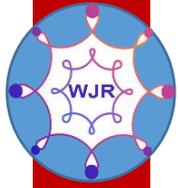## Original Article

Approaches to safeguard teens online: the of adolescents aged 12-14 years in Kenya

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Abstract- **The emergence of new media and technology in recent epoch has precipitated the question of teens' online safety. In contrast, teens continue to utilize these technologies in school spaces and their homes for their obvious reasons. Although these technologies are often encrypted with essential protection mechanisms to ensure that the users are fully protected, teens continue to encounter problems emanating from sexting, pornography, and fraud. The study aims to explore the current discussions of online safety issues by providing a reference point and a context for academics, policymakers, and paves the way in re-looking into the security of teens online. The study uses a qualitative approach and employs interviews and focus group discussions on exploring the extent of the safety of teens online. Cyberbullying, gambling, and cyberstalking are the most common dangers that teens experience online. The study recommends for enhancement of supervision both online and offline by parents, teachers, and the formulation of online education policies to protect teens online**.

 Keywords— **New media; digital skills; Online Safety; school; teens.**

Introduction

The study investigated the usage of online digital communication technologies by teens in Kenya, specifically focusing on internet safety. Access to knowledge, leisure, and play is paramount to the life and rights of children. In today's virtual space, it is essential to note that children have access to the new technologies which has become part of them.

According to Mukhongo [2015], the internet users in Kenya have steadily risen with the latest figures showing a total of 17.38 million users at the beginning of 2013, while 7 million users less in 2011 with mobile phones as one of the primary means of internet access. According to the Communications Commission of Kenya (CCK) [2012], as cited by Kirigha et al., [2016], Kenya has over 10 million young internet users residing in urban areas. Okendo [2014], argues that as more the children use the Internet every day, they enjoy the benefits, but they also face risks that grow exponentially.

As cited by Okendo [2014], the CRADLE study showed that 54 percent of children, while engaging with the Internet, view and download music, 51 percent play games, 50 percent communicate with friends, 29 percent chat, and 28 percent are always on social media. These statistics indicated that the escalating cyberspace is making Kenyan children's net citizens. There is concern about children connecting with new media (WhatsApp, Twitter, Instagram, and Facebook) while accessing adult content and falling prey to online abuses in a country where internet access has significantly developed recently. In today's era, children are always connected with new media, hence able to access adult content and fall prey to online abuse.

Kenya is one of the countries where technology proliferation is on the rise.

The information communication technology in this 21st century has changed the way individuals interact with others. Through this new technology, information and resources are shared throughout the world by the click of a button. The web's content could be retrieved quickly from mobile phones, iPad, and other Internet-enabled devices. These devices are all facilitated by affordable Internet from service providers who offer 2G, 3G, and 4G networks.

In 2012, UNICEF (United Nations Children's Fund) conducted a study in Kenya on issues of online digital access to young people. The results showed that mobile phone penetration stood at 75%, and Internet usage by the youth rose to 28%. The Internet has facilitated connections with friends, relatives, and other parts of the world. Although it has some advantages, the Internet has brought about new dangers comprising addiction, sexting, cyber-bullying, and exposure to unsuitable materials. There have been tendencies of young users who lack knowledge of the Internet's use and reveal too much information about themselves and their family members online.

I. CONTEXTS

I.1 International context

The query of internet safety is not new. The addictive sites identified by the UNICEF study included pornography, entertainment, relationships, and social network. When children at such a young level engage with these sites, the sites could be harmful hence a need to discriminate them when accessing information from the net [UNICEF, 2013]. In recent years, pedophiles were known to take advantage of young children physically. Today, the scenario has drastically changed with the spread of the Internet; they now do it in the luxury of their homes.

The technology has paved the way for pedophiles, and people of the same characters contact children through online platforms like social media, chat rooms, and even chat-enabled mobile phones. Internet-enabled mobile phones have been used by pedophiles to lure children into the conversation of sending indecent pictures, disclose their identity, and appear naked or perform sexual acts on a web camera. When children stop performing more indecent acts, they are threatened to be exposed by the pedophiles. Pedophiles use rewards and promise to encourage children to continue performing indecent behavior.

