

APPROPRIATION OF INFORMATION AND COMMUNICATION
TECHNOLOGIES IN ENHANCING COMMUNITY ACCESS AND
PARTICIPATION IN SELECT COMMUNITY RADIO STATIONS IN KENYA

by

Susan Wanja Mwangi

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APPROVAL**APPROPRIATION OF INFORMATION AND COMMUNICATION
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by

Susan Wanja Mwangi
13-0390

In accordance with Daystar University polices, this dissertation is accepted in partial fulfillment of the requirements for the Doctor of Philosophy degree.

Date:

Wilson Ugangu, PhD,
1st Supervisor

Michael Bowen, PhD,
2nd Supervisor

Levi Obonyo, PhD,
Coordinator, PhD, Communication

Levi Obonyo, PhD,
Dean, School of Communication

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DECLARATION

APPROPRIATION OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN ENHANCING COMMUNITY ACCESS AND PARTICIPATION IN SELECT COMMUNITY RADIO STATIONS IN KENYA

I declare that this dissertation is my original work and has not been submitted to any other college or university for academic credit.

Signed: _____
Susan Wanja Mwangi
13-0390

Date: _____

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Everything that has a beginning has an ending. Indeed, Ecclesiastes 7:8 states: “The end of a matter is better than its beginning, and patience is better than pride.” I’m grateful to God for granting me the grace to see the end of this long, treacherous, and almost unending journey. He gave me strength for the journey and hope for tomorrow, especially on days that I would have easily given up.

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LIST OF ABBREVIATIONS AND ACRONYMS

AMDI	African Media Development Initiative
AMARC	World Association of Community Radio Broadcasters
CAK	Communications Authority of Kenya
FGD	Focus Group Discussion
FGM	Female Genital Mutilation
ICTs	Information Communication Technologies
KCOMNET	Kenya Community Media Network
KMD	Kenya Meteorological Department
NWICO	New World Information and Communication Order
QCS	Qualitative Case Study
RANET	Radio Internet
UNESCO	United Nations Educational Scientific and Cultural Organization

ABSTRACT

This study focused on community radio in Kenya with an emphasis on the changing nature of community access and participation due to the integration of information and communication technologies (ICTs) in community radio broadcasting. The objectives of the study were to determine how the internet and mobile phones are incorporated into community radio stations, examine the role of ICTs in promoting community participation through the decision making and content production in community radio, and investigate the extent to which ICTs enhance community access to community radio stations. This study was premised upon the domestication theory, the participatory culture model, and Fraser's (1990) notion of alternative public sphere. It adopted a multiple case study design with the use of in-depth interviews, focus group discussions, document review, and observation for data collection. The findings showed that the radio stations under study, that is, Amani FM, Bus Radio FM, and Kangema RANET FM, demonstrated that they had adapted digital technologies, although the community members did not fully participate in the decision-making process of the stations. The ICTs helped them improve the quality of the radio stations' programmes, gather news and information, interact with their audiences, and communicate with their sponsors and donors at a greater scale. However, most of the participants still preferred to listen to radio programmes through traditional radio instead of using the internet, social media, or mobile phones. This study recommends that when integrating community radio with ICTs, the needs, perceptions, and expectations of the community radio station and potential challenges that this integration may bring to the community around it should be considered. The access of the community to the ICTs and their level of digital literacy should also be considered.

DEDICATION

To the memory of my father and my brother.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This chapter discusses the background of the study, the statement of the problem, the objectives and research questions of the study, and the purpose and significance of the study. The scope of the study, as well as the limitations and delimitations of the study, have also been outlined. Key terms used in the study have also been defined in this chapter. This chapter provides the context within which one can understand the appropriation of ICTs by community radio stations to enhance access and participation in selected community radio stations in Kenya.

Information and communication technologies have provided communities with new opportunities to share news and information concerning their local communities. As with traditional media, community media have needed to adapt to these new technologies that include the internet, social media, mobile technology, and streaming services, among others. This has altered the kind of engagement that exists between citizens and community media as they seek to provide a platform to promote local voices that include diverse groups in society. Undoubtedly, these new technologies have had an impact on the community media landscape and especially on the ways in which citizens are able to access and participate in their broadcasting.

This study focused on community radio in Kenya with an emphasis on the changing nature of community access and participation due to the integration of information and communication technologies in community radio broadcasting. Access and participation are central concepts in community media and constitute the main distinguishing factors about community radio as community members are able to access

and participate in the activities of the radio station (Deane, 2007; Faisal & Alhassan, 2017; Jankowski & Prehn, 2002; United Nations Educational Scientific and Cultural Organization [UNESCO], 2018).

Access entails both content and infrastructure where “content is provided by independent producers providing alternative programming” while “infrastructure is the opening of the airwaves for community groups to legally create their own radio and television stations” (Coyer, Dowmunt, & Fountain, 2007, p. 111). On the other hand, participation in community radio means engaging “non-professionals in the production of media content (content-related participation) and in media decision-making (structural participation)” (Bailey, Cammerts, & Carpentier, 2008, p. 11). Ordinary citizens’ participation in the media is further categorized by Carpentier (2011) in two ways, that is, “participation in the media and participation through the media” (pp. 67-68). The former entails participation in the production of media output through the programmes and content-related involvement and in organizational decision making through the structural/managerial involvement. Participation through the media constitutes the ability to participate in public debate through mediated platforms.

Community radio is an emerging phenomenon in the broadcasting sector that is distinct from the other platforms, that is the public service and commercial radio in terms of its structure and philosophy. While community radio promotes a not-for-profit policy, it is usually owned by the audience and is characterized by the participation of community members (Gaynor & O’Brien, 2011). Community radio is therefore distinct from other forms of broadcasting due to its organizational structure, processes and procedures, and media output, and this is because its main objective is centered around service to the community and the need to implement goals that are helpful to them. Being a non-commercial media, the audience of community radio is composed of the

actual broadcasters and producers who are actively involved in managing a local communication project, rather than being casual listeners (Gaynor & O'Brien, 2011).

Bello and Wilkinson (2017) argued that since the early 1960s when most countries gained their independence, the media in sub-Saharan Africa have not been successful in facilitating public debate among citizens and hence the need for community media. While mainstream media engage the services of highly trained media professionals, community media engage members of the community in the planning and production of the programmes and give them an opportunity to narrate their stories using their own distinct expressions (Nassanga, Manyozo, & Lopes, 2013; Rodriguez, 2001).

The development of Information and Communication Technologies (ICTs) has resulted in various changes in the media industry globally. These include privatization of media industries and services, deregulation of government controls on gigantic media corporations, relaxation of regulations on entry of foreign multinational companies and concentration of ownership of ICTs in the hands of a few media conglomerates (Kimani, 2017; Pavarala & Malik, 2007; Pavarala & Malik, 2010). These changes have led to multinationals having control over public debate and discourse and to cultural homogenization, further excluding poor communities from access to mainstream media. This has given new impetus to the growth of community radio in their bid to address issues that especially concern local, poor communities.

According to Thioune (2003), ICTs can be categorized as traditional and new ICTs, where “traditional ICTs include radio, television, fixed-line telephones, and facsimile machines and new ICTs consist of computers and specific data processing applications accessible through those computers (that is, email, internet, word processing, and other data processing applications)” (p. 11). This study mainly focused

on the new ICTs and specifically on the appropriation of the internet and the mobile phone in community radio stations.

With a focus on community access and participation, this study seeks to explore the ways in which community radio stations are integrating new media technologies in their operations. Information and communication technology has not only fundamentally changed the media landscape and journalistic practices of community radio stations, but also changed the way community members participate in the activities of these stations (Bello & Wilkinson, 2017; Javuru, 2011).

This study adopts the Domestication Theory as part of the theoretical framework to address the integration of ICTs by community radio stations. The other theories used in this study include the Participatory Culture Model and Fraser's (1990) notion of alternative public sphere. A theory in qualitative research provides a lens through which the phenomenon under study can be viewed. It is used as a way of explaining behaviour and attitudes or aspects of culture (Creswell, 2014). As is discussed in greater detail in Chapter 2, the domestication theory explains how the integration of ICTs affects people's lives and how the use of these ICTs creates routines of use (Silverstone & Haddon, 1996). A study on the appropriation of ICTs is necessary as the community media environment is increasingly defined by ubiquitous media technology. As the societies become more technology-mediated and the Kenyan media landscape comes to terms with the ramifications of globalization and the growth of information and communication technology, there is a need to establish the effect that these technologies have on the nature and operations of community radio and especially in view of their mandate to engage citizens in their operations.

1.2 Background to the Study

The establishment of community radio in Africa and particularly in Kenya is a relatively recent development, with the first station in Kenya, Homa Bay Community Radio Station being established in western Kenya in May 1982 (Ngugi & Kinyua, 2014). Before that, all the radio broadcasting was through the state-owned broadcaster, Kenya Broadcasting Corporation, which had been established in 1928. With the liberalization of the airwaves in the 1990s, the media landscape in Kenya experienced exponential growth and was significantly transformed as privately-owned FM radio stations began to emerge, the first of which was Capital FM (Kimani, 2017; Mudhai, 2011; Ngugi & Kinyua, 2014).

This resulted in radical growth of local commercial radio that occurred not only in Kenya but generally in sub-Saharan Africa by an average of 360 percent between 2000 and 2006, while community radio grew by 1386 percent within the same period of time (African Media Development Initiative [AMDI], 2006). In Tanzania for example, by 2006, there were 32 community radio stations from a total of 8 radio stations in 2000. In the Democratic Republic of Congo, there were only 10 radio stations in the year 2000, a number that grew to over 150 stations by 2006 (AMDI, 2006). According to the Communications Authority of Kenya (CAK, 2018), there are 44 community media broadcasters in Kenya broadcasting in English, Kiswahili, and other indigenous local languages.

This study considers it significant that the right to communicate and to have affordable access to the means of communication, and to freely express and disseminate their ideas is being increasingly acknowledged as a basic human right around the world (Article 19, 2003). The main focus at the seminal World Congress of the World Association of Community Radio Broadcasters (AMARC) held in Italy in 1998 was

“the just and equitable access to and participation in media for strengthening the rights of indigenous peoples, minorities, migrants and refugees”. The need for education and training as a way of empowering citizens to develop their own media skills was also highlighted (Pavarala & Malik, 2007, p. 20). The need for community radio was also given prominence when it was stated that the purpose of community radio is lost “if it does not facilitate the marginalized, rural or poor communities to challenge the mainstream understanding of social issues”.

Community radio stations give community members an opportunity to meet together and deliberate on issues of common interest, while also acting as a platform for social interaction. Additionally, it has been referred to as a simple radio that seeks to address the most basic needs of the community (Coyer et al., 2007; Nafiz, 2012; Ojwang, 2017). Unlike public service and commercial radio, community radio allows for diverse voices and ownership by the community while maintaining a not-for-profit stance (Gaynor & O’Brien, 2011). The assumption here is that this leads to the democratization of the public sphere and enhances social change. This study considers this noteworthy because community radio contests traditional media in the sense that “they provide alternative frames through which to understand social realities and challenge the concentration of media power” (Couldry & Curran, 2003, p. 7). Similarly, they “enable ordinary citizens to access and participate in media productions, thus empowering them to define themselves rather than be defined by the mainstream media” (Guo, 2017, p. 113).

Community radio, therefore, promotes an alternative public sphere that facilitates active conversations between the producers and the audience and seeks to empower audience members by encouraging them to participate in the media production process. Arguing from this perspective, this study seeks to explore the role

that ICTs play in enhancing this role. Community radio serves as an intervention strategy of choice for deepening participation and community ownership as it provides communities with a space to assert and safeguard local cultures, a platform for advocating their rights, and an opportunity to hold to account those who govern them (Da Costa, 2012). Even though community radio may be seen as a seemingly outdated media outlet in the digital era, it is of crucial importance to local, poor communities as it is accessible, and it facilitates democratization while empowering people at the grassroots (Conrad, 2011; Guo, 2017). This is significant in building a case for this study as the community, therefore, has an opportunity to get involved in social and political issues since they now have access to information that informs their decision-making (Gustafsson, 2012). This study argued that research on community media and especially in relation to information and communication technology is timely and relevant as it seeks to determine how this technology is being integrated into community radio broadcasting and how that is affecting community access and participation.

With the increased accessibility of mobile phones in Kenya, citizens are using their mobile phones for internet access to a greater extent (CAK, 2018). This may be one possible solution to the digital divide in Africa although there may still be challenges of access to internet-enabled handsets and the cost of data. Despite these challenges, community radio stations in Kenya are increasingly using digital media (Javuru, 2011), creating the need for a study that investigates the use of ICTs by community radio stations in their daily routines. This study focused on three rural community radio stations. These are Amani FM located in Tana River County, Bus Radio FM located in Kajiado County, and Kangema Radio internet (RANET) FM located in Murang'a County.

Amani FM, with a radio frequency of 88.1 and the slogan ‘*Sauti ya Tana River*’ that is the ‘The Voice of Tana River’ is a community radio station based in Garsen town, Tana River County (Kenya Community Media Network [KCOMNET], n.d.). Amani FM is run by Amani Centre, a Community Based Organization that provides space for various ICT focused peace building and community empowerment initiatives. Amani FM was launched in July 2017 and is run by a team of local volunteers. The radio covers a radius of 110km within Tana Delta Sub-County and its environs, as well as some parts of Lamu and Kilifi counties, an area with an estimated population of 280,000 residents.

Bus Radio 99.9 FM is a community-based organization and a local community radio station operating in Kajiado County. It is the only radio station broadcasting from the headquarters of Kajiado County since 2016 and it is licensed by the CAK as a “community free to air radio”. The Bus Radio slogan is “*Sauti ya Kajiado*” meaning the ‘The Voice of Kajiado’. The station broadcasts within a radius of 50 kilometres from Kajiado Town with a potential to cover 80 kilometres, according to the broadcasting regulations authority, CAK (Bus Radio, n.d.). Bus Radio mainly broadcasts in Swahili and Maa, the language of the local community, the Maasai. The station focused on tailor-made programs targeting the local community who are mainly pastoralists and farmers in Kajiado County. Bus Radio strives to be a platform for community engagement and transformation and public participation and dialogue between the governors and the community and to promote economic empowerment among the women and the youth.

Kangema RANET 106.5 FM was established in 2008 in Gakira Market, Murang'a County. The initial purpose of the radio station was to address environmental issues in the community and particularly the issue of heavy rains and mud slides that

were a common feature in the area. The station was initially established by the area MP and later taken over by the Kenya Meteorological Department (KMD) as part of the RANET-Kenya Project. The radio station has a geographical reach of a 25km radius and generally broadcasts in Kikuyu, Kiswahili, and English (KCOMNET, 2018). Kangema RANET is a partnership between the Government through the KMD (Ministry of Environment and Forestry) and the Kangema community and is a flagship project of Vision 2030 of Kenya.

The foregoing section provides a brief contextual basis for a discussion on the adoption and use of ICTs by community radio stations and how these ICTs are being used to enhance community access and participation. The ICTs in focus here are mainly the internet and mobile phones.

1.3 Statement of the Problem

The use of ICTs by community radio stations has the potential to affect the ways in which citizens access, engage and participate in community radio broadcasting. The convergence of the community radio environment brings with it possibilities and challenges for community participation (Nassanga et al., 2013; Radelius, 2014). Since the 1970s, community radio has been extensively used as an alternative form of mass media. However, it is apparent that this area of media studies has received little scholarly attention and is therefore not considered a grounded research area.

Community radio stations:

Work to strengthen their communities through the cultural production and reproduction of their radio programmes which are used as a tool for popular education, socioeconomic development, to promote community dialogue, and to present audio evidence in support of movements for progressive social change (Barlow, 1988, p.58).

This implies that every community radio promotes community participation in managing the station and in the production of media content and that it is accessible and that it does not seek to propagate the political powers that be but endeavours to be the voice of the people in the community (Servaes, 1999).

Studies on the activities of community radio have focused on: “providing information and news that addresses the needs of the community” (Jankowski, 2003, p. 8); community access and participation (Amadu & Alhassan, 2018); fostering and consolidating a sense of commonality (Keough, 2010); reflecting and constructing the culture of the local community (Meadows, Forde, Ewart, & Foxwell, 2009); diminishing the isolation of specific communities (Reed & Hanson, 2006); and promotion of political and social empowering of community members through facilitating engagement among community members (Forde, Foxwell, & Meadows, 2002; Martin & Wilmore, 2010; Siemering, 2000). Studies with a focus on the Kenyan community radio scene have mainly focused on community empowerment (Gustafsson, 2012; Jallov, 2007; Javuru, 2011); peace building (Ngui, 2009); sustainability (Kimani, 2017); and food security (Farm Radio International, 2011).

Other scholars have focused on the community development role of community radio, which is concerned with community empowerment, promotion of dialogue and debate as well as the promotion of social justice and progressive social change; and on the operations of the community radio stations themselves (Gaynor & O’Brien, 2011; Gustafsson, 2012; Nassanga et al., 2013). Consequently, others have focused on media content and the production process but have paid little attention to the use of ICTs by community media. This study sought to narrow this gap by investigating how ICTs are being adopted and used by community radio stations in their daily routines and operations to enhance access and participation of their audiences.

Aspects of convergence and digitization in community radio call for an investigation to ascertain the manner in which these radio stations are integrating ICTs in their daily routines and operations. ICTs have previously been referred to as technologies of freedom that excite public imagination with narratives of democratization, democratic participation, and civic engagement (Morisett, 2004; Papacharisi, 2010). This study focused on the potential of the internet and mobile phones to democratize and open up community radio stations to the community signifying greater access and participation opportunities. Community access and participation are considered cardinal components to the success of community radio broadcasting as ordinary citizens have opportunities to share knowledge that has the potential to effect social change (Amadu & Alhassan, 2018).

Approaches to the use and adoption of technology tend to either focus on the impact of the technology on society or on how the user influences the impact of the technology (Ling, 2004). Deterministic approaches focus on the technology rather than on the user. In this case, technology is portrayed as a significant social change agent that impacts the society (Ling, 2004). However, this study adopted a social constructivist approach that assumes that an innovation is shaped in use (Silverstone, Hirsch, & Morley, 1992). This approach considers the importance of the user's cultural context in shaping the meaning, perceptions, and impact of technology (Haddon, 2003).

1.4 Purpose of the Study

This study sought to explore the appropriation of ICTs by community radio stations in enhancing audience access and participation.

1.5 Objectives of the Study

1. To determine how the internet and mobile phones are incorporated into community radio stations.
2. To examine the role of ICTs in promoting community participation through decision making and content production in community radio.
3. To investigate the extent to which ICTs enhance community access to community radio stations.

1.6 Research Questions

1. How are the internet and mobile phones incorporated into community radio stations?
2. What is the role of ICTs in promoting community participation through decision making and content production in community radio?
3. To what extent do ICTs enhance community access to community radio stations?

