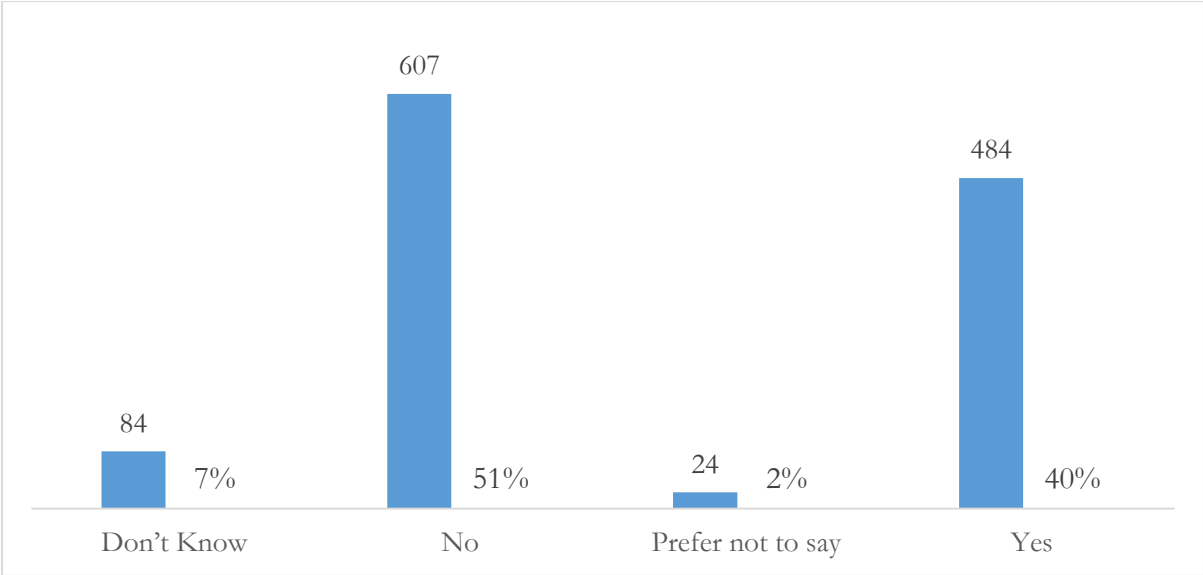
The results show that distribution of encryption tools used to protect their data by district, among these 24% are from Livingstone, followed by those from Lusaka at 17% and the least were from Luanshya, Mazabuka and Kafue.
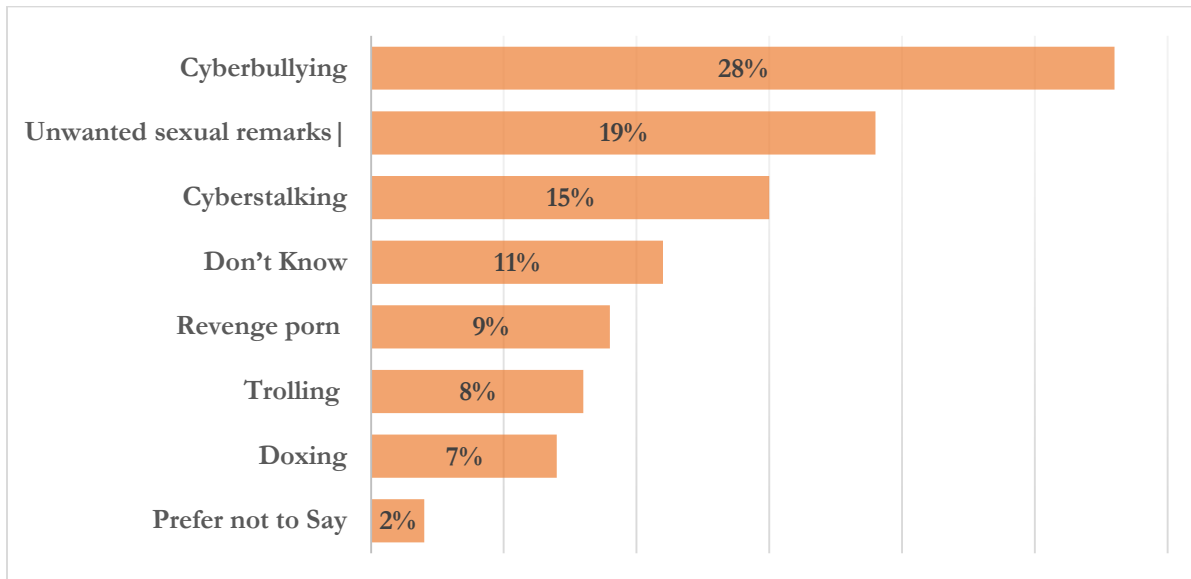
Figure 9: Distribution of encryption tools to protect respondents data