The unknown child exploitation via the webcam-embedded devices was identified by the Terres des Hommes (TDH) [Parent Magazine, 2012]. Webcam child sex tourism (WCST) occurs when an individual offers an incentive to a victim child to control them to do sexual acts in front of the webcam [Terres De Hommes, 2012]. The child prevention exploitation organization, Terres De Hommes, helps children get out of exploitative situations and secure safety surrounding them. The study carried out by this organization found out in less than two months, over 1000 adults across the world were willing to pay children in developing countries to perform sexual acts in front of the online camera.

According to Terres De Hommes, [2012], the use of a virtual ten-year-old Philippine girl by the proxy name sweetie was identified by researchers that adults from 65 countries are involved in sexual exploitation of innocent young children.

1.2 The African context

South-East Asia and Africa have experienced alarming levels of trafficking in children for sexual exploitation [Annan, 2011]. The joining of hands with different players with UN agencies has seen a vast improvement in internet governance. Still, most African countries have no laws or policies regarding the security of children online. Previously, children domestic workers, especially girls, have experienced risks from the perpetrators. The public/ private divide that cuts across national borders can successfully combat widespread sex tourism and stop the dissemination of pornography on the Internet [Annan, 2011].

Annan [2011] argues, for example, that priority for the future on children online should be a significant investment in research, data gathering, and analysis. Furthermore, he advises on the improvement and development of statutory responses to protect witnesses and child victims.

1.3 The Kenya context

Kenya, the press has continued to highlight the repatriation of a Kenyan wanted in the USA (United States of America) for running a syndicate online- pornography. Currently, there are limited policies in Kenya schools that correctly apply to online insecurities. Though regulations' forbidding sexual contact with minor is in the constitution, there are no specific policies related to those that have contact with underage persons through online platforms in the schools. The public awareness of the harm attributed to the new technologies on young people is needed.

I.   STATEMENT OF THE PROBLEM

The problem statement is presented in the following order; social problem; the contextual problem; and lastly, the academic problem.

2.1 Social problem

Socially, the new technology has become part of our lives. Young children grow up having significant contact with different modes of media. They are increasingly acquiring digital literacy and live in a digital world where they are viewed as digital natives' "netizens," while the adults then simply become naturalized citizens. The Internet has been embraced because of its capabilities of communication, entertainment, and information pursuit. The division between online and offline has increasingly turn out to be worthless; hence they go simultaneously. The increase in the number of children who scarcely imagine living without a social network profile, or pictures and videos being shared online is fascinating [Terrace, 2015].

At an early age, children are not acquainted with the risks associated with online digital communication technology and, hence, require adult supervision. The children at this age are at the vanguard of technological change. The exponential innovation in this has widened the generation gap between the children and their teachers. This divide is less stark in the North and broadens in the South, i.e., Kenya being one such country. Parents and teachers have few opportunities to access information technologies due to a lack of technical skills.

This situation is rapidly changing. The new technology is not doubted that it will yield numerous opportunities and advantages for the children concerning its impact on social and educational achievements. Besides, teachers have raised concerns about the adverse effects of technology on learners' motor writing skills. They argue that teens are currently influenced by incorporating texting into the writing of academic works in the school. Hence, they are in dawdling about controlling the use of online digital communication technologies, which aids in cheating during exams and school work. Currently, there is a significant change in terms of the usage of information and communication technologies. The Internet has become an integral part of our lives with its fast in growth. The usage of the Internet has become irrepressible in our lives.

The benefit of using the Internet in the 21st century is enormous. The reasonable concern around the Internet's susceptibility has heightened by the proliferation of crime committed online [Terrace, 2015]. Therefore, the Internet's environment has facilitated the committing of crime easier and unlocked other possibilities for the crime [Alsamadi, Karabatis, and AlEroud, 2017]. In this study, I critically analyze teens' safety in the information age, especially those aged 12-14 years who are in their prime adolescent stage.

2.2   Contextual problem

The Kenya government, under the Jubilee government, has adopted the utilization of laptops in all the public primary schools in Kenya under the project dubbed "Digital Literacy Project." Currently, there are inadequate policies in Kenya schools that specifically govern the safety of children online. Recently, there has been a push for the enactment of the cybersecurity bill of 2016. The law is still pending for public inputs. Most private schools have excellent infrastructure in terms of internet connectivity and sophisticated technologies that are allowed to be exposed to the children; this could create a significant concern regarding the safety of these minors as they enjoy the benefit of the internet resource [Kerrelts-Makau, 2012]. The schools in Kenya are moving towards digitizing both the curriculum and the teaching methodology. The growing power of the Internet and its penetration in the country has increasingly led to consider safety issues that it brings.