1.7 Justification for the Study

While commercial and public radio stations use ICTs to supplement their broadcasting, to interact with their audiences, and to continue with their conversations beyond the airwaves, community radio stations operate on a different trajectory prompting the need for such a study (Bosch, 2014a). This study focused on community radio stations serving rural communities, which are generally characterized by low access to basic services such as healthcare, education, sanitation, water, communication infrastructure, and social services, among others. Community radio stations have the potential to narrow the information gap that exists and to provide access to government information, education, and healthcare, among others. This is in keeping with Vision

2030 proposed by the Government of Kenya that envisages a knowledge-based economy that will be more equitable and inclusive (Government of Kenya, 2013).

Despite interventions mainly by non-governmental organizations to provide ICT training to community radio stations, research studies on the appropriation of ICTs by community radio stations have been few. These trainings are as a response to combating the effects of the digital divide and in support of digital inclusivity and promotion of dialogue while endeavoring to include rural, poor communities in the public debate (UNESCO, 2017). While the digital divide may be a key factor in sub-Saharan Africa and especially in the use of internet-based technologies, community radio stations in Kenya are, however, adopting digital media in their work. They use ICTs and social media to complement their work, have active Facebook pages, and some even stream their content live on their websites (Gustafsson, 2012). Through this analysis of the integration of ICTs by three community radio stations, it is expected that this study will enrich the already available literature on the relationship between community media and information and communication technology.

1.8 Significance of the Study

The significance of this study lies in its attempt to contribute an African and, specifically, Kenyan perspective on the appropriation of ICTs in the operations of community radio stations in Kenya. The media environment in Kenya today has had significant changes from government-controlled media to the emergence of vibrant privately-owned media establishments (Javuru, 2011). This change can largely be attributed to access to ICT, market liberalization, and democratization. The findings of this study will be key in understanding the appropriation of ICTs by community radio stations within the framework of Domestication theory. While this theory was initially used to explain the use of ICTs by individuals within households and later extended to

include organizations and institutions, this study attempts to extend the use of this theory further to investigate the use of ICTs in community radio stations.

The audiences of the radio stations under study are rural communities that are using media in a changing technological environment. This study was, therefore, deemed significant as it sought to investigate how ICTs enhance access and participation among community members while acknowledging the disruptive nature of information and communication technology in broadcasting. It hoped to contribute to an ongoing debate in explaining the use of information and communication technologies, especially in the context of community radio stations.

This study acknowledged that most studies on journalism and digital media use are concentrated on mainstream journalism and therefore leaving the field of community radio and digital media use understudied. Unlike mainstream media, the main objective of community media is to:

Serve people, to encourage expression and participation, and to value local culture, with the sole purpose of giving a voice to those without voices and to communities that are far from large urban centres, where the population is too small to attract commercial or large scale state radio. (Girard, 1992, p. ix)

The findings of this study would, therefore, be significant not only to academics but also to policy makers, regulators of community radio broadcasting, civil society, and the media industry as a whole.

1.9 Assumptions of the Study

This study had the following assumptions:

1. That Kenyan community radio stations are using ICTs to enhance community access and participation.

2. That ICTs are an important tool for promoting interactions among community radio stations.
3. That policy makers and regulators of community radio broadcasting are encouraging the use of ICTs in community radio stations.

1.10 Scope of the Study

The unit of analysis in this study was the community radio station, and the community radio stations selected for this study were Amani FM located in Tana River County, Bus Radio FM located in Kajiado County, and Kangema RANET FM located in Murang'a County. These stations were purposively selected on the basis of their social contexts, duration of existence, and exposure to ICT use. All the three radio stations have been in existence for more than three years, meaning that they are well established and known in their respective communities and are therefore a good source of data. Kimani (2017) and Nafiz (2012) are other qualitative studies on community radio that have considered three stations as an ideal sample.

The study adopted a qualitative approach and purposively selected a sample size of 6-10 participants from among the staff of each radio station. The eligibility to be included as part of the study sample was based on pre-selected exclusion and inclusion requirements. The criteria of inclusion for this study, which reflects on the specific characteristics or demographic categories that are required for a person or element to be included in a study, included the use of ICTs and experience in working at the station. Such sampling criteria is a requirement in qualitative research where participants are selected based on their ability to clearly express their ideas, experiences, attitudes, and opinions (Miles & Huberman, 1994). A sample was also selected from among the audience of each radio station, and the criteria included those who listened to the radio station programmes regularly.

The internet and mobile phones are the two main ICTs that this study focused on. The use of ICTs by community radio stations has resulted in technological convergence on the radio that seems to convey a message of democratization of information, making radio more accessible to audiences. ICTs can be categorized as traditional (radio, television, and fixed-line telephones) and new (computers and specific data processing applications accessible through emails and the internet) (Thioune, 2003). This study is concerned with the appropriation of new ICTs and, specifically the internet and mobile phones.

1.11 Limitations and Delimitations of the Study

The findings of qualitative research are subject to the researcher's biased interpretation; hence there is a need to recognize that one's own background may influence the way in which the data is interpreted. It was, therefore, necessary to ensure that personal ideas or experiences did not influence the interpretation of the data. Researcher bias may also be introduced at the point of selecting the sample for the study. This was avoided by applying an inclusion criterion that ensured that the selection process was objective.

Another limitation that this study faced was that not all aspects of the Domestication Theory were considered in the study. While the domestication approach encompasses four processes, that is, appropriation, incorporation, objectification, and conversion, this study only focused on the first process since the purpose of this study was on gaining an understanding of how these technologies are appropriated by the community radio stations to enhance audience access and participation.

The cases for this study were identified more than two years before the actual data collection began. In the intervening period, some of the radio stations, and specifically, Mang'elete FM and MugamboJwetu FM, scaled down or shut down their

operations altogether. This presented a major challenge and necessitated the selection of another set of radio stations that had similar characteristics. It is also worth noting that while there may be similarities between the selected community radio stations, the results of this study may not necessarily be applicable in other contexts as qualitative research takes into account the natural contexts of the phenomenon under study.

The COVID-19 pandemic and associated effects necessitated that part of the data generation took place online via emails and google meets and, in some cases, via the phone. This situation led to a limited time in the field, limited access to informants, and the use of alternative data gathering techniques that relied more on the use of online platforms. To some extent, this may have compromised the quality of the data generated. To mitigate this, follow-up questions were presented to the respondents where the answers may not have been clear or may not have provided adequate details.

1.12 Definition of Terms

Access: As outlined by Berrigan (1979) and Coyer et al. (2007), this study considered access to include aspects of content and infrastructure as well as opportunities available to the public. According to Coyer et al. (2007), “access entails both content and infrastructure where content is provided by independent producers providing alternative programming while infrastructure is the opening of the airwaves for community groups to legally create radio and their own television stations” (p. 111). On the other hand, Berrigan (1979) defined access in terms of the “opportunities available to the public to choose varied and relevant programmes and have a means of feedback to transmit its reactions and demands to production organizations” (p. 18).

Community: This can be defined as a “big family” (Morris & Morton, 1998, p. 12), where members “carry within them a set of shared moral and social values” (Etzioni, 1995, p. 19; Rennie, 2006) and “duties and responsibilities that are essential

to social cohesion” (Rennie, 2006, p. 26). Therefore, “there is direct and frequent contact within the community between the members, who also tend to show a natural feeling of belonging” (Fuller, 2007, p. 223). “When community members participate in media productions, they are able to create a local public sphere where issues relevant to the community are discussed” (Jankowski & Prehn, 2002, p. 27).

Community media: The operational definition of community media for this study included techniques and technologies for responding to community communication needs (Opubor, 2000, p. 16), technologies through which poor communities are enabled to participate in issues of development, politics, and cultural preservation (Lukalo & Wanyeki, 2000), and a platform that offers counter-hegemonic discourses to power and is alternative to mainstream media. It must, therefore, be autonomous from the state and market influences (Bailey et al., 2008; Karikari, 2000). As argued by Pandit and Chattopadhyay (2018), the alternativeness, in this case, is established “through their association with the social context in which they function, in addition to the specificity of their content and their distinctive organizational structure” (p. 90).

Community Radio: Among the various definitions of community radio that exist, this study considers this term as one that generally denotes “stations that embrace participatory, open, not-for-profit practices that are made by and for the community, by voluntary labour values, and a source of neighbourhood-based news, entertainment, and information that responds to the needs of the community which it serves” (AMARC, n.d.). It differs from commercial and public service radio in that it allows for diverse voices to be heard and provides the local community an opportunity to own and control their own communication spaces. (Coyer et al., 2007; Gaynor & O’Brien, 2011).

Information Communication Technologies (ICTs): This study considered Thioune's (2003, p.11) categorization of ICTs as traditional and new ICTs. Traditional ICTs include "radio, television, fixed-line telephones and facsimile machines and new ICTs that consist of computers and specific data processing applications accessible through those computers (that is, email, internet, word processing, and other data processing applications)". This study focused on the new ICTs and, specifically, on the internet and the mobile phone.

Participation: This study adopted Bailey et al.'s (2008, p.11) definition of participation in community media, which states that it is the "participation of non-professionals in the production of media output (content-related participation) and in media decision-making (structural participation)". Therefore, while mainstream media engages the services of highly trained media professionals, community media engages community members to participate in the planning and production of content and allows them to tell their stories in their own distinct idioms (Rodriguez, 2001).

1.13 Summary

This chapter has presented a background to the study, the problem statement, the research questions, and research objectives, as well as the significance and justification of the study. Also included were the scope, limitations and delimitations of the study, as well as the definition of key terms. It has provided a background of the Kenyan community radio environment and the context within which the investigation on the appropriation of ICTs in community radio stations has been carried out. The chapter has also provided an overview of the community radio environment and a brief background of the radio stations under study. The following chapter provides an overview of relevant literature and a theoretical framework upon which this study was based.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review related literature on community radio stations and their use of ICTs in order to locate this study within the context of already existing literature. The sections covered in this chapter include the theoretical framework selected for the study that includes the domestication theory, the Participatory Culture Model, and Fraser's (1990) notion of alternative public sphere. This chapter also provides a review of general literature and empirical studies that were used to clarify the research problem under study. These have been discussed under various sections providing perspectives on the adoption of ICTs by media in Africa, the adoption of ICTs and social media in Kenya, access to ICTs in the rural areas in Kenya, as well as the role of ICTs in community radio.

An elaborate and detailed discussion on the evolution of radio and the emergence of community radio in Africa is also provided. A discussion on audience participation points to the affordances brought about by ICTs, while the importance of community access and participation has also been discussed in this chapter.

2.2 Theoretical Framework

The Domestication Theory

In research, a theory functions as a theoretical lens or perspective that shapes what is being investigated, guides the questions that will be asked, informs on how data is generated and analyzed, and ultimately helps to explain the behaviour and attitudes of the participants (Creswell, 2014). Scholars have adopted different approaches in their study of the relationship between people and communication technologies. These range

from those that focus on the impact of technology on society to those that focus on the role of the user in influencing that impact (Ling, 2004). Deterministic approaches present technology as a determining factor for social change that will have an impact on society regardless of the user's socio-cultural context (Ling, 2004). Domestication Theory not only demonstrates why people adopt ICTs or not, but also how people adapt (or tinker) with the technology and how this "tinkering" affects the use of ICTs as the users adapt the technology and fit it into their daily lives (Lie & Sørensen, 1996; Silverstone & Hirsch, 1994).

The domestication theory provides a framework within which to understand how ICTs affect people's lives. The concept of 'domestication' was derived from the taming of wild animals but is used here to describe the process of 'domesticating ICTs' (Haddon, 2007, 2017). This theory is premised on the bottom-up approach to the role of media, and how media perpetuates or overcomes asymmetries of power (Haddon, 2011). In this case, media is evaluated based on how they are used, and by their effect on social change. Digital media has seemingly extended the reach of media into every area of daily life, including culture, online information seeking, and sharing as connectedness with others have become part of our lives (Haddon, 2011).

Other approaches that focus on adoption and use of media technology but in different contexts include diffusion of innovations approach and uses and gratifications approach. The latter emphasizes more on the individualistic use of media while ignoring the socio-cultural practices that relate to consumption, while the former assumes that innovations are adopted as they are, without considering any possible alterations to the technology or about the ways in which its properties are used by the user (Morley, 1989). On the other hand, non-deterministic approaches focus on the role of human agency in the adoption of technology and its impact on the user. Domestication theory

takes the view that the meanings of technologies are not necessarily embedded in the technology or the device but in the practices and uses that people assign to them within their contexts (Hynes & Rommes, 2005). This corroborates Lie and Knut's (1996) assertion that, while the place of technological devices in society is obvious, their meanings are not.

Domestication theory explains how the introduction of ICTs into individual's lives can lead to routines of use and how the display of these ICTs can eventually develop meaning to the individuals (Silverstone & Hirsch, 1994; Silverstone & Haddon, 1996; Silverstone & Hirsch, 1992). The Domestication approach is summarized in the following processes: appropriation, incorporation, objectification, and conversion. Appropriation denotes the kinds of negotiation and considerations that led to the acquisitions of technologies; incorporation explains how the ICTs were spatially located in the home; objectification showed how their use was scheduled in people's routines and hence time structure; while conversion focused on how ICTs are mobilized to become part of our identities and how we present ourselves to others, such as in the way we talk about and display these technologies (Haddon, 2011, 2017). These processes describe how the introduction of technologies is managed, how they are physically or symbolically positioned and how they are fitted within our daily routines and consequently into our time schedules and finally, how they are displayed to others and what kind of messages they give about themselves (Haddon, 2007). This process presents the different stages of domestication from the time the potential adopter is made aware of the innovation and begins to develop perceptions of its potential usefulness to the time that the adopter actually acquires it and how he/she continues to embed it into their daily routines (Ling, 2004).

An investigation into the use of ICTs by community radio stations is necessary because it helps to explain how ICTs are actually used in this context. Domestication Theory portends that how an ICT is used is important and it, therefore, seeks to explain the use of technology beyond simple adoption. This theory helps to explain the use of ICTs without necessarily looking at them as either empowering or disenfranchising (Birkland, 2013; Silverstone & Hirsch, 1994).

The Domestication Framework requires an in-depth approach to research which involves interviews and observation, to elicit information. Consequently, this helps to explain the reasons why certain technologies are not adopted or are adopted in a very limited way. In this way, the domestication approach is suitable for discussion on the digital divide or social exclusion and is therefore ideal in explaining the appropriation of ICTs by community radio stations, bearing in mind the composition of community radio audiences and the assumption that they have lower access levels to the internet or mobile phones. The theory provides a framework within which to explain the social shaping that comes with the use of technology. The focus here is on the consequences of technology on our lives, relationships, our quality of experience, and if and how technologies empower us (Bakardjieva, 2005). This approach notes that if the barriers to internet use are removed, the current non-users would be willing adopters (Haddon, 2011). It also looks at why the internet may play an important role in some people's lives but not in others.

This is an approach in media studies that seeks to discuss the processes through which technology is appropriated by its users in context-specific environments. While the domestication theory was first developed to explain the adoption and use of new media technologies by households, its use has since been expanded to encompass institutions and other groups in society. This theory has its roots in cultural studies and

is informed by consumption studies, gender studies, and innovation studies and is mostly used to explain the mass adoption of computers, the internet, and mobile phones and how technology can be adopted to make an impact in a society (Silverstone et al., 1992).

Domestication theory serves as a suitable approach for this study because it focuses on interactive communication technology and the context of the user (Silverstone et al., 1992). It is a social constructionist approach that assumes that an innovation is shaped in use, thus contradicting other arguments that view technology as being fixed in meaning. Social constructionist theorists consider the importance of the user's cultural context in shaping the meaning, perceptions, and impact of technology. They argue that such meanings are understood within the user's socio-cultural context (Hynes & Rommes, 2005; Mefalopulos, 2008). The underlying assumption here is that technology users play an active role in shaping the nature, scope, and functions of technology within their context (Haddon, 2003). Unlike other approaches, domestication theory provides a further investigation of communication technologies beyond the aspects of uptake, gratification, and benefits to users to include how users further define the meaning of technology within their socio-cultural context. The underlying assumption of the theory is that the users of technology have a role in shaping the nature, scope, and functions of technology within their context (Haddon, 2003, 2006; Ling 2004; Hynes, 2009; Hynes & Richardson, 2009).

While domestication is a term that was originally used to refer to the taming of wild animals by human beings, in the context of media studies, it is used to explain how new technologies are integrated into the daily routines of users (Berker, Hartmann, Punie, & Ward, 2005; Haddon, 2000). It is, therefore, a process that is shaped by the values of the society, and the types of life and identity that the users aspire to, and an

approach towards an understanding of the use of interactive communication technology in the context of the user (Haddon, 2000; Ling, 2004; Silverstone et al., 1992).

Morley and Silverstone (1990) argued that consumption of technologies takes place within the environments of family and household interactions and that the influence of the context must be taken into consideration when investigating the consumption of communication technologies and the shaping of meanings of those technologies. Several other scholars have explored the use of domestication theory in other environments beyond the household setting. Pierson's (2006) study investigated the use of ICTs by small businesses and consequently presented an illustration of what he referred to as professional domestication while explaining the progression of the innovation process at the workplace. On the other hand, Hynes and Rommes (2006) applied the domestication approach to explore the meanings attached to technology in teaching and public environments, proving that the approach is suitable for varied socio-economic and technological environments.

Habib (2005) and Vuojarvi, Isomaki, and Hynes (2010) also applied the theory to learning environments and educational settings. Unlike other adoption models that focus on technology or that are technologically deterministic, the domestication approach is user centred, and focuses on the social conditions and the environment of the user (Hynes & Richardson, 2009). This study goes beyond the household to investigate how technology is fitted into the daily routines of a community radio station to enhance community access and participation. The domestication approach differs from other approaches that merely focus on either adopters or non-adopters by focusing on the ways in which technology is used, the symbolic meaning, and the personal attachment that people have towards technology (Lie & Sørensen, 1996). In this case,

adoption is perceived as being just one out of a series of steps in the process of integrating ICTs into society (Lie & Sørensen, 1996; Silverstone & Hirsch, 1994).

Critique on Domestication Theory

Domestication studies are usually done based on case studies and using qualitative methods. While this may be one of the criticisms levelled against them, it is also a strength because it allows the description of the adoption of technology to be explored in greater depth. However, as a social constructivist theory, domestication theory's view of reality is subjective. Subjective realities can be distorted, and they can also misrepresent reality if they are based on "facts" which are not real, and therefore are not facts at all (Kempf, 2006). The researcher must therefore recognize that respondents' views may not always express the reality of the situation, and therefore using various data sources would be essential.

The domestication perspective puts emphasis on the cultural appropriation of technology, thereby providing a solution to the shortcomings of the diffusion of innovations theory. Domestication perspectives also provide an alternative to other deterministic approaches that were prevalent within the media and communication field. Domestication focuses on the use of technology in context while incorporating daily routines and social embeddedness as being relevant for the media consumption process.

Another critique of the Domestication theory is that the theory was originally propagated to explain the use of technology in the household setting and specifically that of western industrial societies (Berker et al., 2005). However, this limitation has been challenged through various studies that have been carried out on what Pierson (2006) referred to as 'professional domestication' whose focus is on the workplace rather than the household setting.