Encrypttion tools used by District

Legend:
- Chipata
- Kafue
- Kitwe
- Livingstone
- Luanshya
- Lusaka
- Mazabuka
- Petuake

Pie values: 13%, 8%, 11%, 24%, 8%, 17%, 8%, 11%

When respondents were asked on their experiences on or anyone else have been affected by online threats. The most mentioned was cyberbullying at 28%, followed by unwanted sexual remarks at 19% this was mostly mentioned by females as compared to males. Cybyerstalking was also mentioned at 15%, revenge porn was at 9%, Trolling was at 8% and Doxing was at 7%.

Figure 10: Distribution if respondent or anyone you know experienced the following online

Bar chart values:
- Cyberbullying: 28%
- Unwanted sexual remarks|: 19%
- Cyberstalking: 15%
- Don't Know: 11%
- Revenge porn: 9%
- Trolling: 8%
- Doxing: 7%
- Prefer not to Say: 2%

3.3 Training

In terms of the training needs from the respondents that were interviewed the greatest need for training was in Chipata at 19%, followed with those from Lusaka at 18%. And 16 percent

respectively from Kitwe and Livingstone. Generally this shows a need for further training on digital safety.

> *Of course Whatsapp, linkedln, facebook and instagram In terms of awareness ah….interms of awareness I haven't read anything ….. I would say I'm just readiy aware. Atleast I know what I'm not supposed to do.*
>
> *Aware of community standards for facebook, whatsapp and twitter. Instagram I haven't really checked on that.*
>
> *We use mostly whataspp, linkedln and twitter, community standards we are aware because we are currently running a project on community standards.*
>
> *In terms of community standards, I have not taken any keep interests to know the community standards. Using the ethical journalism that I learnt in schools so I know what the does and doesn't of what should not be included.*
>
> *Facebook, Linkendln Community standards I don't know the answer, I think am struggling like she is struggling.*

Figure 11: Distribution on those welling to attend as training on digital Safety and Security
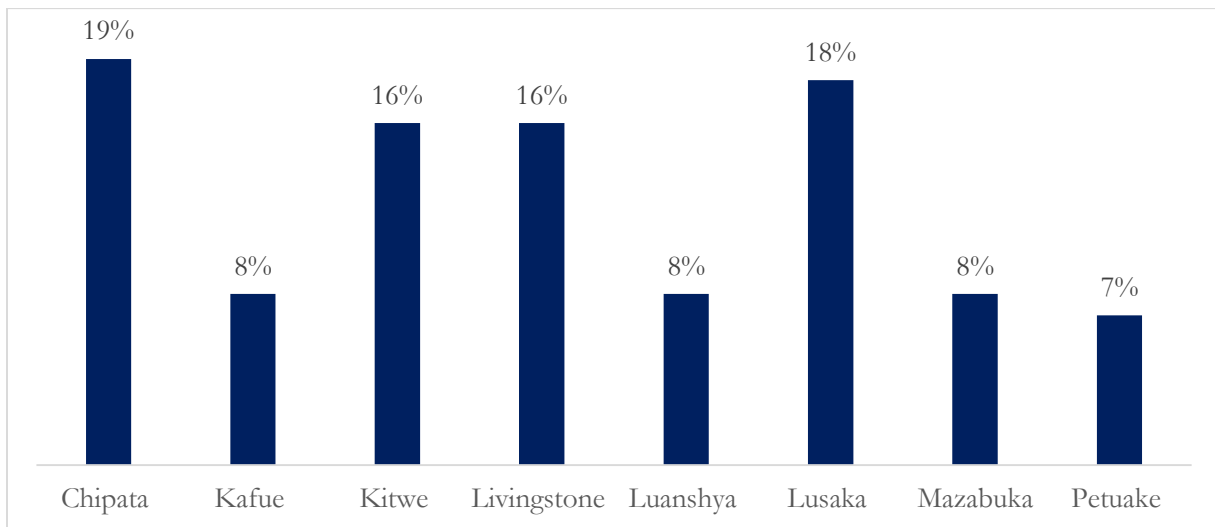
The respondents were asked if they would prefer to be trained digital safety and security on radio, TV or on social media. The majority 88% agreed that they would be able to while only 9 percent said no.