2.3   Academic problem

Studies on the online safety of teens aged 12-14 are not common. This has resulted in a somewhat hypothetical and normative academic discussion on the concept [Kinyanjui, 2014]. Regarding this study, there is a growing concern for teens aged 12-14 years utilizing online digital communication technologies. The available studies focus on the general safety of children when interacting with the Internet [Annan 2011; Akdeniz, 2016; Gilgi 2013; Gillespie 2012; iHUB Research 2012; Jebungei 2013; Jenkins 2003; Johnson, 2010].

The findings of these studies are indecisive. On one side, children's utilization of online digital communication technology is seen as an essential component in the 21st century by enabling children to acquire prerequisite skills for research and self-learning. On the other, they are criticized by teachers, especially on the moral and online safety issues [Misra, Muthucumaru and Hashmi, 2017]. Thus, this study has looked at the influence of online digital communication technology on teens' safety aged 12-14 years. Therefore, this forms the primary concern of the study.

II. SETTING THE SCENE IN STUDYING APPROACHES IN SAFEGUARDING TEENS ONLINE

3.1 Digital Natives

As children continue to use online digital communication technologies, they are categorized into different continuums as per their ages. Palfrey [2008], defines "digital natives" as children "who were born after 1980 when digital social technologies such as Usenet and bulletin board systems came online." The young people at this generation have access to networked digital technologies, and they have the skills to use these technologies. They are online hence can study, write, work, and interact with one another in ways that are unique from the ways the adults grew up. They read blog posts, short messages, and meet one another online before they meet in person.

Gargiulo and Metcalf [2013], attest that digital natives spend their lives surrounded by technology such as computers, video games, digital cameras, smartphones, and other tools and gadgets of the digital age. He concurs with Prensky [2001] by stating that the "digital natives" prefer to process and utilize both data and information through pictures, sounds, and videos before reading texts. They, therefore, seek immediate gratification and instant rewards or response. Gargiulo and Metcalf [2013], also support Palfrey by saying that digital natives prefer multitasking and process information from multiple sources.

Palfrey [2013], argues that digital natives get connected by a shared online culture. Online digital technologies mediate the central aspect of their lives, including social interactions, friendship, civic activities, and education; hence they do not know any other way of life.

3.2 Internet use by teens

According to Farrell [2007], the digital landscape in the world is changing due to the availability of cheap mobile phones used to access the Internet. Teens can afford cheap mobile phones on the Internet. The rates for browsing through the Internet are relatively inexpensive, making it affordable for young people [UNICEF, 2013]. Kenya, as a country, is considered as one of the fastest-growing internet markets. According to Michele [2011], more than half of the country's population uses the Internet, which includes daily teens. Teens aged between 12 and 17 are quite substantial, and a more significant percentage of this group is aware of the existence of the Internet.

Although young children have been established as active users of the Internet, policies are directed to older children and much concerned geared towards teenagers [Holloway, Green & Livingstone, 2013]. As a result, there is a consideration for the protection of teens. To add on that, little attention is directed to the available opportunities and the benefits provided to teens through engagement online.

Due to the remarkable increase in uptake of the Internet by teens in school and at home, it has made it difficult for the parents, teachers, and policymakers to establish the benefits and risks that teens involved in the Internet. It is not also clear how best to support the teen's engagement with internet issues in a safe and rewarding way.

3.3 Digital safety and unsafe digital use among teens

Ong'ong'a et al., [2017], argues that teens chat and share their personal information with strangers in online platforms. The young people choose to take risks by posting personal or intimate information without their parents' knowledge [McAfee, 2013]. This is risky behavior. This trend has been increasing since the advancement of technology and increased use of the Internet among teens. Sharing personal photos with strangers is also a common phenomenon among teens.

The use of the Internet in Kenya has also raised much concern among the teachers, parents, and other stakeholders who include the government [Asher, 2014]. This is due to some of the illegal content that teens access on the Internet. There is a concern about the contents that teen access to the Internet in Kenya, and measures and controls in place to ensure the safety of young people in the online platforms.