Participatory Culture Model

From the aforementioned, it is clear that a discussion on new participatory media cultures would enrich this study as we seek to understand the appropriation of ICTs by community radio stations and the possibility of enhancing community participation and access. Thus, this study deployed the Participatory culture model for that purpose. The main goal of the participatory culture model is to expand opportunities for meaningful participation for individuals (Jenkins, Ito, & Boyd, 2016). This concept was first introduced by Henry Jenkins in 1992 and is used to refer to both descriptive and aspirational dimensions of cultural practices. Descriptive dimensions refer to how participatory practices and various forms of cultural practices are carried out, while aspirational dimensions are concerned with how such practices inspire agency and empowerment among different groups (Jenkins et al., 2016).

The participatory culture model is useful in explaining participatory culture in changing media environments, as well as agency and empowerment in a networked era where technology continues to take a more central place in society. Jenkins, Purushotma, Clinton, Weigel, and Robison (2007) described a participatory culture as a situation in which members of the community develop a social connection with one another because they believe that their contributions matter. Participatory cultures tend to grow from interest-based interactions and to have well-laid out norms to guide their contributions and communication. They seem to thrive in spaces where members present their media-driven content in spaces that an exchange of ideas can take place (Halverson, 2012).

New media technologies do not necessarily need to be present for participatory cultures to function. However, such access is made wider by access to the internet. According to Jenkins et al. (2007), participatory culture is defined by four key

functions: “affiliations, expressions collaborative problem solving and circulations”. Affiliations describe the interest-driven aspects of participatory cultures, where members can join and belong to various participatory cultures, based on their social connections. Expressions refer to “the production aspect of participatory cultures where members participate in cycles of conceiving, representing and sharing ideas” (Halverson, 2012). Collaborative problem-solving is considered as “the knowledge-building aspect of participatory cultures”. Community members collaborate with one another to address various issues. Circulations describe the networks through which interactions and information flow. This interaction shapes the daily routines of its users, and it is governed by their interests in communicating and sharing knowledge. The participatory culture model was, therefore, useful in the quest to identify possibilities of enhanced community access and participation that may emerge as a result of the use of ICTs by Community Radio Stations.

Fraser's Notion of Alternative Public Sphere

This study considers Fraser's (1990) notion of alternative public sphere as a suitable theory to help explain audience access, participation, and interaction in community radio. Fraser (1990, p.118) noted as follows:

Even if one single, comprehensive Habermasian public sphere exists and if this public sphere is entirely public and open in its ideal form, it will still exclude those who cannot participate to the fullest extent due to their varied social backgrounds and lack of access to cultural and political capital.

Therefore, some community members will inevitably be excluded from active participation in situations where a media initiative is modelled around the Habermasian public sphere. Schneider (1996) noted that “when Habermas argued that all members

of the society should have an opportunity to participate in the rational-critical debate, he did not take into consideration disparities such as those of class and gender” (p. 365).

Hence, Fraser (1990) suggested “unbracketing inequalities in the sense of explicitly thematizing them” (p. 118) while Guo (2017) asserted that, “alternative media represents a nexus of multiple alternative public spheres that clearly prioritize each interest group’s voices and needs” (p. 114). This alternative public sphere gives those among the “alternative public” access to participate in content production. This means that the audience not only receives information but is also able to participate actively by speaking out or in some cases, in producing media output. Gitlin (1998) argued against the idea of a single public sphere. Instead, Gitlin proposed the notion of public sphericules, which comprise of segments of the public sphere. This suggests the existence of counterpublics or public sphericules which refer to the fact that there might not necessarily be one public sphere as suggested by Habermas, but that regional media outlets have the ability to create parallel discursive arenas where social and political ideas are discussed and debated, with the end result being the formation of public opinion. In support of this argument, Mustapha (2012) argued for a variety of public spheres that are a reflection of people’s cultural and social confines, and these include age, ethnicity, class, and gender. In essence, this is the purpose of community radio as it converges around communal social relations and identity politics.

Even before the emergence of the internet, the idea of deconstructing the boundary between producers and audiences was already an area of interest for alternative media scholars. This challenges the notion that trained editors and journalists are the main determining factors of the social reality and that alternative media producers and audiences are locked together to the point where they collectively construct the truth (Atton, 2003; Couldry & Curran, 2003; Downing, 2001; Gui, 2017).

Hence, the participation of audience members in alternative media through sharing content-related ideas and participating in the production process is significant, and thus the integration of Fraser's (1990) notion of alternative public sphere in this study.

2.3 An Overview of the Adoption of ICTs by Media in Africa

As has been discussed in previous sections, ICTs have by and large been adopted by journalists in Africa. For this reason, it becomes necessary to discuss the ways in which ICTs are being used by the media and the implications of their use, especially in view of understanding how ICTs enhance the participation and access of media audiences. New ICTs such as the internet and mobile phones are changing the concept of radio globally as they have the potential to multiply and pluralize radio spaces. Moyo (2013) argued that "radio is now a virtual space, a network space, a mobile space while at the same time remaining a physical space when conceptualized in its studio format where citizens can participate in public debate" (p. 214). Radio is now more inclusive, and information is disseminated through the use of informal spaces of content production.

The assumption here is that this leads to greater accessibility to their audiences as digitization and convergence create a participatory culture within radio that is potentially organic, bottom-up, and democratic. Convergence offers multiple platforms of engagement such as online streaming, social media, websites, and podcasts, ensuring that radio is accessible within and across social classes (Moyo, 2012; 2013). Radio remains more or less traditional for most people in Africa as they still receive it through traditional broadcasts. However, this is slowly changing as convergence between new media and broadcasting means that change in the processes, culture, form, and content on the radio is inevitable (Moyo, 2013).

Discussions on new media often do not pay much attention to the unusual African media landscape that defies many of the technological inventions said to be configuring the structures and processes of communication globally (Mudhai, Tettey, & Banda, 2009). Challenges faced include poor electricity and telecommunication network, low per capita income, low literacy levels, and language barriers, among others, that consequently lead to a low level of internet usage. Despite this, mainstream and community media journalists in Kenya, as in other parts of Africa, have adopted the use of technological innovations and social media in their work.

Social media such as Facebook and Twitter are no longer considered as ‘new platforms’ in the media and communications landscape as over the past decade or so, these innovations have established themselves as high-profile players in the industry. Due to high broadband internet costs, the penetration rate of these platforms in developing countries has not reached proportions comparable to those in the developed global north (Jordaan, 2013). However, the rate of access in Kenya, as in several other African countries, is steadily rising. Statcounter Global Stats (2020) estimated the use of Facebook in Kenya to be at 43.46% as of December 2019 and that of Twitter to be at 21.88%. Social media has an empowering potential that enables social connection and cultural participation (Jenkins et al., 2016; Sujon, Viney, & Toker-Turnalar, 2018).

Digital social interactions have had some profound implications for mainstream media organizations and on journalism as a profession (Deuze, 2007). Long-established practices of news gathering, verification of stories, and reporting are changing, and alongside that, the profession itself seems to be intrinsically transformed (Bruno, 2011; Gulyas, 2013). While there have been in the recent past studies on whether journalists use social media and whether they find these technologies credible, there has, however, been little focus on the impact of these technologies on enhancing the access and

participation of community members in community radio broadcasting. This dearth of research is especially evident within developing contexts of the global south where research into the appropriation of new technologies on African journalism is scarce, particularly research about the influence of digitization, the internet, mobile communications, and social media on the daily routines and practices in community radio stations.

There is a gap in empirical research between the developed north and the developing south, and this has resulted in scholars invoking the “digital divide as the default explanatory framework - seen by many as a chasm that prevents journalists from Africa ‘from drinking at the fount’ of the unfolding digital revolution” (Berger, 2005, p.3). In spite of the shortcomings experienced, it is obvious that new media has had an impact on African media and has disrupted traditional processes of news generation, dissemination, and consumption by their audiences.

The advent of information and communication technology in Africa in the 1990s assumed linearity of progress, positioning new media technology as deterministic of social progress (Mudhai et al., 2009). Yet, the questions about access, inequality, power, and the quality of information available are still valid over a decade later after the emergence of new ICTs (Fourie, 2001). Mudhai et al. (2009) have argued that the integration of traditional media with multimedia platforms has provided possibilities for greater participation, inclusion, and expression and, in that way, expressing the value of new media technologies. The challenges notwithstanding, a number of countries in the continent have embraced new media technologies, and they are gradually adapting to the new digital revolution (Berger, 2011; Chari, 2009; Mabweazara, Mudhai, & Whittaker, 2014; Mudhai, 2011).

Such an analysis of the African perspective on the adoption of information and communication technology provides a basis upon which further research should be conducted, further strengthening the case for this study. The adoption and use of information and communication technology give rise to the need to understand the ways in which this technology is acquired and used, with a particular focus on community access and participation.

2.4 An Overview of the Adoption of ICTs and Social Media in Kenya

The internet was first introduced in Kenya in 1993, but full access through dial-up connections became available in 1995 (Internet World Stats, 2018). Due to the high cost of access and equipment at the time, the growth of internet uptake was slow, and by 2000, there were only about 200,000 internet connections in the country. However, this changed with the liberalization of the telecommunications sector and the introduction of the National Optic Fiber Network that connected Kenya to international networks and led to exponential growth in the media industry (Gathigi, 2009; Mudhai, 2011; Nyabola, 2018; Odhiambo, 2002).

Even with the emergence of mobile internet, which significantly lowered the costs of connectivity, Stork, Calandro, and Gillwald (2012) argued that by 2012, the disparities of access were not only of ICT but also of electricity. CAK (2017a) noted that in 2011/2012, only 60.1% of the households in Kenya had access to electricity, while only 12.7% of the homes had access to the internet and a computer. By 2017, the number of internet subscribers in Kenya had reached 30.8 million. Still, according to the CAK (2017a), it was difficult to determine the exact number since there was a possibility of a subscription belonging to an individual or an institution. The following year, the number of internet subscribers rose exponentially to 42.2% (CAK, 2018). In both cases, statistics showed that most Kenyans used their mobile phones to access the

internet, with mobile phone penetration rates being the highest in the developing world, at 88% and 100.1%, respectively (CAK, 2017b; CAK, 2018).

Alongside this exponential growth, social media use also grew steadily. By 2012, 74% of Kenyans who were above 15 years old owned a mobile phone, and 32.3% of these could access the internet, while 24.5% of them were using social media (Stork et al., 2012). By 2018, the number of mobile subscribers in Kenya had risen to 46.6 million, a growth that the CAK (2018) attributed to the fact that most people owned more than one SIM card, sometimes from the same or different service providers. These statistics are significant because it is through the mobile phone that most Kenyans are able to access the internet and consequently social media, including Twitter, Facebook, WhatsApp, and Instagram.

The Bloggers Association of Kenya (2018) estimated that by 2017, 12 million Kenyans were using WhatsApp, 7.1 million were on Facebook, 4 million on Instagram, and another 1 million on Twitter. By March 2020, Statcounter Global Stats (2020) estimated social media users in Kenya to have risen as follows: Facebook 35.86%; Twitter 26.08%; Pinterest 21.84%; Instagram 12.07%; Youtube 3.7% and LinkedIn 0.19%. The level of social media usage is significant to journalism because, as Spangler (2017) noted, social media allows for the production of the user's own content and for the opportunity to broadcast it directly to consumers, therefore posing a threat to traditional media.

Access to ICTs in the Rural Areas in Kenya

Access to ICTs in Kenya is significantly lower in rural areas compared to that in urban areas. According to the 2017-18 After Access survey conducted by ICT Africa, less than a third (27%) of the population in Kenya has access to the internet, with the urban-rural gap being at 69% (Ndung'u, Lewis, & Mothobi, 2019). The survey

attributes this disparity to the lack of desire to roll out infrastructure in the rural areas, the lack of electricity, lack of digital skills, and affordability issues. The study also established that despite having high mobile phone penetration levels in Kenya, only a quarter of the population owned smartphones. The majority of the people (84%) in Kenya who do not have access to the internet are based in rural areas.

Ndung'u et al. (2019) noted that the internet is a one-stop-shop, where citizens can access information on job opportunities, market trends, and policies, among other issues. The exclusion of some societies from the internet is likely to increase the already existing societal inequalities. This, therefore, defines community radio as a significant tool for development as in most cases, the community radio is able to access the internet on behalf of the community. The audiences of community radio stations are generally composed of citizens from lower socio-economic communities with possibly lower access levels to the internet or mobile phones.

One of the most successful community radio projects in their use of ICTs to empower marginalized communities is found in Sri Lanka. Known as the Kothmale community RANET project, the radio station has a daily programme, "*Radio Browsing the Internet*" that gives the audience an opportunity 'to browse' the internet as the presenters conduct the searches on their behalf. The information is explained and contextualized, sometimes even by guests who have been invited to the studio (Bosch, 2014b). In Latin America, the Pulsar news agency provides other community stations with daily news and reports through email and the internet (Dagron, 2001). Therefore, in some areas, community radio stations may be the only means through which the community is able to access the internet.

The Role of ICTs in Community Radio

Rheingold (1993) noted that the rise in the use of ICTs has often been regarded as a threat to legacy media such as print, radio, and TV because, as he says, “computer mediated communications might become the next great escape medium” (p. 11). However, despite the threat, the internet is making it possible for listeners to tune into local radio stations from any part of the world, while social media makes it possible for listeners to engage with the radio station not only through the airwaves but through the internet as well (Bosch, 2014b). Convergence has therefore enabled radio to remain an important platform for disseminating and exchanging information, especially in remote areas that lack modern cabled ICT infrastructure (Mudhai, 2011).

The advent of ICTs has, however, not accomplished the decentralization and diversification of production processes and democratic decision-making as had earlier been envisaged (Hamelink, 1986). Control over technologies instead became more centralized, and the power structures between the haves and the have-nots became more reinforced (Pavarala, 2008). There was an uneven distribution of access and skills required to exploit complex technology hence making information a source of power only under specific conditions of equity (Lyons, 1988). The use of media technologies for social change depends on “local communicative environments, availability of infrastructure and technological and social networks, and particularities such as age, gender, class, education and economic situation” among others (Lennie & Tacchi, 2013, p. 13). It is critical to note here that ICTs can be dualistic in nature in the sense that, while they can facilitate one’s participation in society, they can also become significant barriers for others (Silverstone, 1994). However, this is not the focus of this research study. The focus here is on the social shaping of technology that is concerned with how

people incorporate technology into their daily lives rather than on how technology empowers or disenfranchises people.

Traber (1986) argued that as long as ICTs serve the interests of only the powerful sectors of society, that is those who control and manage information, the information revolution remains only a myth. Castells (1996) called this the network society, which suggests that while networking as a form of social organization has previously been in existence, the “IT paradigm provides the material basis for its pervasive expansion throughout the entire social structure” (p. 469). In a stratified social structure, the spread of networks cannot have differential effects on different segments of society. However, Castells still saw the potential of reconstructing democracy through the mobilization of ICTs. He argued that these technologies can lead to greater decentralization and citizen participation and enhance horizontal communication among individuals and communities. He noted that “electronic grassrooting of democracy could possibly help reconstruct a new kind of civil society” (Castells, 1997, p. 352).

Silverstone (1994) did not view ICTs from the point of view of the device but argues that the meaning of ICTs is more complex and nuanced as ICTs take a central place in our routines, traditions, and rituals, while Birkland (2013) supported this notion noting that ICTs are socially constructed, and their use always takes place in certain economic, social and institutional frameworks. Quintas (1996) argued that the values and assumptions of each digital technology are inbuilt, and they have the potential to predetermine its use to a certain extent. Therefore, different definitions of ICTs may be culturally determined, and rather than the ICTs being the ones to shape the people, it is the people who shape and integrate ICTs into their behaviours (Haddon, 1994). As noted by Megwa (2007), it is necessary to determine the interface between community

radio stations and their communities in order to establish whether ICTs really enhance opportunities for greater participation or not.

This study focused on the role of ICTs within the perspective of alternative approaches to community development, on exploring the relationship between the use of ICTs and the democratization of the process of community development, with particular reference to community radio. ICTs have the potential of providing an arena to the marginalized communities that could be used for democratic deliberations and negotiations that would, in turn, help to form a more responsible and responsive alternative public sphere. The use of the internet as a media platform is creating greater possibilities for the practice of community media by opening up the channels of media content distribution without the need to use the radio frequency spectrum, that is by making use of internet distribution enabled radio (Buckley, 2011). The intersection between radio and the internet offers community radio stations the opportunity to close the gaps between the producer and the consumer within the networked public sphere and an additional platform through which they can reach their listeners (Bosch, 2014b).

Defining the Community in Community media

Before providing a definition of what community media is, this study will first seek to define what a community is. The notion of community is epitomized through the Communitarian/Libertarian theoretical arguments. Rennie (2006) asserted that “individual rights must be the primary concern of political society, as it is through the protection of individual rights that good life is most likely to occur” (pp. 26-27). Liberalism focuses on individual needs over those of the community. However, communitarians argue that “emphasis on individualism in liberal thinking helps to create an amoral, fragmented society that represents a colder, unattached way of living devoid of cooperation and social cohesion” (Morris & Morton, 1998, p. 12).

What matters most for communitarians is “the primacy of society over the individual” and their argument that “people in groups are capable of participating in and defining their society in a meaningful way through their shared collective interest” (Rennie, 2006, p. 27).

Downing (2001) stated that the term community is exceptionally difficult to define, while Morris and Morton (1998) referred to the community as “the big family” which portrays the idea of some form of “homogeneity within the community” (p. 12). As argued by Rennie (2006), “community is inculcated, formed through a sense of affinity and identification, a recognized essence, or a sense of belonging and that it involves processes of group formation, mobilization, and public participation” (p. 40). According to Rennie (2006) “a community can also be defined in terms of interest, language and cultural groupings” (p. 3). As stated by Downing (2001), there may be social rifts within a community, which result in the creation of sub-units within a community, hence suggesting that a community is not always homogeneous.

Wenger, Dermott, and Snyder (2002) described what is generally referred to as communities of practice as:

Groups of people who share a concern, set of problems, or passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis...these people do not necessarily work together every day, but they meet because they find value in their interactions (Wenger, Dermott, & Snyder, 2002, p. 4).

This definition ties in well with the kind of community that a community radio represents due to its emphasis on a shared concern.

The Philosophy of Community Radio

Against the backdrop of the aforementioned, it is necessary to understand the philosophy behind community radio. Community radio was initially established as an instrument to foster development as the voice of the voiceless and especially the disadvantaged in the community (AMARC, 1998). Community radio promotes values such as participation, ownership, and control by the community, a not-for-profit model, and emphasizes the community radio's role as a facilitator for the community to do something for itself through ownership and control of its own means of communication (AMARC, 1998).