Table 9: Distribution Perceptions on listening to the radio, TV or online Training on Digital safety and Security.

Responses	Frequency	Percent
Don't Know	26	2
No	113	9
Prefer not to Say	9	1
Yes	1,050	88
Total	1,198	100

The results show that 66 percent of the respondents interviewed are interested to either attend or receive information on digital safety with 16% percent of the respondents saying they are unlikely.

Table 10: would you be interested in receiving information and/or attending training on digital safety.

Responses	Frequency	Percent
Don't Know	42	3
Indifferent /Neutral	94	8
Interested	643	54
Prefer Not to Say	15	1
Unlikely	139	12
Very Interested	221	18
Very Unlikely	43	4
Total	1,197	100

The topics of interest were ranked by the respondents, it was found out that about 44 percent of the respondents are interested in setting up social media accoutings, followed by 18 percent of using anti-censorship tools and strategies and about 12% on password protection. The least was understanding laws that impact online spaces at 1.25%. Hence trainings on digital safety can be based on these thematic areas.

Table 11; Distribution of Ranked topics interested in receiving information and/or attending training on.

Topics interested to be trained on.	Percent
Encryption	3.58
Password Protection	11.58
Security Settings on Social Media	7.83
Setting up Social Media Accountings	43.83
Using anti-censorship tools and strategies	18.42
Understanding laws that impact online spaces	1.25
Tools and techniques to advocate for your online rights	3.50
Fact-checking online information	1.78
Internet law and policy	4.98
Media rights	3.24

3.4 Offline Community

The respondents were asked what to state which statement they most agree with in relation to cost of the Internet.

Table 12: Please select the statement that you most agree with, "The cost of Internet is:

Responses	Frequency	Percent
very affordable and the cost never prevents me from accessing the Internet services I need	116	10
affordable and the cost rarely prevents me from accessing the Internet services I need	282	24
is not affordable and the cost often prevents me from accessing the Internet services I need	186	16
somewhat affordable, and the cost sometimes prevents me from accessing the Internet services I need	346	29
is very unaffordable and it prevents me from accessing the Internet services I need most of the time or always.	246	21
Total	1,176	100

The following section will look at the offline community to determine the current challenges to access Internet and possible needs.

Distribution of 3 challenges you experience in accessing the Internet currently online to go online

According to the finding the most common challenge among the three that were selected by all respondents in the sample should that the stability and reliability was the major factor in accessing Internet at 26%, followed by cost of the Internet of the connection at 22% and the least was fears of what might have online at 8 percent.