3.4 Filling the Gap through Literature Review

In conclusion, the use of the Internet among teens in the country is high. Mobile phones are the main technological gadget that is used by teens to access and use the Internet.

The fast growth of the Internet in Kenya has also contributed to its accessibility. It is also important to note that the use of the Internet by teens is for different purposes. The teens use the Internet to access educational materials, social media, and downloading documents from the Internet. The parents and the teachers have little control over the use of the Internet among teens. Meeting new friends is also a motivating factor among teens concerning the use of the Internet. Teens are exposed to online risks when they chat and communicate with strangers [Maurer, 2013].

Sex predators are a threat to teens that use the Internet, and globally, some teens have been their victims.

Addiction to the Internet has resulted in poor results being registered in the examinations. The teachers are unable to control their learners' activities as they also lack adequate knowledge and skills as far as Internet safety is concerned. Government policies and the stakeholders' efforts are required to improve young people's digital security.

3.5 Uses and gratification theory (UGT)

The study adopted UGT as a framework in establishing the approaches in safeguarding teens in Kenya. Rössler et al., [2017], argue that UGT is also called need seeking theory. The scholars posit that the theory adopts a functionalistic approach to media and overall communication, including communication over the Internet. The theory's most crucial element is to fulfill the needs and motives of the audience. Thus, the theory guides the study in establishing how teens' needs are met and how they become satisfied when they achieve those needs. Therefore, the theory supports in evaluating why teens are attracted to particular media, content, and the nature of satisfaction that is illuminated by these media to the individuals who utilize them.

Consequently, teens seek communication to quench their thirst for information, which, in return, stems from psychological and social states and conditions. The needs of these individuals affect their communicative behavior. Currently, the UGT model is utilized in various scholarly researches on social media. Rössler et al., [2017], suggest that in consideration of the importance of the theory used in the 21st century, scholars should use a holistic methodology and assess commutative behaviors in the 21st century more accurately.

Ruggiero [2000], stipulates that traditionally UGT has been widely used in assessing why and how individuals use media in overall communication. The scholar continues to argue that any theorizations in communication are dependent on the uses and gratification theory. Besides, the emergence of social media, the theory has become very important. The technologies provide users with various forms of media. Moreover, the UGT deals in investigating, comprehending the media in general, and utilization patterns of the audience. Further, it seeks to examine how these choices impact them positively or negatively. In this regard, the theory guides this study in investigating the approaches to safeguard teens online in Kenya.

IV. METHODOLOGY

The pilot study adopted a qualitative approach to investigate the, experiences, understanding and narrations of the study participant in their own worldview. The case study was used to select a school in Nairobi County in Kenya to explore a particular case in real-life situations because it was accurate to yield viable answers to the research questions. The school is among the tops schools in Kenya, where technology is used widely. The study purposively sampled participants according to the study criteria [Streubert, 2007]. The selection criterion also included the participants' willingness to participate in the study [Morse, 2007].

The sample frame included teens aged 12-14 years and their teachers. The study recruited thirty-six participants who met the inclusion criteria in the pilot period between August-September 2016. After pre-study, the school was purposively sampled. The sampled school characteristic included; teens" aged 12-14 years allowed to access online digital communication technologies during the school session and at home. The study used quota sampling to identify twenty-four teens aged 12-14 years from their respective classes to participate in the study. Eight teens were selected from each age, gender and grade to ensure that the focus group is conducted effectively. Twelve class teachers who vast experience were also purposively sampled for this study.

4.1 Data Generation and analysis

Data collection is the process of gathering, assembling, and interacting with data [Jwan and Ongóndo ,2011] The study used focus group discussion and in-depth interviews as the methods of primary data generation. The author held focus group discussions with the teens during the school days. These focus groups ensured that the study gets a variety of information and experiences from the study participant. Interviews with the teachers were conducted to establish the strategies that the teachers and the school employed to ensure the teens' safety in the online platforms. Therefore, there was a maximum of two meetings for each participant. This provided the quality data is generated from the participants.