In its programme content, according to Baker (2007), Barlow (1988), Elliott (2010), and Sussman and Estes (2005), community radio aims to make a contribution to the democratization of information and ultimately to affect the existing power structures and to promote social change. Jose Ignacio Lopez (as cited in Anduvate, 2014) encapsulated the notion of community radio in the following words:

When radio fosters the participation of citizens and defends their interests; when it reflects the tastes of the majority; when it truly informs; when it helps resolve the thousand and one problems of daily life; when all ideas are debated in its programmes and all opinions are respected; when cultural diversity is stimulated over commercial homogeneity; when women are main players in communication and not simply a pretty voice; when no type of dictatorship is tolerated; when everyone's words fly without discrimination or censorship; that is community radio.

United Nations Educational Scientific and Cultural Organization, which has actively supported the growth of community radio as an agent for change and development over the years, refers to community radio as a radio service by the people,

close to the people and for the people who essentially means that community radio should not only be run by but also serve the interests of the community (Fraser & Restrepo-Estrada, 2001; UNESCO, 2011). Additionally, Gaynor and O'Brien (2011) noted that community radio forms a distinctive media space and functions largely outside the commercial and homogenizing tendencies characterized by most of the other forms of mass media. In more than two-thirds of Africa, radio can be said to be the mass medium of choice, for both rural and urban communities due to its affordability, portability, and the fact that it runs independently of power grids and does not exclude the illiterate members of the community (Da Costa, 2012).

The advent of community radio as we know it today can be traced back to the 1940s when the tin mining communities in Bolivia set up community radio stations. However, the first-ever community radio station is believed to have been Radio Sutatenza, established in 1947 in Columbia (Girard, 2007). The idea took root in the late 1970s as community radio stations were established in the Caribbean, Asia, Australia, Europe, and Africa as an alternative to commercial and public radio (Bosch, 2014b; Dagron, 2001). Community radio provided people with little access to the mass media in the West, with a platform to express themselves, and for countries with autocratic or totalitarian leadership, it provided an avenue for some form of resistance. In developing countries, community radio targets marginalized communities and aims to promote cultural values and the use of local languages and to give them a voice in development issues (Buckley, 2011; Dagron, 2001). Generally, in most countries in Africa, growth in community radio has been in line with changes towards more democratic political systems and liberalization of economies (Bosch, 2014b).

Tabing (2002) defined “a community radio station as one that is operated in the community, for the community, about the community and by the community” (p. 9)

and further noted that “the community can be geographical, such as an island, village, township, district or a group of people with similar interests who may not necessarily be located in one defined area” (p. 9). While Fraser and Restrepo-Estrada (2001) were of the opinion that community radio is a social process in which members of a community come together to produce programmes and broadcast them, Pavarala and Malik (2007) argued that the main characteristics of community radio include access, the community’s participation in production and decision making, and the use of their own resources to run the station. In this case, community radio, therefore, demystifies media processes and functions as a tool to promote the culture and the interests of the community while providing a platform for the marginalized to express themselves (Bosch, 2014b; Pavarala & Malik, 2007).

Gaynor and O’Brien (2011) asserted that community radio was established with the aim of “re-appropriating the public sphere”. Similarly, Habermas (1996) stated that “community radio was established as an antidote to the existing media institution”, which through its processes of commercialization and privatization, had compromised on its role as the watchdog of the society. Herman and Chomsky (1988) referred to this appropriation of public discourse as the manufacture of consent. In making a case for community radio, Hackett and Caroll (2006) argued that mainstream media is also faced by issues such as “centralization of power, inequality, homogenization, undermining the sense of community, corporate enclosure of knowledge, elitist processes of communication, policymaking, and the erosion of community” (p. 2).

World Association of Community Radio Broadcasters (n.d.) emphasized that community radio is one that serves the community by responding to their needs. This description calls to attention the significance of the nature of the relationship between the community and the radio station and the need for the community to participate in

the activities of the station. Interestingly, while various researchers such as Berrigan (1979), Girard (1992), and Jankowski and Prehn (2002) emphasized on the need for the radio station to be owned by the community which it serves, AMARC does not lay much emphasis on this (Oso, 2003). The purpose of community radio is to give marginalized communities access to the media while at the same time demystifying media processes (Bosch, 2014b). Therefore, citizens who had only previously had access to state-run media which is laden with biased propaganda, can now have broadcasting on their own radio stations (Bosch, 2014b).

Several scholars argued that the main focus for community media is communication for development (C4D) which Lennie and Tacchi (2013) argued is a social process that is based on dialogue. Dagron (2009, p. 6) noted that “community media aim to pursue change at different levels ranging from listening to building trust and sharing knowledge and skills, as well as learning for sustained and meaningful change”. According to Quarry and Ramirez (2009), rather than good communication producing good development, the emphasis should be on good development breeding good communication. This implies that good development communicates well with local communities about their development goals and solutions, rather than telling them from a policy-based, top-down approach what these ought to be (Lennie & Tacchi, 2013).

2.5 Evolution of Radio in Africa during the Colonial Era

A brief historical overview of the introduction of radio in Africa is crucial at this point before delving into the introduction of community radio in the region. Radio was initially introduced to Africa during the colonial era, with the main role being to link “the expatriates to the metropoles” (Bourgault, 1995, p. 69). In 1920, the first radio was established in South Africa, and later, in 1927, the British East Africa Company

began a relay service for settlers that aired its programmes from Nairobi. The British then established the Empire Service in 1932 for its colonies and dominions in anglophone Africa, Canada, Australia, and India. This service broadcast programmes on the BBC station from select locations such as Salisbury in modern-day Zimbabwe (then Southern Rhodesia), Southern Africa, and from Lagos in Nigeria.

In both the British and French colonies, radio became a symbol of the colonial policies, and this influenced the kind of information that was broadcast. For the British, it was important for them to establish an African audience; hence they emphasized the use of local languages (Tudesq, 1983). The French used radio to propagate their colonial policy of direct rule and to counter the “discussions of educated Africans who were quickly turning rapidly to subversive and antigovernmental ideas” (Tudesq, 1983, p. 15). In accordance with the French colonial assimilationist policies, the nature of their programming was initially French in inclination and choice of language, and their broadcasting maintained a close relationship with France even after the attainment of independence (Nyamnjoh, 1988).

2.6 Post-Independence Broadcasting in Africa

The first generation of anglophone politicians in the 1960s recognized the power of radio in nation-building. Coincidentally, some of them, such as Nnamdi Azikiwe of Nigeria, Hastings Banda of Malawi, Jomo Kenyatta of Kenya, and Kwame Nkrumah of Ghana, had received journalism training (Boughault, 1995). In a bid to create awareness about their new governments, some leaders, specifically in Madagascar, Niger, and Upper Volta, began the distribution of free radio sets among the rural communities while others like Ghana, Togo, Zaire, Mali, and Niger established radio clubs (Tudesq, 1983, pp. 39-40).

These efforts aimed at expanding the airwaves, especially where radio was concerned, and with a target on the rural populations. The efforts to enhance broadcasting services in Africa were driven by UNESCO under the influence of Wilbur Schramm's (1964) "mass media and national development". Schramm had been influenced by Daniel Lerner, a scholar who had established a structure for socio-economic development that highlighted the significance of mass media in enhancing this process. The model propagated the idea that a certain level of urbanization was necessary for literacy to be achieved. It also advanced the idea that it was only after the proper literacy level had been attained that the media would be introduced. Hence, mass media would "act as a mobility multiplier" causing citizens to seek new areas of economic advancement (Lerner, 1958).

The Emergence of Community Radio in Africa

Boafo (1991, p. 109) argued that there was little effort towards the establishment of community radio in post-colonial Africa. He noted that only a few countries such as Burundi, Burkina Faso, Ghana, and Liberia had made notable progress to expand community access to electronic media with the establishment of local community radio stations. The African mass media acquired two overarching legacies at the time of independence. The first one was the need to foster and promote nationalism or national consciousness, which led to highly controlled and centralized media systems. The second legacy was the need to promote modernization (Boafo, 1991, p. 228). Development implied industrialization, which was seen as the cornerstone of the western world's superiority in world affairs and its ability to provide material wellbeing to its citizens. Under the guise of promoting development, African governments have established or extended mass media systems with the assistance of UNESCO and other bilateral aid organizations and private investors. However, as the African elites have

recognized the potential of these initiatives to enlighten the masses, they have often slowed down the pace of development in rural areas so as to redirect its aims and messages.

The theory and practice of promoting development began with a globalistic assumption about the media's power to promote positive change in third-world countries (Lerner, 1958; Schramm, 1964). It implied that the introduction of media would lead to development (West & Fair, 1993, p. 92). By the 1970s, communication experts began to use the diffusion of innovations approach to development as the assumptions of the 1950s and 1960s proved to be wanting. The diffusionist perspective was preferred because it recommended the use of scientifically designed procedures to trace the flow of messages, promoting the adoption of scientific modern ideas or practices through society. It mainly focused on the cognitive stages through which a target individual passes before adopting a course of action.

This perspective assumed that messages concerning development must inevitably emanate from the top of society (the social planners and development agencies) and that its targets were individuals rather than groups. According to Rogers (1962), diffusion of innovations was both sensitive to the salience of the messages for audience targets and to the effects of communication contexts within which the communication operated.

The Emergence of Community Radio in East Africa

Communication for social change through community radio is a growing phenomenon in the African continent. In most cases, a community radio station's transmitters are only able to reach a few thousands of people, but in effect, it gives a voice to poor, isolated communities. Ordinary citizens are given an opportunity to

discuss issues that concern them, such as gender issues, health, farming, governance, HIV/AIDS, among others.

The media landscape in Africa is currently characterized by vibrant and progressive public and privately-owned media establishments rather than just the former government-controlled monopolies (Javuru, 2011). This is due to the availability of opportunities for greater access to more affordable technology, democratization, and market liberalization. Radio remains the main mass media in the global south and mainly in Africa (AMDI, 2006; Bourgault, 1995). The growth of community radio stations has given rise to greater interest among local scholars to theorize and problematize this phenomenon from an African viewpoint.

The advent of community radio in East Africa can be traced back to 1982 with the establishment of Homa Bay Community Radio (HBCR) by the Government of Kenya and with funding from UNESCO (Githethwa, 2008; Javuru, 2011). The station was managed by personnel from the state broadcasting station, Voice of Kenya (now Kenya Broadcasting Corporation) as the government wanted to monitor its operations closely (Quarmyne, 2006). HBCR signified a turn-around in radio because it meant taking radio away from the cities and to the people. Initially, HBCR focused on community development in spite of the fact that the programmes that were aired were similar to those of the state broadcaster. It did not use the local language in much of its programming, and neither did it seek to foster any ties with the community. Rather, HBCR seems to have been an attempt at establishing a low-cost radio station at a time when emphasis was put on the use of technology from the west to “list Africa out of the dark mist of under development” (Javuru, 2011, p. 3). However, as some researchers have correctly argued, HBCR would fall short of the current criteria of a community radio station due to its ownership structure, aspects of control, and community

engagement (Dagron, 2001; Girard, 2001; Howley, 2005; Kimani, 2017; Lewis, 1993; 2002). In 1984, the government decided to shut down HBCR as a way of quelling the growing ethnic tension in the South Nyanza region.

In Uganda, only three community radio stations, Mama FM, Radio Apac, and Kagadi-Kibale Community Radio, would be considered legitimate community radio stations, even though there were a few others that had been set up by religious organizations (AMARC, 2003). Additional efforts by UNESCO ensured that several community multimedia centres were well funded. These include Kachwekano Community Media Centre, Nakaseke Community Multimedia Centre, Buwama-Tele Centre, and Nabweru Multimedia Centre. These initiatives did not, however, yield much as the growth of community radio did not take root as expected. Javuru (2011) attributed this slow growth to a poor broadcasting policy which did not offer much support to the establishment of the community radio.

The situation in Tanzania is an interesting one in that the Tanzania Communication Regulatory Authority (TCRA) regulates broadcasting in Tanzania, with the chairman and the Director General being presidential appointees, which casts doubts on the independence of the authority (Javuru, 2011). Overall, Tanzania lacks a versatile broadcasting sector that is essential to a functional democracy (African Media Barometer, 2010).

Despite Kenya having the first community radio station in the region, it has been noted that community media has faced myriad challenges in an effort to get established in the country. Some of the community radio stations that were well established and vibrant years ago such as Radio Manelete, MugamboJwetu FM, Mwanedu Radio, and Radio Maendeleo among others are either no longer as vibrant or no longer in existence. In spite of the challenges faced, some community radio stations such as Baliti FM,

Amani FM, Pamoja Radio among others continue to soldier on. Several community radio stations that belong to institutions of higher learning, such as St. Paul's University, Daystar University, Baraton University, University of Eldoret, among others, have also been granted frequencies (Githethwa, 2008). These stations usually broadcast around a radius of 8 km and are characterized by low power transmitters and shared frequencies (Githethwa, 2008).

Conrad (2011) offers a helpful illustration to explain the roots of community radio ownership by stating that “usually, a community radio station is set up before the community is willing or able to fund it. Hence the tower is planted, and then its life-sustaining roots try to grow later” (p. 10). The ownership is therefore inclined towards the external as the station was established with external funding. This kind of model leads to difficulty in building trust and establishing proper ownership and participation. Conrad (2011) proposed that the ideal stage for a community radio station is where “the station operates on the voices and funding of the community” (p. 10). This occurs when people express the need for the radio station “as much as it needs them, and the station is owned, operated and controlled by and for the community” (p. 10).

The Growth of Community Radio in Kenya

Community media activities in Kenya are coordinated by the KCOMNET. Currently, KCOMNET oversees the operations of 22 community radio stations in eight counties, spread across the country and which all adhere to the principles of community broadcasting which include: community ownership, community service, community participation, a non-profit model, and independence (KCOMNET, 2018). Community broadcasting activities in Kenya may range from print to radio stations and theatre groups, among others (Javuru, 2011). Community radio in Kenya faces an identity crisis as most of them pose as community radio stations, but they are actually commercial

radio stations even though they broadcast in the local languages and are owned by a member of that community (Javuru, 2011).

However, as a result of an amendment to the Kenya Information and Communications Act in 2008, community radio in Kenya attained its own identity from commercial private broadcasters (Kimani, 2017; Lagat, 2015). Consequently, community radio in Kenya is regulated by various regulatory frameworks that include: The National Information & Communication Technology, 2006; The Kenya Communications (Broadcasting) Regulations, 2009; The Kenya Information and Communications (Radio Communications and Frequency Spectrum) Regulations, 2010; The Kenya Information and Communications (Licensing and Quality of Service) Regulations, 2010; Guidelines for the Application of Community Radio Broadcasting License Service by the CAK, 2011 and the Kenya Information and Communications (Amendment) Act, 2013 (Githethwa, 2008). Therefore, community radio in Kenya is recognized as the third tier of broadcasting through legal frameworks that clearly separate it from public service media and private or commercial media (Kimani, 2017). Globally, Australia is one of the pioneers in the world in institutionalizing community radio as a separate tier of broadcasting (Nafiz, 2012).

Use of Social Media Networks as a Medium of Participatory Communication

The emergence of the internet has made it possible for people to create virtual communities where members can interact with others from anywhere in the world. As Lewis (1993) suggested, “the formation of these cyber communities means that communities no longer need a fixed space to become a community as they cut across conurbations, nations, and continents, eliminating the confines of a specific geographical or physical location” (p. 13). According to McQuail (2010), essential features of the internet include computer-based technologies, hybrid, non-dedicated,

flexible character, interactive potential, private and public functions, low degree of regulation, interconnectedness, ubiquity, and de-locatedness, access to individuals as communicators, and a medium of both mass and personal communication.

Social media networks play an active role in the formation of virtual communities. Through social media sites such as WhatsApp, Facebook, MySpace, and Google Plus, people are able to form virtual friendships and interact with friends through instant messaging, sharing videos, and even having meetings (Nafiz, 2012). Just like in the real world, virtual communities are able to form new movements that pursue their own agendas. Therefore, in the same way that a traditional community media platform revolves around a local community and helps them to strengthen the cultural values of the community through opening spaces for dialogue and participation, social media evolve around virtual communities, while reinforcing community bonds through establishing virtual spaces for community interaction (Nafiz, 2012; Rodriguez, 2001).

The traditional community radio exists to create social networks for those within a certain geographical or physical locality who are able to receive, listen and participate in radio programmes within that locality. However, with the introduction of internet based virtual communities, there is now a geographically dispersed virtual community of interest whose needs cannot be met by the traditional community radio (Blanchard & Horan, 1998; Fairchild, 2010; Hollander, 2002). As noted by Hollander (2002), digital media have “redefined the relationship between the global and the local by bringing digital communities into the realm occupied by community radio and television” (p. 32). He perceived this as the next step after the emergence of community newspapers, radio, and television, with new technological possibilities for virtual communities. In their study on the use of ICTs on newsroom cultures among

community radio journalists, Nassanga et al. (2013) noted that those community radio stations that have access to good infrastructure such as those in semi-urban areas have a better capacity for integration of ICTs while those based in rural remote areas may not be as well integrated due to irregular power supply or none at all, high cost of telephone and internet charges and high cost of ICT equipment.

The Role of Community Media in Community Development

Community media has been defined in diverse ways depending on the activities being undertaken. Downing (2001) argued that it may include “free radio, participatory video, and street newspapers” among others, while Howley (2010) noted that it lacks a precise definition due to the fact that it is an ongoing process to which no one has a manual. Various scholars have, however, attempted to explain this phenomenon by stating that community media is best understood within the framework of alternative media since it is about “how and why forms of alternative communication mediums are set up to conduct communication processes within and between their communities” (Downing, 2001; Nafiz, 2012, p. 24).

McQuail (1983) argued that “alternative approaches to media grew out of ordinary citizens’ dissatisfaction with existing mainstream media models that were seen to have broken faith with the people” (p. 98). This, therefore, drove the need for an alternative media access because the mainstream public service media and the commercial media were no longer addressing the concerns of the community. Coyer et al. (2007) consequently argued that alternative media include “all forms of small-scale communication media that are viewed as more accessible and participatory, and less constrained by bureaucracy or commercial interests than mainstream media and are often in some way, in explicit opposition to them” (p. 1).

Dagron (2004) noted that alternative media in the developing world grew in urban areas out of an attempt to address the rights of the citizens there, who were as a result of intensive migration from rural areas. For these people, community media became “their own means to have a voice and express their suffering” (Dagron, 2004, p. 46). Alternative media has also been described as “independent of, and often explicitly established as an alternative to corporate oligopolies that control most of the mainstream media” (Deane, 2007, p. 207); “media that has stemmed out of the need to counterbalance the public and commercial media” (Dagron, 2004, p. 46); “usually small scale and often oriented towards specific communities, possibly disadvantaged groups; are horizontally structured, allowing for the facilitation of audience access and participation within the framework of democratization and multiplicity” (Bailey et al., 2008, p. 18).

Community media, therefore, focuses on the significance of the right of the ordinary citizen to communicate and to create their own media, and that it is not about the people in general but about individuals in specific local, ethnic, religious, cultural contexts (Coyer et al., 2007, p. 111; Hollander, 2002, p. 33). Community media, therefore, seeks to give communities a voice and to provide them with information on issues that concern them using small scale mediums which rather than create conflict with the authorities, aim to establish a local platform for dialogue and discussion (Jankowski & Prehn, 2002; Nafiz, 2012).