Table 13: Challenges on access to Internet

Challenges you experience in accessing the Internet	Percent
Stability and reliability of your connection	26
Reliability of electrical and power supply	13
The cost of Internet connection	22
The quality of the device/equipment you use to connect to the Internet	12
Lack of availability of a device to connect to the Internet	8
Lack of knowledge about how to use the Internet	10
Fears about what might happen online	8
Prefer not to say	2

The respondents gave the following responses in terms of what can prompt them to use the online spaces more. The first suggestion was that the Internet should be more affordable at 24 percent, followed by making devices more affordable at 20 percent.

Table 14: Percent distributions of suggestions on what can prompt one to use the Internet more

Responses	Percent

Make the Internet more affordable	24.30
Make devices more affordable	20.06
Improve connectivity and Internet infrastructure	16.58
Provide more trainings on how to use the Internet	12.11
Provide more information about the benefits of using the Internet	13.89
Provide more information about how to protect yourself online	11.52
Prefer not to say	0.20
Don't know	0.91
Other	0.44

The respondents said they would be communicate more with friends and family at 19% if the Internet was more reliable and affordable and gaining knowledge or skills. Followed by those that

said they would start their own business at 12 percent and the least was engaging in more activities to help my community at less with just a quarter percent.

Table 15: showing the percent distribution if they had better, more reliable, and more affordable Internet, what they would do for with it.

Responses	Percent
communicate more with friends and family	19.09
play games and watch movies	7.98
more easily do my job	10.04
find a better job	8.84
start my own business	12.17
gain knowledge/skills	18.94
track my health	10.73
learn more about news and politics	10.24
engage in more activities to help my community	0.25
Prefer not to say	0.69
Don't know	1.03

4.0 Discussion and Conclusion

From the results evidences that Digital technologies such as the Internet are a part of everyday society today. They are inevitable and must be seen as a necessity, especially for the news media. It is envisaged that these benefits of the Internet for the media will be appreciated once concerted efforts are in place to have connection available in all media houses. Going forward, the following matters remain crucial to the development of the Internet in Zambia and need urgent attention.

i. Ensuring online protection
ii. Improving cyber security
iii. Guaranteeing Universal Access for all
iv. Reducing the cost of access of the Internet
v. Harmonizing policy and legislation to match international standards

Additionally, it there is still a need to tackle the ethical concerns that have emerged as a result of the available online platforms, as well as what the new wave of social media through stakeholder trainings and beneficiary engagements

Further based on the needs assessment, a high proportion of Youth women and men in Zambia face online violence and are increasingly concerned about their safety in digital spaces. However, many of these respondents are unaware of any legal protections offered to them. Additionally, they believe that they lack the appropriate knowledge to protect themselves in these digital spaces. Results from the needs assessment show that there is a significant need for training programs aimed at building digital security awareness and digital hygiene skills.

Most importantly, these findings indicate that the digital inequalities tend to build on historical income, knowledge gaps, digital access and gender inequalities. In some cases, such as in rural considered districts, the disparity in access to the Internet also widens the digital inequality gap, including the skills and gender gap among other factors.

This also worthy to conclude that only those who are on the Internet are able to participate in the digital economy, apply for jobs online or enrol in online educational course to improve their skills; while the unconnected are left behind thus the need to increase Internet access in Zambia. Therefore, Bloggers of Zambia will advocate while working with governments units to look beyond improving digital safety and reducing data prices to find alternative policies that bring the unconnected people online.

The evidence gathered in this needs assessment shows that affordability is the main inhibitor to Internet access and use. Other issues are Internet enabled devices, unaffordable data services and digital illiteracy. Thus this needs assessment has identified this gap and need to work on this. This demonstrates that policymakers need to look beyond the supply-side issues when addressing broadband access and usage in Zambia. With data prices having been driven so low and population coverage being much higher than Internet uptake figures, factors other than just access to signal or not are required to explain why many people in Zambia are still offline. It is therefore critical for policymakers to desist from implementing retrogressive social media taxes that are far more burdensome to the poor and instead focus on policies that improve affordability and digital literacy. Thus, the key issue to note is that bloggers of Zambia will advocate for any barriers that may affect an increase to access on open spaces.