The study utilized six phases of thematic analysis by Braun and Clarkes [2006], to analyze the data. This strategy entailed reading through all the datasets, familiarizing with the data, coding the data, finding themes and subtheme, sorting, merging, and writing the report. To ensure the data's consistency, the transcriptions were returned to the participants to fact check whether the information they had provided was consistent with what was transcribed. Therefore, this ensured that the data were valid and reliable for the study.

V FINDINGS AND DISCUSSIONS

The following are the significant findings from the study.

5.1 Entertainments, gambling, and socialization

The exposure that teens get online is fun and of a short fad. Therefore, the study strongly conforms to [Green et al. 2012; Moore, 2011; O'Keeffe, 2011], that teens use the Internet to alleviate boredom, association with celebrities, and specific genres of music. In addition to sending texts, pictures, and photos, which may be damaging but contradicts Kimberly et al., [2011] arguments that children are exposed to violence when interacting with the Internet?

The study confirms Vanderhoven et al., [2014], argument that children feel that nothing will happen to them when they engage in risky behavior on the Internet and need adequate supervision from the teachers. Teens should be supervised no matter online or offline. The study, therefore, agrees with Asher [2014], who argues that children chat, socialize in online community platforms with friends and strangers but disagrees with Machuki [2013], that children use the ODCTs (Online digital communication technologies) for education.

5.2 Online insecurity

Insecurity online is one of the significant findings of this study. The study concurs with Kerrelts-Makau [2012] that there is a rise in Internet access by the children in Kenya. The research has revealed that teens openly access the Internet as a resource. Although parents feel that it's good to put the photos of their teens online for identity and fans, teens think that this puts them into trouble. Therefore, Gasser et al. [2010] contradict the study, arguing that children are concerned about their digital safety due to superficial reasons instead of safety issues. Therefore, teens do not want their e-portfolio published in social media.

5.3 'Sharenting'

Today's technology allows for the synchronization and sharing of information from different platforms. Information from WhatsApp, Twitter, Instagram, TikTok, and Facebook can easily be found since the users may use one login to all these sites. The need to educate the teens that the naming, sharing, tagging, and liking someone's post may reveal information about them to other people is vital. This is because teens at this stage tend to explore the Internet and show off what they are doing offline to the online world. Photos download, upload, and sharing are common among teens online. Therefore, teens need to seek permission from their parents and guardians to upload relevant information and

or participate in video gaming, texting, and chatting. Most online abusers send photos to children as part of a grooming process to gain trust and intrude into their privacy.

5.4 Supervision

The study agrees with Byron et al., [2008], that teens feel that their teachers or their parents do not have adequate information regarding the online safety issues and, therefore, cannot provide them with sufficient support needed. Supervision is very vital for the safe upkeep of teens in both online and offline space. This allows teens to appreciate the level of concerns of their teachers and parents towards them. Lack of supervision from both parents and teachers in most cases may lead to inappropriate behaviors. This is because, as the teens continue to grow, they seek information and tend to use the technology to explore their world. Inadequate information provided by both the teachers and parents related to sexuality and other topics of concern by the teens may motivate them to explore the Internet. Since the Internet gives a variety of information and contents, the teens might find themselves accessing contents that might be risky, harmful, and dangerous [Maurer, 2013].

VI. Strategies in keeping teens safe online

6.1 Precise information on the utilization of online digital communication technology

Parents of teens usually gear the usage of online digital communication technologies in schools. Teens are given these technologies to communicate with their parents while at school whenever they have problems or use them for their school work. This makes it impossible for teachers to have an apparent direction on how the teens should utilize the ODCTs. To create a more long-lasting credit of clarity in information on utilization of ODCTs, the teachers must be significantly involved in the decision making process on the use of technology in schools. Moreover, there is a need for ODCTs literacy in the country because it appears that the teachers are not clear about their roles in safeguarding teens online.

6.2 Innovative reporting system

Effective reporting structure and mechanisms should be introduced to safeguard the teens online in schools. This might include hotlines report abuse functions and online supports to avert abusive scenarios. Generally, in some of the social networks like WhatsApp, Facebook, and Instagram, just to mention a few have an icon on the home page that allows children to report people with inappropriate behaviors that

they are engaging with online. It works by just a click of a button, and the sharing of their concerns is linked to relevant authorities. These tools are potent if and only if the teens are empowered and trained on the utilization of such resources in their online digital communication technologies and the majority of the social network sites.