The need for community media in capitalist societies, where media is considered a business first, arises from the fact that “the capacity for dominant media to represent diverse interests and provide the space for democratic dialogue is never secure” (Hackett & Carroll, 2006, p. 3). Hence, access and participation in the process of media democratization is hampered. Berrigan (1979) argued that access and

participation are the two most significant aspects of community radio. Berrigan defined access as “the ability of the community members to obtain media infrastructure to communicate with the local community” (p. 8). If, for example, community radio is the tool that the community uses to access different programmes and to give feedback, then, Berrigan argued, “it is the radio station’s ability to embrace this aspect that defines the true characteristics of community radio” (p. 8).

For communities with little or no access to mainstream media, “community media therefore provide resources and opportunities...to tell their own stories in their own voices, using their own distinctive idioms” (Howley, 2010, p. 5). Marginalized communities get a voice to express themselves which is fundamental for self-expression because, as Taylor (1994, p. 26) stated, marginalization means deprivation from having a voice and is similar to non-recognition or a form of suppression where marginalized people “live in a reduced mode of being”. Further, Kalugendo and Macleod (2013) argued that community radio forums provide an opportunity to expand discussion and stimulate debate on issues affecting the community but note that communication tools on their own do not bring about the desired development; rather, when used appropriately, they can be used to help people achieve their development goals, beginning in their own communities and later, to the rest of the country.

Rennie (2006, p. 6) stated that “access and participation are pursued due to the fact that people feel the need to represent themselves directly within the media”. Access to media infrastructure, enables the community members to participate in the planning and production of content. Pavarala and Malik (2007) noted that the more the concerns of the rural poor are marginalized in the market-driven outlets, the greater the potential for alternative media to redefine concepts of democracy, development, and identity, leading to a public sphere that is more egalitarian and more equitable. Additionally,

they note that the opportunities proffered by the democratization of the airwaves for the community-based organizations are enormous and include: building capacities of non-literate rural people, exploring viable, cost-effective technology options, establishing more democratic management structures, and more ethical standards of media practice.

Community media differs from mainstream media in terms of ownership and control. Community media belongs to the local community, and it is guided by social objectives to empower the community rather than treating them as passive consumers (Howley, 2005; Nafiz, 2012). On the other hand, corporate media focus on mainstream issues of the society and favour the wealthy communities that have the ability to generate greater resources and hence are a better market for advertising. This leads to the marginalization of the interests of the smaller communities (McQuail, 1983). Mainstream media disseminates more general news and programmes, which means that the small communities have to listen to news and information that may not necessarily address their specific issues. According to Opel (2004), “community media is therefore about the local community communicating with one another without the intervention of corporate media or government media or multinational global media” (p. 3).

The role of community media is usually considered in connection with dominant mainstream mass media. Community media can be distinguished from corporate media or mainstream media in that they operate as small entities operated by small local communities that do not possess a strong financial backing. Hence, they maintain a small number of paid staff while relying mainly on volunteers to perform tasks that involve decision-making processes and production and distribution of media content. Their focus is on non-dominant discourses and representations that do not attract any financial resources or advertising revenue but rather depend on in-kind contributions and donations from well-wishers, underwritings and some form of limited advertising,

grant funding, and other non-commercial forms of support (Bailey et al., 2008; Howley, 2010). For Kenyan community radio stations, the legislation directs that funding is generated from grants and sponsorships as opposed to advertising. Hence, they tend to seek funding from NGOs and civil society organizations, which require that certain conditions are met for the radio stations to continue to receive funding. Commercial advertising is often discouraged as a way of safeguarding editorial independence (Kimani, 2017).

Dagron (2004, p. 47) noted that “community radio is likely to be the most widespread alternative medium globally and with the most impact over the last 50 years”. It is regarded as a key medium for community expression in most parts of the world, “playing an important cultural role in promoting local music, stories and opinions, all of which reinforce community memory and history” (Rennie, 2006, p. 4). As noted by Fairbairn and Rukaria (2011), the purpose of community radio is to educate, inform and entertain the community. Pavarala (2008 233) argued that

community radio embodies a conception of the marginalized as active social agents in communication; a conception of communication as a process that helps poor, disadvantaged women reframe histories of oppression and strengthen their resolve to resist further marginalization; and a strategy that seeks to anchor rural women’s communication experiences and modes of communication in the local, everyday realities of their social environment; and a recognition that grassroots-level participation and horizontal circulation of ideas are necessary preconditions to democratization of communication and distribution of power. (p. 233)

In her study on the link between community radio and the community, Guo (2017) argued that community radio is still relevant in the digital era and that audiences

have more trust in the community radio content because they have lost trust in the mainstream media and are suspicious of online content. Guo defined community radio as “an old-fashioned, yet accessible alternative medium that still plays a significant role in fostering the expression of diverse voices and citizen participation in the digital era” (p. 112). Consequently, Ngugi and Kinyua (2014) argued that convergence between radio and the internet is providing new avenues for community radio enabling community radio to reach new latitudes as well as providing internet users a participatory experience which is expected to contribute to social change. They envisage a situation where community media centres are established in marginalized areas, to provide a combination of community radio with telecentre facilities and being owned by the local community and disseminating information in their local languages.

According to Pavarala and Malik (2007, p. 16), “community-based media in the form of people’s theatre, small local newspapers, community radio, participatory video, and alternative documentaries provide an alternative to the civil society organizations who question the roles of state-centred and market-run media”. They argued that these alternatives promote the development agenda of the media by providing meaningful content that is change-oriented and socially responsible, as well as relevant to local contexts. Their study on community radio in India investigates the principles of community radio of universal access, diversity, equitable resource allocation, democratization of airwaves, and empowerment of marginalized sections of the society.

Community radio is viewed as being an alternative to the mainstream due to various factors. Atton (2002) argued that “a comprehensive model of what constitutes alternative media must be as much concerned with how it is organized within its sociocultural context as with its subject matter” (p. 10). This implies that an appropriate framework for community radio as alternative media must be concerned about the

organizational structure, as well as the content, and its production, financing, and distribution (Moyo, 2013). As suggested by Bailey et al. (2008), alternative media should seek to be of service to the community, to offer counter-hegemonic discourses to power, and to avoid external influences from the state and the market. The counter-hegemonic role in society is usually expressed in news values that embrace political and cultural radicalism (Atton, 2002; Bailey et al., 2008). This kind of media aims to challenge the control of the masses by the elite, while at the same time demystifying the ruling elite's social engineering that is often presented as natural and commonsensical by the mainstream media (Moyo, 2012).

Alternative media are epistemologically framed in opposition to dominant worldviews and their social orders. In most cases, they represent ideologies of the underdog that rarely form part of the mainstream discourse in the elite media (Moyo, 2012). Alternative media stories overtly or covertly propagate a social change agenda through activism that underpins their informational and educational roles in news dissemination, especially in authoritarian environments that exist in liberal and autocratic states (Waltz, 2005). Alternative media are guided by the principles of active citizenship and emancipation of the marginalized classes, where citizenship implies a commitment towards public good in the political sphere, and alternative media is perceived as a form of civic media (Moyo, 2012).

2.7 Audience Participation

The notion of 'participation' is not a new one as it has been in existence as long as humankind. However, discussions around the need for participation gained momentum in the 1970s as a result of increased criticism of the top-down, unidirectional, or 'modernistic' approaches of the 1950s and 60s (McQuail, 2000). The modernization theory and the dominant paradigm presented a mode of communication

that aimed at western-style material development as opposed to participatory means to empower the community. In developing countries especially, communication assumed the role of being a conduit for the society to achieve democracy, freedom of speech, and fair and legitimate participation, as was the case in the West (Huesca, 2002; McQuail, 2000). The alternative paradigm, which focused on community participation, emerged in the 1970s in opposition to the dominant and dependency paradigms.

Over the years, newspaper content and design has been changing to accommodate user-generated content from platforms such as Twitter and Facebook. Online communication has gradually influenced newspaper content with new media technologies, such as weblogs, wikis, and social media, making online communication possible. The totality of the online communicative experience is referred to as “cybersphere” (Banda, 2010, p. 25). According to Banda, “the suffix ‘sphere’ is generally inherited from the idea of the ‘public sphere’ which according to Jurgen Habermas refers to that neutral space where rational, often male-dominated public deliberation takes place” (2010, p. 25). As defined by Habermas, Lennox, and Lennox (1974), the public sphere is “the realm of our social life in which something approaching a public can be reached” (p. 49). Consequently, Nyabola (2018) extended this definition by stating that the “public sphere is the space in which all conversations with power across and between various groups collide and produce a kind of national narrative” (p. 40).

As previously mentioned, audience participation is not a new phenomenon. For decades, mainstream news production has had various channels such as phone-ins, polls and the press ombudsman (Deuze, 2006). The notion of user generated content is not new either as such content was previously shared through letters and faxes and more recently using the tools offered by the internet as a technical platform (Scott, 2009).

The nature of the tools that facilitate audience participation through submission of materials or content has progressively grown in recent years and this trend is likely to continue (Wardle & Williams, 2010).

One of the most widespread acceptance of the term “participation in digital media” was coined by Jenkins (2006, p. 3), according to whom “the participative culture contrasts with older notions of passive media spectatorship” (p. 3). In the new media context, the roles of the consumers and those of the producers are interchanged. Therefore, rather than discussing media consumers and producers as different entities with different roles, Jenkins suggested that “we might now view them as participants who interact with each other, guided by a new set of rules that none of us is fully conversant with” (p. 3).

Adoption of technology in newsrooms is closely related to daily routines (Domingo, 2008); management strategies and workplace organization (Marjoribanks, 2000); technical tools that match the needs of the reporters (Domingo, 2008); working conditions (Cottle & Ashton, 1999; Meier, 2007); and multimedia competencies and skills (Deuze, 1999). Digital media are considered to be eroding the distinctions between professional and citizen media. This new form of journalism is characterized by the adaptation of the web and a converged media ecosystem that presents innovative production possibilities that lead to evolving forms of mash-up journalism. This new technical hybridity suggests a redefining of what it means to be a professional journalist and the concept of the pro-am (professional amateur), that is, innovative, committed, and networked amateurs working to professional standards (Vicente, 2013).

New media platforms provide an opportunity for audiences to construct their meanings of reality. It is here that emphasis has shifted from journalism-centred to user-centred, from monological to plural, from media houses to grassroots-level citizen

journalists and/or activist groups, and from journalism of facts to journalism of attachment and events (Boczkowski, 2004). Transition and adaptation of journalism to the new media environment that the internet has created has necessitated users' participation which is made possible by Web 2.0 and its tools, and social network sites and blogs, among others (Paulussen & Ugille, 2008). This has become a means through which new audiences are captured, and communities are created and engaged. It is also a means by which content is distributed and viralized (Bruno, 2011; Gulyas, 2013).

Audience participation in community radio presents itself in various ways and may differ from one community to another. Nafiz (2012) argued that in some communities, the purpose of participation is to give support to campaigns whose agenda is to demand radical social transformations. On the other hand, Downing (2001) suggested that alternative media such as community radio are usually closely related to ongoing social movements and therefore often express views that are excluded from mainstream media. For radical alternative voices, community media provides access for them to be heard, and they become the platform on which many movements are able to demand radical change in society (Nafiz, 2012).

Participation in community radio goes beyond giving listeners a chance to make a request on their favourite song or to provide an opinion on a particular topic selected by the radio station during the phone-in shows. Rather it provides an opportunity for "building and enhancing community life through community communication" (Girard, 1992, p. 9). Through community radio, communities are able to meet and discuss their problems and find solutions to them. This is because community radio plays a significant role in participatory development communication (PDC), especially in developing countries (Hochheimer, 2002). For example, in rural and agricultural areas, the community radio helps the community by airing more programmes on how to boost

their agricultural production and encouraging the community to work together in community projects.

Rennie (2006) referred to participation “as a bottom-up approach” (p. 134), which McQuail (1994) argued is synonymous with the community radio’s ability to establish a two-way communication system that ensures that the audience is actively involved and is comprised of programme makers and content providers, a significant aspect, especially in developing countries. Cornwall (2008) noted that participation was first recognized in the development mainstream in the 1970s, later taking hold in the 1980s. He argued that participation is about power, and control and it is an inherently political process.

In their study on the role of citizen journalism at the Voice of Kibera, a citizen reporting project in Kibera, Desta, Fitzgibbon, and Byrne (2014) noted that Voice of Kibera adopts a participatory bottom-up approach that is led by the residents of Kibera. They are the primary producers and consumers of the news, which is localized and timely, producing slum-oriented reports and news items that are targeted towards the residents of Kibera. The research also found that new technologies such as the mobile phone and social media played a significant role in citizen participation but noted that such an initiative requires finances, professionalism, and financial self-sufficiency for it to be sustainable. Kim (2011) noted that citizen journalism requires steady and prolonged participation to sustain itself - predicting, evaluating, and creating a critical mass.

Among other things, participatory development communication anticipates democratized and decentralized information and communication structures as key agents of empowerment to the previously marginalized communities (Nair & White, 1993; Servaes, Jacobson, & White, 2000; White, Nair, & Ascroft, 1994). By the mid-

1970s, there was discontentment in the third world countries with the dominant paradigm of development which pushed for a top-down approach to planning and growth, and which treated people as objects (Escobar, 1995; Pavarala, 2008).

According to Rogers (1962), information was supposed to be an agent of diffusion of new ideas and of transformation of traditional individuals into modern citizen subjects. Melkote and Steeves (2001) argued that media were used as persuasion agents for domesticating people through information, therapy, and manipulation. The response of the dominant models of development in the third world was in the form of critiques by scholars in the 1980s who disapproved of the universal application of development models. Pavarala noted that these alternative approaches were stimulated by Freire's (1970) work on the *Pedagogy of the Oppressed* through conscientization and Schumacher's (1973) advocacy of appropriate technologies. White (1999) noted that the facilitation of dialogue among a community's members is the key issue in participation, and it leads to them becoming the ultimate arbiters of the development that is suitable for them.

Community radio stations are characterized by ownership and engagement by members of a community that is usually a marginalized community. The community radio station gives the community an opportunity to participate in public debate and acts as an alternative to mainstream media. This study investigates the integration of ICTs into the operations of community radio stations using the framework of the domestication theory. The focus is on the appropriation of ICTs by community radio stations as they seek to promote community access and participation.

2.8 Global Perspectives on Community Radio

Community media can be defined as “media that facilitate ordinary members of the community to access and participate in the media as they express their own views,

concerns, and interests” (Rennie, 2006, p. 23). Community media has been described variously by different scholars as grassroots media, radical media, alternative media, citizen’s media, tactical media, participatory media, or community-based media (Downing, 2001, Fontes, 2010; Rennie, 2006; Rodriguez, 2001). According to Dagron (2007), the Bolivian miners’ radio stations were among some of the world’s earliest community radios. They originated out of the need for the community voices to be heard and to enhance communication within the community concerning their daily issues. The miners wanted a platform where they could read messages from their families, call for meetings, broadcast their music, and announce the arrival of letters and postal parcels.

The main idea behind community media is community access and participation to enable members of the community to express their concerns and pressing needs (Nafiz, 2012). As viewed by Downing (2001), community media is alternative media that also includes leaflets, songs, street dancing, poetry recitation, posters, murals, and graffiti, among others, to convey their messages. People from different cultures use different alternative communication means to convey their message to their intended audience, as a way to self-express their alternative ideas (Nafiz, 2012). These types of communication are especially useful when the community is marginalized in the society or is a minority group and whose members cannot access mainstream media channels to voice their concerns and to make their issues known (Nafiz, 2012). Alternative media is media that is characterised by a “strong participation of local community members addressing their own local people and focusing on local community issues of interest” (Stein, 2002, p. 135). Hence creating a conducive environment for community communication and community media.

Community media has been extensively used since the 1970s and is closely linked to UNESCO's communication debates of the mid-1970s. These debates focused on the flow of information within and between developed and developing countries. The emergence of the New World Information and Communication Order (NWICO) was the driving force behind the explosion of media research at the time. The NWICO debates played a major role in the creation of interest in community media in the academic arena (Rennie, 2006; Rodriguez, 2001). Community radio advocates generally critiqued the mainstream mass media for advancing narratives and agendas that were not relevant to the citizens of developing countries, as they drew inspiration from scholars like Paulo Freire (1970, 1985) for the creation of participatory communication initiatives (Rodriguez, 2001).

2.9 Importance of Community Access and Participation in Community Radio

Hochheimer (2002) outlined the importance of community radio by stating that it provides members of a community a platform on which they can gather to celebrate various milestones of that community. This calls for an opportunity for access and participation by local community members for them to be actively involved in the activities of the radio station such as gathering, reporting, and disseminating information; and for narrating their stories in their own way, using their own voices (Rodriguez, 2001).

Hochheimer (2002) further noted that it is the local community members who should have a say on the issues to be discussed on the radio and who are the legitimate voices. In emphasizing the importance of participation in community radio, Hochheimer (2002, p.33) argued that “community-based participatory media …provide substantial hope that people can best make decisions affecting their futures if provided

the contexts within which to establish media for themselves to address their own problems as they construct them.”

For community radio, accessibility by the community is fundamental. This ensures active participation in the production of programmes that matter to them, on issues that concern them. Nafiz (2012) highlighted aspects of access and participation by community radio, arguing that they are at the centre of the operations of community radio. This study focused on how digital media enhances access and participation in three selected community radio stations: Amani FM, Bus Radio FM, and Kangema RANET FM.

Nafiz (2012) observed that it is unfortunate that many members of communities do not have an opportunity for access and participation in their radio stations because in most cases, the management decides who should gain access to the radio station and who should participate in the production of radio programmes. This means that there is a possibility that community access and participation are at the prerogative of the management and not a decision by community members, and they can therefore be denied. The choice is made by those who own or manage the station and whose thinking conforms to that of the management. Van Vuuren (2003) argued that by bringing in people “who are like-minded, and who do not express opinions that are contrary to the radio station’s opinions, radio stations do not necessarily encourage equal access for all community members” (p. 384). Access to broadcasting is only available to those who share the station’s values, purpose, and interests, through a process that Van Vuuren referred to as “the process of exclusion”.

Lack of access, engagement, and participation of community members means that the audience remains as a passive audience composed of inactive and uninvolved listeners of the content that is provided by the radio station (Barlow, 2002). In such a

case, the radio station does not provide mechanisms to enable direct access by community members. In some cases, community radio stations belong to NGOs that also manage them, as they are considered effective information diffusion strategies (Fombad & Jiyane, 2019). In India for example, the government gives priority to NGOs to own community radio stations and to run them as well (Malik, 2007). Hence, only NGOs and organizations with similar developmental goals can operate community radio stations for the purpose of achieving their objectives. This implies that in India, community radio is basically a tool used for development purposes by NGOs and they are therefore not open to the community (Nafiz, 2012). According to Malik (2007), NGO involvement is actually good for the community radio because it ensures good programme content and that it ultimately contributes towards genuine local community participation. Rennie (2006) agreed with this view and added that “NGOs or their funding agencies often have narrowly defined goals such as empowering women, promoting community financing, preventing communicable diseases, eradicating illiteracy” (p. 137), among others. In this regard, there may be a disconnect between community interests and the objectives of the NGO where the NGO and the elites who wield greater financial power are more likely to pursue their goals rather than attend to the needs of the community (Nafiz, 2012).