The barriers to use for many people are therefore not only that they are not covered by a signal, but that people do not have the resources to get online even where they are. The fact that there is wider coverage than the percentage of the population online suggest that there are challenges with the current technology and business models, exclusive spectrum licensing and universal service strategies.

References

Kanižaj, I. (2017). The role of civil society organisations in promoting media literacy, transliteracy and media and information literacy in EU. Revista Fuentes, 19(2), 69-80. [Fecha de consulta: dd/mm/aa]. doi: http://dx.doi.org/10.12795/revistafuentes.2017.19.2.05

Mambwe, E. 2015. The state of Internet technology in Zambia. In Media Industry in Zambia: A Handbook. Lusaka: DMCS/Mission Press. pp. 203-220

Robinson, N. 1996. "Bringing the Internet to Zambia" in Bridge Builders: African Experiences with Information and Communication Technology. Washington: National Academy Press

Zambia Information and Communications Technology Authority (ZICTA). 2009. "ICT Statistics & Indicators." ZICTA.

Government of the Republic of Zambia. 1996. Information and Media Policy; Zambia Printing Company, Lusaka

Government of the Republic of Zambia. 2002. Independent Broadcasting Authority (IBA) Act No. 20 of 2002. Government Printers: Lusaka

Habeenzu, S. 2010. A Brief Overview of the Telecommunications Sector in Zambia. Research ICT: Ottawa

Heinonen, A. 1999. Journalism in the Age of the Net. Tampere: Acta Universitatis Tamperensis.

Internet World Statistics. 2015. "Africa Internet Statistics: Zambia. Internet World Statistics." Url: http://www.Internetworldstats.com/africa.htm. Retrieved January 6, 2015.

Mugisha, Ivan R. (2013). Liquid Telecom acquires Rwandatel assets. The New Times Rwanda. 3 June. Available at http://www.newtimes.co.rw/section/article/2013-06-03/66372/.

Nixon, Ron (2007). Africa, Offline: Waiting for the Web. The New York Times. 22 July. Available at http://www.nytimes.com/2007/07/22/business/yourmoney/22rwanda.html.

Qiang, Christine Zhen-Wei, Carlo Rossotto, and Kaoru Kimura (2009). Economic Impacts of Broadband. In Information and Communications for Development. Washington, D.C.: World Bank. Available at https://openknowledge.worldbank.org/handle/10986/2636

Research ICT Africa (2019). After Access 2018: A demand-side view of mobile Internet from 10 African countries. Available at https://researchictafrica.net/2019_after-access_africa-comparative-report/

Appendix 1: Data Analysis Plan

Items	Data
Title of study	A Needs Assessment on Promotion of Digitally Literate and Cybersecure Users and Inclusive, Online Spaces of Engagement through Digital Security and

	Hygiene Training of Zambian Civil Society Organisations conducted by Bloggers of Zambia.
Goal	To assess the needs and capture digital security behaviors, trends, and needs of at-risk users among the identified target groups in Lusaka, Southern, Copperbelt and Eastern provinces:
Data sources and datasets (Quantitative)	Interview Schedule- Focused Group Discussions
Data sources and datasets (Quantitative)	Structured questionnaire
Data analysis software (Qualitative Data)	Stata version 17
Data analysis software (Quantitative Data)	Atlas.ti version 7.5
Key indicators (variables) to be analysed	**Questions based on the following Study Objectives;** 1. Identify digital security behaviors and trends practiced by the target group 2. Assess and identify digital security needs and knowledge gaps among the target group **3.** Identify prevalent digital security concerns among the target group
Types of analysis to be performed (Qualitative Data)	- Content Analysis based on the research objectives
	- Thematic Analysis – based on new identified and emerging issues. - Thematic Mapping (Diagrammatical)
Types of analysis to be performed (Quantitative Data)	- Descriptive (Univariate, bivariate)
Key table shells (univariate and bivariate)	

Province	Freq	Percent
Southern	**x**	**x**
Copperbelt	**x**	**x**