6.3 Reporting unacceptable behaviors online

When teens face challenges, they need to identify and know where to go for help. Therefore, it is essential to note that teens need opportunities and means to report unacceptable behavior they encounter either online or offline. When this happens, they must get counseling services. Teens must possess confidence in reporting exposure to abuse and hate online. It makes them active agents to minimize insecurity on the Internet. Information should be availed to the teens to enable them to make informed choices and avoid risk while seeking academic content. It allows them to find and offer to help others when they are needed. Innovative information communication materials should be developed by relevant policy bearers to communicate with the teens who could be context-based.

6.4 Strengthening parental capacities

The capacities of the parents of the teens must be strengthened to protect their teens online. It should be done by introducing programs that inform them about the benefits and risks associated with online digital communication technologies. The parents must also be acquainted with the strategies that teens can adapt to be able to keep themselves safe on the Internet. Therefore, parents must create an open space for dialogues and engagement to help their teens identify their potential in identifying danger on the Internet.

6.5 Building capacity of teachers and professionals

Teens protection, either online or offline, is everybody's business. Therefore, it is essential to build capacities of teachers, guidance & counseling teachers, ICT teachers, and the school administration at large to alert them to the risks that teens face. These groups must also be trained to recognize warning signs and symptoms that teens show during and after engaging with various ODCTs. It is argued that they can construct their knowledge based on their experiences and how they overcame from stressful situations, as well as how they have managed to protect themselves online. It means creating educational measures based on principles of acceptance, decency, and respect among teens. Consequently, the campaign on the reduction of violence and cyberbully in schools must be hastened.

6.7 Approaches to safeguard teens online

It is crucial to corporate with the internet service providers (ISPs), the online payment industries, and other stakeholders to track online child abusers and those who lure teens to perform the indecent acts. The measure is to close down these channels used by the perpetrators. The power lies with the providers of the services to make it happen despite the challenges of revenue versus risks associated with the teens' services. Professionals, including Teachers, ICT professionals, as well as computer service organizations, must make it mandatory to report incidences of suspected teen's online abuse. They must bear in mind that effective reporting is dependable on the quality of services available.

6.8 Reduction of availability and access to harm

The primary goal is to eliminate online or offline exploitation of teens. Consequently, the Internet has made it possible for millions of teens being abused online. The images of these teens are, therefore, accessed easily online. There must be a strategy to remove these created, stored, and circulated images online. Minors must be limited to access the Internet, and if so, it must be through parents' and guardians' mediation and intervention. The relevant ICT authority has a very significant set of responsibilities to perform concerning reducing the online risk of teens. Close collaboration among the key stakeholders and collective action is essential to ensure the unavailability of risk and reduction of harm on the Internet.

Conclusion and recommendation

Kenya, as a country, has embraced the utilization of digital communication technologies in schools; however, there is a need to put policies in place towards ensuring the online security of teens. Although Kenya has started establishing the laws that will ensure that learners utilize online digital communication safely, the process has lagged. More significantly, and precisely to this perspective, the question of the online safety of teens while using digital communication technologies remains a diverse issue, hence need clear concretized definition, awareness, and consideration process for policy implementation.

The study contributes to the body of research on teens' online safety when utilizing ODCT in various ways. Firstly, the study responds to the dialogues going around the public regarding the security and safety of teens while using internet resource in Kenya, and elsewhere, by accomplishing the demand for empirical data on Internet safety of teens from the school perspective.

Secondly, the study places of interest on the challenges faced by teens while interacting with the Internet, and strategies put in place to counter them. Therefore, the study offers suggestions to policymakers, teachers, parents, teens, and other stakeholders on ways of maximizing resources in combating the vice.

Third, the study on the online safety of teens in Kenya mostly focuses on on-campus students. In approaching this study from the standpoints of the social worker in ICT4D (Information communication for development) programs, this research fetches new insight from the implementer's position that was previously non-existing in Kenya.

Fourthly, the study contributes to the methodology. There are few qualitative research approaches in the Kenyan context. Therefore, the study contributes to the utilization and acceptance of qualitative methods in Kenya. Thus, the study explores the current discussions by providing a reference point and a context for academics and policymakers and paves the way in re-looking the security of teens online.

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