2.10 Media Globalization and Media Democratization

Pavarala and Malik (2007) noted that contrary to previous assumptions, in the 21st century, the greatest threat to freedom of expression and equitable access to communication media is not the excessive use of state power but the uncontrolled growth of media establishments into large conglomerates. Globalization and liberalization of the economy have resulted in greater power to market forces, including the media sector. With this new development, people at the grassroots are left

unrepresented. The consequences of media globalization include diminishing freedom of information and restriction on the diversity of information. This is evident in the uniformity of the content in spite of having a higher number of media establishments, hence rendering the increase meaningless.

The global media phenomenon has faced major challenges from various organizations and activists all over the world, leading to the emergence of community media. Nafiz (2012) stated that community media is a clear indication of the need for local communities to participate in creating content that addresses their interests rather than having the public service media disseminate information that does not meet the needs of the local community. On the other hand, elitist media corporations have a reputation of imposing their dominance over others, resulting in media mergers globally and standardized media content such as news, music, and other programmes that create a global village in the process. The danger of this is that it threatens multiple cultures and communities, leading to media democratization and media globalization (Nafiz, 2012).

Media globalization has led to media organizations that are larger due to mergers and acquisitions, and in the process, ignoring cultural forms of individual societies (Pavarala, 2008). Consequently, the civil society is confronted with the task of advocating for access to ICTs and mobilizing them for autonomous self-expression and development at the local community level. Quarry and Ramirez (2009) pointed to communication for another development to counter the top-down paradigm, which they claim does not work. The focus for communication for another development is that such communication supports and promotes the development and the focus is on listening, hearing, and responding appropriately to grassroots people.

Nafiz (2012) described media globalization as a “by-product of the economic philosophy of neo-liberalism that swept the world during the late 1970s and early 1980s and was promoted by the president of the United States of America, Ronald Reagan, and the British Prime Minister, Margaret Thatcher” (p. 32). The danger of media globalization includes the fact that it ignores the importance of diversity expressed in a community’s cultural values and the unique elements that enrich life in local communities (Nafiz, 2012). Alternative media, therefore, fills this void by purposefully protecting the community against this through promoting community identity and culture (Girard, 1992). Community media, and especially community radio, was therefore referred to as “the media that helped to make their presence felt on the airwaves, to restore localism, their own voices, and their own perspectives in an increasingly franchised marketplace of ideas” (Opel, 2004, p. 1). As argued by Herman and McChesney (1997) “community media is the most vibrant and hopeful response to the trend towards globalization and commercialization” (p. 200).

Media democratization can be demonstrated in four main waves (Zhao & Hackett, 2005). The first one is the UNESCO debates of the 1970s and 1980s, whose aim was to establish a NWICO. The first debate took place in 1976, with the main focus being international communication and the right to communicate. These debates, which began in 1976, generally played a major role in instigating the universal debates on media democratization.

The market-driven communication system was eventually adopted by UNESCO in 1985 in line with the demands of the US, UK, and other western countries who advocated for privatization, commercialization, trade liberalization, and overall deregulation (Nafiz, 2012). “These forces put constraints on national media systems rather than support them to address issues of national and public interest” (Zhao &

Hackett, 2005, p. 5). Ultimately the withdrawal of the US and UK from UNESCO and the failure to adopt the McBride Report resulted in the growth of neo-liberalism, “putting the interests of multinational corporations above those of individuals, communities, and societies” (Howley, 2010, p. 7). As argued by Zhao and Hackett (2005) this was a way of “diminishing the state’s role, both as a provider of media services and as a regulator of media ownership and public interest obligations in broadcasting and telecommunication” (p. 6).

The second wave of media democratization has been described by Zhao and Hackett (2005) as follows:

A drive for public voice and participatory communication on the part of oppositional movements which were faced with challenges such as concentrated corporate control, hegemonic representations, and commercial logic in mass media in the heartland of global capitalism - western Europe and North America. (p. 15)

According to Howley (2010):

Social movements realized that they may not get fair, accurate, and ongoing press coverage by the mainstream media, and yet there was the need for them to communicate their debates and public conversations, hence an alternative media managed by the movements became inevitable (p. 234).

The third wave of media democratization has been described as the “support that was given by the West to the East European countries that were in transition from authoritarian to more liberal and/or nominally democratic forms for media reforms” (Zhao & Hackett, 2005, p. 16).

The fourth and latest wave of media democratization is the era of the internet which, according to Zhao and Hackett (2005, p. 16), has “facilitated transnational civil

society networks of and for democratic communication". Ford and Gil (2001) described the internet as a "new era for alternative media as it consists of people's participation in creating interactive forms of communication that act as a countervailing force to one-way flows inherent of commercial media" (p. 205). Additionally, Ford and Gil (2001) noted that "the merger of the internet with other media makes it a valuable resource even for those without direct access" (p. 205).

Rennie (2006) noted that "the Internet is becoming the means for small and media-powerless communities to reach the world and advocate their sentiments in the way they want to be portrayed" (p. 166). Social movement activists find a platform to speak out by posting directly on the internet, which offers varied possibilities such as websites, news groups, email, online chat, conferencing, mailing lists, among others. According to Norris (2001, p. 172), "the internet is the preferred mode of communication for individual activists because they are able to reach out to a global audience, hence according them an opportunity to reach and mobilize global audiences".

2.11 Challenges of Community Radio

Da Costa (2012) noted that even though community radio exists as an alternative means of engaging with and empowering marginalized communities, there are various challenges that they face. In his view, the most fundamental one is definitional. Some radio stations fall short of the standard definition of a community radio station on a number of issues such as ownership by individuals rather than by the community, they generate income from advertising, the programming does not involve the community members that they serve (Frere as cited in Da Costa, 2012). As noted by Da Costa (2012), even stations that generally conform to the prescribed definition are prone to be drawn into political debates and some have succumbed to pressure and

broadcast messages of support eventually turning them into vehicles of propaganda. Frere identified the issue of attracting or retaining trained staff as another major problem for community radio stations while Da Costa (2012) noted that many radio stations may be fragile due to technical problems despite benefiting from a significant amount of training, organizational development, coaching support visits and funding of equipment upgrades.

According to Da Costa (2012), community radio in Africa is still experiencing growing pains and has not yet come of age. This assertion corroborates Conrad's (2011) findings of a study based on six community radio stations in Kenya, Uganda, and Tanzania that established common characteristics across the three countries. These included the fact that most of them were barely a decade old; they were dominated by donors; that very few of the stations were actually in operation, with some of their airwaves being dominated by more accessible and popular commercial radio stations; that discussions around community radio and audiences were beset by definitional ambiguity and confusion. The findings also pointed to a large number of stations adopting top-down approaches to establish certain stations; a lack of sufficient community ownership and leadership; funding constraints and distorted incentives.

In their study on Kenyan community radio stations, Fairbairn and Rukaria (2011) pointed out various challenges that these radio stations face. Among them are lack of a sense of identity, weak governance structures, imitating commercial stations, the risk of political control and influence, lack of or insufficient management skills, business planning and marketing capacity, lack of or insufficient skills in programming. Other issues are concerned with high staff turnover and lack of finances to pay the staff, hence most of them rely on unskilled volunteers who use the station as stepping stones to other jobs. There is generally a lack of financial transparency and poor financial

controls which ultimately translates to a lack of adequate equipment to reach their allocated broadcast areas or to produce high quality programming. Githethwa (2008) also noted that community radio stations face challenges related to licencing, where existing policy does not encourage a vibrant sector. In some cases, there is a lack of distinction between community radio stations and vernacular radio stations where the former has been categorized as community radio stations when they are actually commercial radio stations broadcasting in local languages. The need for training for community radio stations' volunteers is also another challenge that they face perpetually.

Community radio stations also face the need for sustainability of their operations. In their bid to remain afloat and sustainable, many community radio stations feature advertisements and receive funding from NGOs. This, according to Nafiz (2012), inadvertently affects community access and participation, hence affecting the role of the community radio from being the authentic voice of the community. Ojwang (2017) noted that “community broadcasting is licensed to advertise only those products or services that are specific and relevant to the community within the broadcast area” (p. 13). Such adverts do not however generate the much-needed revenue. Issues of sustainability stem from other factors that community radio stations have to grapple with such as limited financial resources, unclear station identity, and inconsistent community support (Kimani, 2017).

Besides the challenges that community radio stations face that relate to funding, identity, ownership, and community participation, Kimani (2017) also pointed out that the legislative environment is also a challenge as it limits the funding options that community radio stations can explore. This is directly linked to the issue of financial unsustainability as the stations are still expected to finance themselves. This is mainly

done through grants and sponsorships, leaving the stations vulnerable in situations where the funding may be discontinued. Ultimately, external funding has a bearing on ownership and control of the radio station. Conrad (2011) pointed out that in certain cases, the community expects financial benefits from the radio station and when this is not forthcoming, the community ceases to have trust and goodwill for the station.

2.12 Summary

This chapter has focused on reviewing related literature on community radio stations and their appropriation of ICTs in order to locate this study within the context of already existing literature. The theoretical framework has also been discussed while an elaborate review of general and empirical studies that have been carried out in this area of study has been provided. The next chapter discusses the research methodology and research design that has been used to generate and analyse data, leading to the study's findings and conclusions.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides an overview of the methodology used in the investigation of the appropriation of ICTs by community radio stations in enhancing community access and participation. It provides details of the research design, target population, sample size and sampling procedures, description of the research instruments, data generation procedures, data analysis techniques, and the ethical considerations that were used in this study.

The theoretical underpinnings upon which the study was carried out have also been discussed here. This study was guided by the constructivist/interpretivist philosophical worldview, which is an approach to qualitative research and adopts a multiple case study design. A constructivist/interpretivist perspective focuses on understanding social phenomena from the actor's own perspective so as to understand their reality from their own frames of reference, hence the study recognized the importance of the participant's values, context, and settings. In-depth interviews, focus group discussions (FGDs), document reviews, and observations were employed to investigate the appropriation of ICTs in community radio stations in enhancing community access and participation.

This being a qualitative approach, it focused on gathering descriptive data and records of people's words and behaviour (Taylor, Bogdan, & DeVault, 2016). The central idea is to understand people from their own perspective or frames of reference and to seek to experience reality as they do (Corbin & Strauss, 2008). The researcher must therefore ensure that his or own perspectives do not influence the research process.

Qualitative researchers recognize the importance of value and context, settings, and the participants' frames of reference. There is need for a social inquiry on understanding subjective meanings and values of individual actions. To find meaning in action requires researchers to interpret in a particular way what individuals are doing. The philosophical worldview proposed in this study to investigate the appropriation of ICTs by community radio stations in enhancing community access and participation is therefore the constructivist/interpretivist philosophical worldview which is an approach to qualitative research (Taylor et al., 2016).

Constructivist research is relativist, transactional, and subjectivist (Guba & Lincoln, 1998). According to Hugly and Sayward (1987), adopting a relativist stance means that “there is no objective truth to be known” (p. 278) and emphasis is on the diversity of interpretations that can be applied to the world. Transactional means that truth arises from interactions between elements of some rhetorical situation and is a product of these interactions and the individual’s thoughts (constructed realities) (Berlin, 1987). Subjectivist research positions the world, including the psychological world of research participants, as knowable and the role of researchers is to construct an impression of the world as they see it (Ratner, 2008).

Therefore, it follows that conventional distinctions between epistemological and ontological viewpoints disappear in constructivist research as “the investigator and the object of investigation are interactively linked so that the findings are literally created as the investigation proceeds” (Lincoln & Guba, 1985, p. 207). According to Charmaz’s (2006), grounded theory research design is consistent with a constructivist epistemology and ontology by “placing priority on the phenomena of study and seeing both data and analysis as created from shared experiences and relationships with participants and other sources (p. 330).

The Research Philosophy

This study adopted the constructivist/interpretivist philosophical worldview. Scholars have described a philosophical worldview as a framework or a foundational perspective that guides the process of research and through which knowledge is filtered (Babbie, 2013; Kuhn, 1962; Lincoln, Lynham, & Guba, 2011). In the view of Creswell (2014), constructivism or social constructivism is an approach to qualitative research. The proponents of constructivism can be traced back to Berger and Luckmann's (1967) *social construction of reality* and Lincoln and Guba's (1985) *naturalistic inquiry*. More recent social constructivists include Mertens (2010) and Crotty (1998), among others.

As social constructivists hold the view that individuals seek the meaning of the environment in which they live and work, individuals develop subjective meanings of their experiences, and these meanings are varied and multiple and lead the researcher to look for the complexity of views rather than narrowing down the meanings into a few categories or ideas. Consequently, the goal of this research study as with other constructivist studies was to rely as much as possible on the participants' view of the situation studied. Having open-ended questions provided an opportunity to listen to what people were saying or doing in their natural life settings. These provided for subjective meanings that are usually negotiated socially and historically and are formed through engagement with others, hence social constructivism (Creswell, 2014).

3.2 Research Design

The purpose of a research design is to ensure that the data and methods used are suitable for answering the research questions to be investigated. This study employed a qualitative case study (QCS) design proposed by Stake (2005) to investigate the appropriation of ICTs by community radio stations in enhancing community access and participation, and hence taking a qualitative approach to research. According to

Creswell (2014), the QCS design involves detailed, in-depth data generation from multiple sources of information, each with its own sampling, data generation, and analysis strategies. Stake's QCS takes a constructivist philosophical orientation as opposed to Yin's (2003, 2009) case study work which takes a postpositivist approach. The case study design allows for a holistic understanding of a phenomenon within real-life contexts from the perspective of those involved (Stake, 2005; Yin, 2009). This study, therefore, adopted the QCS design with 3 multisite contexts. Miles, Hubermann, and Saldana (2014) have referred to this as a multiple case study. The justification for choosing Stake's approach over Yin's, therefore, lies in the philosophical assumptions that underlie their approaches.

Yin's approach being postpositivist seeks to establish truth through focusing on the process, the method, and the pursuit of an ultimate truth while Stake's constructivist approach views truth as relative and as being the outcome of perspective (Crabtree & Miller, 1999). A postpositivist orientation supported by Yin (2010) advocated for the use of a conceptual framework as well as propositions that need to be tested and approved or disapproved but a constructivist approach adopted by Stake (2005) proposed that qualitative researchers may choose to use a conceptual framework but states that that is not a requirement. This study adopted Stake's recommendation and therefore did not use a formal conceptual framework as this study does not seek to test propositions but rather to identify themes that emerge from the data generated. According to Boblin, Ireland, Kirkpatrick, and Robertson (2013), using a conceptual framework when seeking to uncover information that was previously unknown may limit the richness of the data generated.

The distinctive value of a case study design is that it can be used to analyse the complex interaction of factors within a single case (Yin, 2014). While a case study can

also be said to be the analysis of a single entity that exists, a multiple case study research focuses on multiple cases (Baxter & Jack, 2008; McLeod, 2011). Multiple case studies allow for a wider exploration of the research questions, add confidence to findings, and strengthen the stability, validity, and trustworthiness of the findings (Eisenhardt & Graebner, 2007; Miles et al., 2014). The cases that have been selected for this study are 3 community radio stations, that is Amani FM, Bus Radio FM, and Kangema RANET FM. Miles et al. (2014) suggested that the case is in effect the unit of analysis of the study.

Case study research design is flexible and able to adapt to various situations. A high-quality case study occurs in a bounded context and is characterized by a focus on the ‘how’ and ‘why’ questions, describing processes, and requiring adequate presentation of evidence to reach appropriate conclusions (Miles et al., 2014; Myers, 2009; Ponelis, 2015; Yin, 2014). Case studies also have the advantage of having a rich set of data based on multiple sources of information. This study adopted a multiple case study design that employed the use of in-depth interviews, FGDs, document review, and observation to investigate the appropriation of ICTs in community radio stations in enhancing community access and participation.

3.3 Population

The population of interest in this study comprised all the staff and volunteers of the selected community radio stations as well as their audiences. The community radio stations under study included Amani FM, Bus Radio FM, and Kangema RANET FM. Amani FM is based in Garsen town in Tana River County. The radio frequency covers a radius of 110km, reaching an estimated population of 280,000 residents. The radio station currently has 12 staff members, with one station manager and 11 volunteers. Bus Radio FM broadcasts in Kajiado town within a radius of 50 kilometers

and currently has 6 full-time staff and 6 volunteers. On the other hand, Kangema RANET FM has a geographical reach of 25km radius and currently has 1 paid employee, 8 staff working on volunteer basis, and 3 interns. Their audience is estimated at about 150,000 listeners.

3.4 Target Population

The target population of this study comprised of all the staff and volunteers who work or regularly participate at the selected community radio stations. As demonstrated in the previous section, the radio stations under study have a small number of staff and volunteers. This study, therefore, considered all the staff at the 3 community radio stations as part of the target population. Notably, at all the three stations, the majority of the staff were volunteers. The target population also comprised members of the community who were closely involved with the operations of these stations and who form part of the radio stations' audiences.

3.5 Sample Size

This being a multiple case study, several participants were interviewed for each case. Different scholars have given varying guidelines on how large or small a sample size for qualitative research should be. Lopez and Whitehead (2013) have proposed a range of between 8-15 participants while Creswell (2014) proposed 3-5 participants for a case study, 10 for a phenomenological study, and 15-20 for a grounded theory study. Brinkmann (2013) proposed that the qualitative sample size should not go beyond 15 participants. In determining the sample size for this study, Roller and Lavrakas' (2015) recommendations were also considered. They suggested that determination of the sample size is based on several factors such as: the magnitude of the research problem, the homogeneity and heterogeneity of the population of interest, the level of analysis

required to achieve the objectives of the study, and the practical aspects of the research such as availability of and access to interviewees, and travel and logistics associated with conducting face to face interviews.

Taylor et al. (2016) stated that the number and type of respondents in a qualitative research study can be estimated if a proposal is required, but specifics are not necessary at that point. The size of the sample becomes clearer towards the end of the research as the research gets to saturation. On the other hand, Charmaz (2006) noted that the idea of saturation comes from grounded theory that states that the qualitative researcher should stop collecting data only when the categories or themes are saturated; when gathering fresh data no longer sparks new insights or reveals new properties. Taylor et al. (2016) referred to this as the point where researchers begin to yield diminishing returns while Glaser and Strauss (1967) referred to it as the point in research where the data begin to become repetitive with no new insights. That is the point at which the researcher should leave the field. For qualitative research, the sample size is considered adequate when the researcher reaches data saturation and achieves richness of data that leads to meaningful analysis. Leavy (2017) noted that the researcher should avoid generating unnecessary data, that is, data that does not yield any additional insights.

For this study, the sample size for the in-depth interviews and FGDs for the staff comprised eight staff from Amani FM, seven staff from Bus Radio FM, and six staff from Kangema RANET FM. The FGDs for the audience members comprised five people in each group. They were conducted with heterogeneous groups of people that did not necessarily bear similar characteristics except for the case of Amani FM that had separate gender groups. All the others were composed of audience members of mixed gender and mixed ages.

The intention of this study was to carry out research in three community radio stations that were using ICTs in their operations and that were specifically located in a rural setting. As stated in the literature review in Section 2.3.2, rural areas are characterized by lower levels of access to ICTs compared to urban areas. This can be attributed to the lack of desire to roll out infrastructure in the rural areas, the lack of electricity, lack of digital skills, and affordability issues, among others (Ndung'u et al., 2019). As noted by Nassanga et al. (2013), those community radio stations that have access to good infrastructure, such as those in semi-urban areas, have a better capacity for integration of ICTs, while those based in remote rural areas may not be as well integrated due to irregular power supply or none at all, high cost of telephone and internet charges and high cost of ICT equipment. It was, therefore, particularly significant for this study that in spite of the challenges encountered by the selected radio stations, they were still keen to integrate ICTs in their daily operations.

As the literature has shown, community radio stations in Africa and indeed globally have had to grapple with sustainability-related issues such as limited financial resources, unclear station identity, and inconsistent community support (Kimani, 2017; Nafiz, 2012; Ojwang, 2017). Among the three stations that had initially been identified for this study, two of the stations were no longer operational by the time of going to the field. MugamboJwetu FM, which was a project of Mugambo Jwetu (our voice) Multimedia Centre and which had been established by a community-based organization known as Mugambo Jwetu group in 2008 and Mang'elete FM, which was among the pioneer community radio stations in Kenya, having been established in 1993 as an initiative of the East Africa Community Media Project had shut down their operations due to financial challenges. Consequently, it became imperative to seek out other community radio stations with similar characteristics for the purpose of the study. That

is, stations that were located in a rural context and had been in existence for several years and were therefore well established in the community and also those that had extensive use of ICTs. The three radio stations that were then purposively selected for the study were Amani FM based in Tana River County, Kangema RANET FM based in Muranga County, and Bus Radio FM located in Kajiado County.

3.6 Sampling Techniques

Miles et al. (2014) stated that there are a number of dimensions on which sampling takes place. These include people, settings, events, processes, activities, and time, with people as the most important element of the research. In this study, purposive sampling, also known as judgemental sampling, was employed to select the three community radio stations for the study (Hagan, 2006). These stations were also significant as they were located in varied socio-cultural environments around the country, they have been in existence for several years and they have a history of ICT use. Purposive sampling was also used to select 5-8 staff and volunteers from each community radio station as well as from their audiences. The underlying rationale for purposive sampling in this study was to purposively select participants that promise to enrich this study. Purposive sampling, therefore, serves as a strategic approach in which the best cases are identified to best address the objectives of the study and the research problem (Morse, 2010; Patton, 2015).

Purposive sampling is generally used in QCS research. With the QCS, there is a need to understand how and why something might have happened. It looks at the subject from many and varied angles to develop what Michel Foucault (as cited in Thomas, 2011) called “a polyhedron of intelligibility” (p. 4). This implies that by looking at inquiries from several directions, a more rounded, richer, more balanced

picture of our subject is developed. A QCS was therefore considered suitable to meet this objective in this study.

Since particularity is key in qualitative research, this study sought to develop thick descriptions and themes from the data generated in the contexts of the 3 community radio stations under study. The eligibility to be included as part of a study sample is based on pre-selected exclusion and inclusion requirements. Such sampling criteria is a requirement in qualitative research where participants are selected based on their ability to clearly express their ideas, experiences, attitudes, and opinions (Miles et al., 2014). The criteria of inclusion are dependent upon the data generation methods to be used. In this study, the staff of the community radio stations considered for the study were mainly those who had worked at the radio station for a considerable period of time and were using ICTs in their work. The audience members who comprised the sample size were those who actively participated in the activities of the radio station by listening to their programmes and making contributions through calling or sending text messages to offer feedback or make suggestions.

3.7 Data Collection Instruments

This study deployed semi-structured in-depth interviews, FGDs, document review, and observation as the most suitable data generation methods. Qualitative inquirers use a variety of data generation instruments. This study made use of an interview protocol or interview guide for asking questions and recording answers during the interview and FGDs, an observational protocol for recording the information that was observed, and a document log or review guide to record all documents that were collected for analysis. The log contains secondary material or secondhand accounts of the radio stations or the people involved that have been written by others.

These were mainly from websites, articles, or research papers that had been written about the radio stations.

The information gathered from interviews was in the form of handwritten notes, supplemented by audio or videotaping. Creswell (2014) recommended that researchers should have handwritten notes in case the recording equipment fails, and when they have been used, the researcher needs to plan for transcription in advance. Qualitative interviewing is non-directive, unstructured, non-standard, and open-ended interviewing that entails in-depth probing that aims to understand the informants' perspectives, experiences, or situations as narrated in their own words (Taylor et al., 2016). In this case, the researcher does not pose as an impersonal data collector but as the research tool itself. In essence, it is not the interview schedule that is the research tool but the researcher himself or herself. In this study, it was, therefore, necessary to probe for details and specific descriptions of the informants' experiences and perspectives by following up with specific questions, encouraging informants to provide details, and asking for clarification where necessary. It was also necessary to identify potentially important themes as they appeared, as well as take note of any striking gestures, non-verbal expressions, or intuitive feelings.

Bogdan and Biklen (2006) noted that the observational protocol can take the form of a single page with a dividing line in the middle to separate the descriptive notes (portraits of the participants, a reconstruction of dialogue, a description of the physical setting, accounts of particular events or activities) from reflective notes (the researcher's personal thoughts, such as speculation, feelings, problems, ideas, hunches, impressions and prejudices). It was also important to make note of the demographic information such as date, time, and place of the field setting where the observation takes

place, and to observe the way in which those working at the community radio stations were using ICTs to enhance access and participation of their audiences.

3.8 Types of Data

This study generated mainly qualitative data that was gathered through interviews, FGDs, document review, and observation. The interview questions were open-ended and designed to solicit as much information as possible from the participants. The semi-structured interviews contained several key questions that addressed the phenomenon under study, while any additional questions were included in order to explore the idea further and to obtain in-depth information from the participants. Secondary data for this study was obtained from the documents that were reviewed from both online and offline sources, including websites, articles, and research papers, that were used to triangulate the primary data that was generated from the respondents through in-depth interviews and FGDs.

3.8 Data Collection Procedures

This section discusses the details regarding the data generation methods used in the study, that is, primarily interviews and FGDs, which were complemented by observation and document review. It also provides the details of the data generated, the number of respondents, and the period of time within which the interviews and FGDs were carried out, among others. As previously mentioned, the QCS has a unique ability to make use of a combination of data generation techniques, making it a suitable method for social science research (Litchman, 2014). According to Stake (2005), researchers using case study should focus on both that which is common and that which is particular about the case, and this entails in-depth consideration of various factors such as the nature of the case, the physical setting, historical background, and informants, among

others. The focus of this study was to understand the unique cases selected and how they appropriated ICTs to enhance community access and participation, rather than seeking to establish correlations or cause and effect relationships among variables.

Data was generated over a period of 12 weeks through semi-structured, in-depth interviews and FGDs with the managers, staff, and volunteers of the selected community radio stations. FGDs were also carried out among members of the selected communities, while observation and the review of relevant documents was also done during the same period.

Interviews

Interviews are said to be the primary data generation method in qualitative research. Interviews may be unstructured, semi-structured, and in some cases, structured. In the case of unstructured interviews, the questions to be asked are not predetermined. In most cases, they are designed to be informal and conversational (Yin, 2014). In this way, participants can express themselves freely and in a more natural way. The questions are open-ended and are formulated in a way that encourages the participants to offer in-depth responses. In this study, semi-structured interviews served as a source of thick descriptions and insider perspectives that were intended to capture people's personal attitudes and experiences (Mabweazara, 2013). As recommended by Creswell (2014), the questions were few in number and intended to elicit the participants' opinions and views.

While Breen (2006) stated that the number of interviews to be conducted in qualitative research is normally dictated by the point at which the researcher gets to theoretical saturation where no new information is forthcoming during the thematic analysis, this study was guided by the suggestion by Baker and Edwards (2012) on the number of interviews that were conducted for the study. They argued that the number

of interviews depends upon epistemological and methodological questions about the nature and the purpose of the study. That is, whether the focus of the questions and of the analysis was on the commonality or on the differences or complexity, for instance. The semi-structured interviews conducted in this study lasted for about half an hour to one hour each, while the FGDs lasted for about one and a half to two hours each.

The nature of the interview guide provided an opportunity to probe and explore further for detailed information. Yin (2009) suggested that case study interviews should be conducted at 2 levels simultaneously, satisfying the needs of the line of inquiry, while at the same time putting friendly and non-threatening questions. In this study, a total of 17 interviews were carried out with staff from the three community radio stations, with eight interviews (out of 12 staff) at Amani FM, three interviews (out of 10 staff) at Bus Radio FM, and six interviews (out of 12 staff) at Kangema RANET FM.

At the onset of every interview, the participants were made aware of the purpose of the research and about what they were expected to do during the interview. They were also made aware of the fact that it was a voluntary exercise and that they would remain anonymous as their names would not be mentioned in the research paper and that the information provided would only be used for the purpose of the research. Each respondent was required to sign the consent form to show that they were voluntarily participating in the interview and that they had given their consent to participate. The initial interview questions provided some background details about the radio stations that were not in the documents reviewed. It was important to understand the background of the station, details about their programming, the nature of the audience, and how the staff perceived their audience's participation in the radio station's activities. Field notes and audio recordings were also done during the course of the interviews.

Online Interviews

Due to the Covid-19 pandemic and the restrictions that came along with it, it was necessary to carry out some of the interviews and FGDs online and sometimes via the phone. Salmons (2015) argued for the possibility of carrying out qualitative research online either synchronously or asynchronously. Salmons explained that synchronous data is gathered through real-time dialogue either on a face-to-face interview, a FGD, or observation that can take place through video conferencing or over the phone. Data is said to be asynchronously gathered when there is a time-lapse between the message and the response, for instance, in the case of emails.

Salmons (2015) noted that this data can be generated using three different methods: extant data is generated using existing materials and without the researcher's influence, elicited data is generated from participants in response to questions posed by the researcher while enacted data is generated together with the participants as the researcher is highly engaged with the participants. In this study, it was necessary to gather some of the data online due to the Covid-19 pandemic. Dowling (2012) noted that in some cases, a researcher may adopt a hybrid approach in which some of the data is generated online through interviews, FGDs, video conferencing, texts, email, and face-to-face interviews, while some are generated offline. Even though Salmons (2015) acknowledged that there are disadvantages of online research due to missing out on non-verbal cues, she, however, noted that it may be necessary in certain situations. In the wake of the Covid-19 pandemic, carrying out e-interviews and e-FGDs, as recommended by Salmons (2015) in her qualitative e-research framework, provided a way out for one to continue with the research process without experiencing delays or inconveniences. This study adopted Salmons' approach and carried out some of the

interviews online and as guided by Dowling (2012), also included some offline interviews and FGDs, therefore engaging a hybrid approach to the data generation.

The pandemic and associated effects necessitated that much of the data collection took place online. Online data collection was characterized by limited time in the field, limited access to informants, and the use of alternative data gathering techniques that relied more on the use of online platforms. To some extent, this may have compromised the quality of data generated. To mitigate this, follow-up questions were presented to the respondents where the answers may not have been clear or may not have provided adequate details.

Focus Group Discussions

It is often assumed that in a group setting, participants may feel more comfortable sharing about their experiences. FGDs were therefore carried out among the staff and members of the audience in order to get their opinions and attitudes about their access and participation in the radio station with the assumption that the participants would be more at ease in a group setting. The participants were asked questions and allowed to speak freely and therefore ensuring a low level of moderation. According to Leavy (2017), “this allowed for rich data with thick descriptions and examples, with the participants’ language and concerns being at the forefront” (p. 19). Roller and Lavrakas (2015) suggested a “funnel” organization that begins with broader, more general questions, gradually leading to more specific questions. This was helpful in allowing participants time to get comfortable as we built some rapport. Active listening through eye contact, gestures, and probes also helped to enrich the data.

The FGDs carried out in this study were more conversational and were carried out like unstructured interviews, where, as the moderator, I encouraged the participants to make their comments freely, to build on each other’s comments, and to agree or

disagree with one another's point of view. FGDs provide a social environment in which participants are able to freely articulate their views and discuss new insights, ultimately providing a deeper analysis of a phenomenon. To ensure that each FGD was homogenous, it was necessary to consider the demographic variables of the participants that were relevant to the study. For example, while the research required that both men and women participated in the study, due to the cultural and religious practices of the community in Tana River County, there was a need to have a separate FGD for the men and a separate one for the women among the audience members. Therefore, while the initial plan was to carry out two FGDs in each radio station, one for the staff and the other for the community members, there was the need for flexibility in order to accommodate their cultural values.

It was also necessary to take the location of the FGDs into consideration and to seek to have the FGD at the most convenient location for the participants. This was important in order to avoid disrupting their activities. At Kangema RANET for example, most of the community members who had been identified for the FGD were traders at the market, and the day scheduled for the FGD happened to be a market day. It was, therefore, more prudent to carry out the FGD at the market where the traders could continue serving their clients rather than have the FGD at the radio station offices. Although this was marked by some interruptions, the traders were more relaxed as they could continue with their work as they answered the questions.

Another consideration was the use of equipment such as recorders for audio recording. The participants were made aware of this at the beginning of the discussion. The FGD guide was prepared in advance to ensure that there was consistency in the questions being asked at each station and that no questions were missed out. Note-taking and audio recording was done simultaneously. This was important in case the

recorder failed, then there would be the handwritten notes to fall back on. At Kangema RANET and Bus Radio FM, I was able to handle the note-taking while moderating the discussions as the recording was done by one of the members of staff, while at Amani FM, data was gathered online as the FGD was conducted via google meet. The recording was, therefore, accessible for transcription later. In some cases, bringing in someone else to handle the note-taking or recording may cause participants to become uneasy (Leavy, 2017).

While conducting the FGDs, it was necessary to get thick descriptions of the data from the information received from the participants, hence the focus was on probing for further details as the participants were asked to share their experiences and perceptions on various issues. The questions were specifically focused on addressing the research questions of the study that focused on how they appropriated ICTs in their radio stations. After a brief warm-up session where introductions were made, and the purpose of the study was outlined, I embarked on asking the questions as they appeared on the FGD interview schedule, but with follow-up questions where the need arose.

At each FGD, the same process was followed, and this included: welcoming the participants, introducing myself, providing an overview of the purpose of the study, providing ground rules for the FGD, such as letting them know that they were free to answer any question without being called upon by name and also assuring them of confidentiality of the information and anonymity of their identities. I also requested them to introduce themselves, and this helped to put them at ease as I was able to refer to them by name when I needed to. The first few questions were more general and geared towards putting the participants more at ease as I progressed on to the more specific questions.

As the moderator, I had a duty to ensure that I avoided bias among the participants. I did this by ensuring that I involved everyone by giving them an opportunity to speak and did not just concentrate on the louder members of the group. I also tried to avoid asking more than one question at a time. In some cases, it was necessary to paraphrase or translate the questions for the sake of clarity. It was also necessary to consider the time taken for each question and to avoid taking too much time on any of the questions, even when the participants became very passionate about a certain issue or had differing views about an issue. For example, at Kangema RANET, it was interesting to note the differing views that played out when asked whether they had had any training on ICT use. Some of the staff said they had, while others said that they had not had any training and that whatever they had learnt was on their own initiative and from one another. This generated quite a debate which, if not controlled, would have gone out of hand. As a moderator, I was also keen to ensure that I was not imposing my opinion on the participants or influencing their position on any given topic.

Focus groups are a common data generation method in qualitative research (Babbie, 2016). Several scholars have pointed out certain factors that lead to the choice of FGDs. These include epistemological and practical aspects, such as a number of people discussing their views at the same time and the research questions. Scholars have also pointed out that FGDs may not be a safe space for discussions on sensitive issues to take place as they are based on participants' thoughts, views, experiences, and feelings (Babbie, 2016; Obuya & Ong'ondo, 2020). The number of participants in an FGD also matters. The smaller the number, the easier it is to manage group dynamics, such as in cases where you have some people dominating discussions while others have no chance to speak. Babbie (2016) recommended a group size of about 6-8 participants.

The staff FGDs had the following number of participants: Amani FM, 6 participants, Bus Radio, 7 participants, and Kangema RANET, 5 participants, while the audience FGDs all had 5 participants each. At Amani FM, it was necessary to have two separate audience FGDs, one for the men and the other for the women, due to religious and cultural values. To ensure that I minimized moderator/interviewer effects, I ensured that I talked less and gave the participants time to make their comments. I did not want to influence them by giving them suggestions or imposing my ideas on them, but whenever necessary, I paraphrased or translated the questions.

In observance of Covid-19 health protocols when carrying out the FGDs, some of them were carried out online via google meets so as to limit social interaction and to minimize movement. More specifically, these were the FGDs for Amani FM. This did not, however, compromise on the rigor, quality, and credibility of the investigation as follow-up questions were presented to the station management for clarification on issues that were not clear or those that required further details.

Justification for the use of FGDs

This study used FGDs due to their unique ability to provide a social environment in which participants freely articulate their views, discuss new insights, and a deeper analysis of a phenomenon is provided as opposed to one-on-one interviews that lack this context. Obuya and Ong'ondo (2020) outlined certain features of FGDs that have implications for analysis. These include the following: spontaneous comments because respondents do not anticipate the questions; inconsistent comments as participants offer varying opinions; participants changing their minds based on persuasion from others; repetition of comments; sometimes conversations tend to wander away from the main point; participants may use different words to describe concepts, hence the need to code similar comments with the same code and the display of emotion or passion when

discussing certain issues. In this study, these features were also observed as the discussions were going on.

Challenges Faced During the FGDs

While FGDs are similar to conversations that are informal and spontaneous in nature, they provide little insight into the participants' backgrounds hence limiting the interpretation of body language. Observation can be very subjective hence interpreting body language can be tricky. It is possible to misinterpret the action, especially when conducting cross-cultural FGDs. For example, it may be difficult to interpret what leaning forward, or backwards, means or whether raising one's voice means being passionate about a particular issue. They also face the challenge of inconsistency in the information provided, participants changing their minds or having comments that are focused on specific situations rather than on generalized comments. Hence, in as much as FGDs provide an amiable, conversational environment, it was apparent in this study that they can also provide an environment that tends to be fluid or inconsistent.

There were also challenges of gathering all the participants together. For example, at the Kangema RANET radio station, it proved a difficult task gathering all the audience members together since it was a market day, and all the participants were traders at the local market. Amani FM also had a challenge gathering their audience members together as the culture was posing a barrier in having the men and the women together. Hence separate FGDs were held for the men and for the women.

The challenge of having a biased sample of participants was also experienced. In all three cases, the staff members and the members of the community who participated in the study were selected by the community radio management. This posed a potential bias because the participants selected were well-known and people of good standing with the radio station management. This essentially meant that they were

unlikely to point out any negative factors or difficult issues that would portray the radio station in bad light; hence the potential of bias in opinion was a lingering issue to contend with during the discussions. Other challenges that were experienced included having perceptions that may not have been completely accurate, having dominant participants controlling the discussion, and in some cases, the presence of management staff during the staff FGDs may have limited the sharing of opinions among the staff.

Carrying out FGDs in a pandemic also presented its own unique set of challenges. Due to the need to observe the Ministry of Health guidelines on social distancing and the travel restrictions that had been imposed by the government, some of the FGDs had to be carried out online through google meet. This restricted interactions with the respondents and may have compromised the quality of the data, but Salmons (2015) acknowledged that although there may be disadvantages of online research, in certain instances such as this one, they are necessary.

Document Review

The review of relevant documents such as official publications and reports, historical publications, and records was also carried out in order to trace the historical development, operations and legislative framework, and ideology behind each community radio. Other helpful sources included websites of the selected community radio stations, postings on community radio, and other digital communication available such as email and social media postings. A document review guide was used to record any relevant information gathered from the documents reviewed. In qualitative research, data analysis is not considered as a distinct end process, but as a parallel process that is carried out as the data generation progresses (Pavarala & Malik, 2007). Hence, data was collected and analysed throughout the data generation phase as a back and forth process.

Gillham (2000) noted that an organization's documents play a major role in triangulating evidence, while Yin (2009) noted that documents serve to supplement the data collected by researchers and are a good source of information on the organization's activities, strategies, and decisions. The types of documents used for this study were selected based on the information they were expected to provide. The selection of the documents to be reviewed was guided by the research objectives and purpose of the study. The documents included the company profiles of the community radio stations, websites, vision and mission statements, core values, policy statements, news articles, and research papers that had been made available either online or as hard copies. Obuya and Ong'ondo (2020) supported the use of documents by arguing that documents can be helpful in stabilising the informal reality by comparing it to the formal and structured one. By using relevant documents, it was possible to cross-check the evidence gathered from the interviews and the FGDs.

Observation

Taylor et al. (2016) suggested that when carrying out participant or non-participant observation, the researcher should try and develop a rapport with key informants at the initial stages of the research before focusing on the main research interests. This is critical because they have a good understanding of the setting and will provide useful background information. For this study, notes were recorded in the observation protocol after each observation with a particular focus on descriptions of people, events, and conversations; descriptions of observers' actions, feelings, and hunches or working hypotheses; sequence and duration of events and conversations; description of the setting in detail; recording field notes on paper on everything that should be recalled about the observation, with the idea that if it is not written down, it never happened (Taylor et al., 2016).

A non-participant observation approach was adopted for this study which meant that it was not necessary for me to engage in the activities of the community radio stations together with respondents. Obuya and Ong'ondo (2020) provided a justification for using observation for data generation by stating that it allows the researcher to gather additional information. Consequently, Yin (2009) noted that because case studies are carried out in natural settings, there is, therefore, a chance for observation of behaviour and environmental conditions and other activities taking place.

3.9 Pretesting

Before the commencement of data generation, as recommended by Baker (1994) and Berg and Lune (2012), the interview guide was pretested to determine its suitability in the research. In qualitative research, pre-testing is required for a relatively unexplored research area as the results may be used to design a subsequent phase of the study (Tashakori & Teddlie, 1998). It may involve the use of in-depth interviews and FGDs to identify pertinent issues that need to be addressed in the larger research project (Teijlingen & Hundley, 2001).

The pilot study for this research was conducted at Realist FM ‘under 40 miles’, also known as RFM located in Limuru town in Kiambu County. A pilot study is necessary in order to improve the quality of your data by adjusting your data generation instrument to ensure that you have the most appropriate questions. After the pilot study, it was evident that there was the need to make adjustments to the interview guide and the focus group interview schedule. The pilot study was helpful in obtaining feedback on how the interview questions were handled by the participants especially checking whether the meaning was clear and that they were well understood, and whether there were questions that had been repeated or needed to be reorganized. Based on the feedback received, it was possible to revise the order of the questions, adjust the number

of the questions by adding more relevant questions, and delete the questions that were not very relevant in reference to the research questions. The pilot study also provided an opportunity to include some general questions, and this was necessary in order to give the respondents time to adjust to the interview process.

3.10 Data Analysis Plan

While analyzing the data, the meanings of the information from the participants were interpreted by generating patterns of meaning from the data gathered. Jankowski and Prehn (2002) noted that the medium of qualitative analysis is human language expressing the concepts of everyday experience as they pertain to a specific context. The researcher's intent is to make sense of or interpret the meanings that others have of the world (Creswell, 2014). Since qualitative data analysis is an intuitive and inductive process (Taylor et al., 2016), data was analyzed and coded by the researcher while seeking to gain a deeper understanding of the research study and to interpret the data. Data interpretation also depends on the researcher's firsthand experience with the settings, informants, or documents reviewed.

Several key emerging themes were identified to explain the phenomenon being investigated, that is, the appropriation of ICTs in community radio stations in enhancing community access and participation. The qualitative data generated from the interviews and FGDs was coded, categorized, and themed. The data analysis technique used in this study was, therefore, thematic analysis which is a method of analyzing qualitative data. According to Taylor et al. (2016), thematic analysis involves reading and re-reading through one's data while looking for emerging themes and patterns that frequently occur in the data. This may be from topics based on conversations held, respondents' feelings, recurring activities, meanings, specific vocabulary, and sayings among others. In the process of analyzing the data for this study, there was also a need to refer back

to the literature as the interpretation of the data also depended upon the theoretical assumptions of the study.

Creswell (2014) suggested that the process of data generation can take place concurrently with data analysis in qualitative research. Therefore, interviews that had been done earlier were analyzed while developing the research report on the findings as other interviews were being carried out. As anticipated before the data generation process, the data generated was dense and contained thick descriptions, and not all the information gathered was useful in the final report. Guest, MacQueen, and Namey (2012) suggested that in the process of analysing the data, the researcher is required to ‘winnow’ the data, a procedure that involves focusing on some of the data and disregarding other parts of it. This was necessary as I tried to aggregate data into a small number of themes. Creswell (2014) recommended 5 to 7 themes. In qualitative research, the researcher becomes the instrument for analysis, and is involved in making judgement about coding, theming, decontextualizing, and recontextualizing the data (Starks & Trinidad, 2007).

According to Breen (2006), there are four critical qualities of qualitative data analysis, that is, systematic, verifiable, sequential, and continuous. Analysis is said to be systematic when it follows a prescribed, sequential process and when the analysis strategy is documented, understood, and can be clearly articulated. The researcher can describe the process and point to the trail of evidence when asked to explain how they arrived at the analysis. Analysis is said to be verifiable when it provides similar findings when a different researcher analyses the data. It is natural for human beings to be selective in what they hear because we usually want to confirm our point of view. Consequently, we tend to avoid or miss information that causes us to experience some form of dissonance or that we don’t understand. Various factors such as our

experiences, background, and training are bound to influence our attention to what is around us, which is known as selective perception (Breen, 2006). Verification in analysis helps to prevent this from taking place and requires that the researcher is able to provide sufficient data, including field notes and recordings done during the data gathering process.

Analysis is considered a sequential process or an evolving process of enlightenment. Good analysis begins with good planning, recruiting, questioning, and moderating. The researcher asks questions such as: What is the configuration of the group? What are the qualities of the FGD members? How were the participants identified and recruited? Therefore, questions must be written with analysis in mind right from the beginning (Breen, 2006). The FGDs in this study ended with a short verbal summary and a debriefing by the moderator, and a confirmation on whether the recorder worked and that the field notes were complete.

Qualitative analysis is continuous and clearly distinct from quantitative analysis because unlike in quantitative data analysis, qualitative data analysis does not have to wait until all the data has been gathered, it begins immediately and continues as the data gathering process is still going on. The two processes run concurrently, and this provides an opportunity to gather better quality data. Qualitative research majorly focuses on the researcher's ability to present an argument on the subject matter and concentrates on nuanced analyses of debate in a research area (Ugangu, 2012).

Marshall and Rossman (1990) noted that "data analysis is the process of bringing order, structure, and meaning to the mass of collected data. It is a messy, ambiguous, time-consuming, creative and fascinating process. It does not proceed in linear fashion, it is not neat" (p. 111). Data analysis is a search for answers about relationships among categories of data. Qualitative research is essentially more people-

centred and keen on insider perspectives (Denzin & Lincoln, 2017). The data in this study is in the form of interview transcripts, FGD transcripts, and field notes from observation and document review data. Qualitative research targets culture-specific information that focuses on the respondents' emotions, opinions, beliefs, behaviours, social relationships, social contexts of particular situations and provides a complex textual description of how people experience a given research issue (Obuya & Ong'ondo, 2020). Looking at three community radio stations in this study, therefore, enriched the study by providing context-specific information from different stations in different locations.

Qualitative research is used to identify intangible factors such as social norms, social-economic status, gender roles, ethnicity, and religion, whose role in research may not be readily apparent. While gathering and analysing the data for this study, it became apparent that this kind of information from the respondents played an important role besides the main issues addressed in the research objectives. Data from interviews and FGDs was gathered and recorded before being transcribed and later analysed. There were two levels of data transcription that preceded analysis. First, the audio clips were recorded verbatim in vernacular language or in Kiswahili. Respondents were assigned pseudo codes to enhance anonymity of data while maintaining data integrity and eliminating chances of confusion during data analysis. The second stage of data transcription involved translation of the Kikuyu version or the Kiswahili version encoded in the first stage into English. At this stage, due diligence was of paramount importance to ensure that translation did not mute the respondents in any manner and that it did not interfere with the intended meaning. Data analysis was then conducted using qualitative data that had been translated into English.

The qualitative data generation techniques used to answer the research questions in this study included in-depth interviews with the staff, FGDs with the community radio station staff and audiences, as well as observation and a review of documents. Triangulation allowed for better results because of the use of various data gathering methods. Yin (2009) noted that the use of multiple sources of evidence that provide triangulation and corroboration usually results in more convincing and accurate findings of conclusions. Data gathering for this study was greatly hampered by the travel and movement restrictions occasioned by the COVID-19 pandemic. In adherence to government protocols on social distancing, it was incumbent upon the researcher to devise alternative ways of gathering data that did not necessarily include travel. Therefore, the researcher heavily relied on online platforms such as email and video conferencing as well as phone calls, texting, and WhatsApp messaging to communicate with the respondents.

Data analysis for this study has been carried out through a thematic analysis that discusses the themes that emerged from the data generated in the study. Qualitative data analysis should include the most significant themes. In this study, coding involved assigning each code to a number by picking out themes. The focus was mainly on the intensity, frequency, and specificity of the comments, and hence the identification of the most noteworthy quotes and any unexpected findings in the study. Codes were assigned to sentences and a number was assigned to each code then the frequency of the codes was counted to ascertain the frequency of the codes or the themes. It was also important to check on the frequency of the participants agreeing or disagreeing with each other or the frequency of opinion shifting during the discussion.

According to Lachapelle et al. (2005), the actual analysis begins with the identification of sentences or groups of sentences within the transcripts (termed as

meaning units) describing or conveying a coherent concept or belief. Therefore, the researcher is expected to identify the key themes that emerge from the analysis of the narratives. This study followed the scientific review of research protocols that included the following: data processing, data cleaning, data coding, data entry, and consequently, data presentation, analysis, and discussion of key findings.

Thematic Analysis

Thematic analysis involved identifying emerging themes in the data generated. Jwan and Ong'ondo (2011) identified thematic analysis as one of the most commonly used data analysis methods in qualitative research. This study adopted the thematic data analysis process prescribed by Obuya and Ong'ondo (2020), which is an adaptation of Braun and Clarke's (2006) six-step framework of thematic analysis. Therefore, in this study, the data was taken through the following stages, as shown in Table 3.1, which presents the thematic analysis framework.

Table 3.1: Thematic Analysis Framework

Stage	Activity
1. Transcription	All the interviews and FGDs were transcribed verbatim.
2. Familiarisation	Reading the transcribed data to familiarise oneself with it and to ensure that it was a true representation of the contents of the interviews. The document is also cleaned by eliminating repetition and to ensure accuracy.
3. Initial code generation	This involves re-reading the transcriptions in order to have a better understanding of the data and searching for meanings and patterns within the data.
4. Searching for themes	The initial coding was followed by grouping the codes into potential themes and ensuring that there is a coherent pattern in each of the themes.
5. Defining and naming themes	The themes were then defined by identifying and telling the story for each theme. Sub-themes were also identified from within the themes.
6. Producing the report	This entailed the final part of the analysis and write-up of the report.

The Coding Process

The sorting of the data began with the coding, which consisted of placing similar labels on similar things. This involved sorting comments into categories, looking at

each question and providing a code to the answers, and looking for frequency of themes, extensiveness, intensity, specificity, internal consistency, and participant perceptions of importance. That means, for example, taking note of information that the participant cited as an important idea or concept. The coding process also included the following factors: documenting how opinions had changed in the course of the discussion, discussing the developing thought processes of the participants, identifying patterns in the data, noticing critical events that have shaped the discussion, identifying key concepts that were central to the analysis (core ideas), and being aware of personal bias and pre-existing opinions about the topic.

This study sought to explore the appropriation of ICTs by community radio stations in enhancing audience access and participation. Various patterns and relationships between codes were identified once the data was coded. Similar codes were then categorized into groups which led to certain themes that began to emerge from the data. These codes were inductively generated as they were derived from the data that was generated in the interviews and FGDs. The initial coding generated 89 codes which were categorized into similar groups, eventually leading to 5 themes.

Qualitative Data Coding using Delve

Qualitative data coding was done using Delve, which is a software that enables researchers to manage qualitative data and even though it does not in and of itself analyse the data, Delve proved to be very helpful in managing the datasets of this study and in classifying the data into themes and subthemes. Delve made it possible to see the frequently recurring themes and to merge or delete themes depending on how significant they were to the study. The initial coding framework was not fixed hence allowing for an iterative modification and adaptation of the framework as each transcript was analysed and discussed. The process also allowed for adding, deleting,

and reprioritizing themes as required. The analysis turned out to be fluid and responsive to the data as I ensured that the literature informed the research questions asked. Nowell, Norris, and White (2017) cautioned that although Braun and Clarke's (2006) thematic analysis is presented as a linear process, it is actually an iterative and reflective process that involves a back and forth movement. This was evident in this study as the thematic analysis turned out to be an almost cyclic process requiring a back and forth movement through the data while trying to identify the codes and themes that were emerging and the relationships between them. This was necessary as it helped to identify recurring patterns, establish something interesting or unexpected in the data, and identify related codes. It was also important to ensure that the themes were distinct and that each theme had sufficient evidence to support it. Data coding required oscillating between descriptive coding that provides a summary topic of the data, to *in vivo* coding that uses the participants' actual words, hence reflecting their perspectives, to process coding that provides codes that communicate the action in the transcript, hence using verbs that end with -ing.

Validity and Reliability

In this study, a number of validity strategies were used to assess the accuracy of findings. They included triangulating different data sources of information by examining evidence from different sources and using thick descriptions to convey the findings. Triangulation was achieved through the use of interviews, FGDs, observation, and document review. The interpretation of the findings is inevitably shaped by the researcher's background, including aspects such as gender, culture, history, and socioeconomic origin, and this may have posed a potential bias to the interpretation of the data. Stake (2005) advocated for varied sources of data to be used to obtain multiple perspectives and points of view in order to provide a holistic understanding of the

phenomenon being researched. Triangulation or the use of multiple data sources is useful in identifying the convergence or divergence of findings (Stake, 2005; Yin, 2009). In qualitative research, validity has also been referred to as credibility, trustworthiness, and authenticity (Creswell & Miller, 2000; Lincoln et al., 2011).

To ensure that this approach achieved reliability, all the procedures of the case studies and as many steps of the procedures as possible were documented. The transcripts were perused to ensure that they did not contain obvious mistakes made during transcription, ensuring that there was no shift in the definition of codes in the process of coding. When developing themes, care was taken to look for underlying similarities in words and phrases while comparing different statements in the data (Gibbs, 2007; Yin, 2009).

This process of coding helped in the reduction and classification of the data. The process of assigning a word or phrase to segments of data was carried out using a computer-assisted software, Delve. *In vivo* coding was used where the participants' exact language is used to generate codes, hence codes developed organically (Leavy, 2017). Once the data had been coded, the patterns and the relationships between these codes were identified. Categorizing involved grouping similar or seemingly related codes together (Saldana, 2014). In the process of categorizing the data, certain themes began to emerge. A theme differs from codes in that it may be an extended phrase or sentence that signals the larger meaning behind a code or a group of codes (Saldana, 2014). The processes of coding, categorizing, and theming occur cyclically as the researcher engages in memo writing, which involves thinking and systematically writing about data you have coded and categorized. Hesse-Biber & Leavy (2011) noted that memos are the link between coding and interpretation as they document the researcher's impressions, ideas, and emerging understandings.

Establishing Trustworthiness in the Research

To establish trustworthiness in this research, Lincoln and Guba's (1985) concept of trustworthiness that focused on aspects of credibility, transferability, dependability, and confirmability was considered. This criterion parallels the quantitative criteria of validity and reliability (Nowell et al., 2017). The trustworthiness criteria in this research study was fulfilled through the pragmatic choices made in the data generation and analysis process. According to Lincoln and Guba (1985), credibility can be established in a variety of ways, including persistent observation and data collection triangulation, which have already been effected in this study. This study sought to achieve transferability through providing thick descriptions for the sake of those who would seek to transfer the findings to their own contexts. Consequently, this study also sought to achieve dependability through ensuring that the research process was logical, traceable, and clearly documented (Tobin & Begley, 2004). In this way, a reader is able to establish the dependability of the research as they examine the research process which is clearly documented.

According to Tobi and Begley (2004), confirmability focuses on establishing that the researcher's interpretations and findings are well derived from the data, hence the researcher is required to demonstrate how conclusions and recommendations have been arrived at. Guba and Lincoln (1989) argued that confirmability is achieved when the researcher has achieved credibility, transferability, and dependability.

3.11 Ethical Considerations

Ethical issues need to be addressed at every stage of the research process. That is, at the beginning of the study, during the data generation, when analyzing the data, and at the reporting, sharing, and data storing stage (Creswell, 2014). At the initial stages of the research, all the necessary permissions were obtained from relevant

bodies, and participants were contacted to inform them of the general purpose of the study. The respondents were also informed of the right to voluntary participation, and informed consent was sought from them. The researcher also sought to find out cultural, religious, gender, and other differences that needed to be respected.

During the data generation stage, respect for the site was maintained by seeking to cause as little disruption as possible. This was done by creating a good rapport and trust with the participants. The participants were treated with impartiality as caution was taken to ensure that participants were not exploited. This was done by respecting the power imbalances that may have existed between myself as the researcher and the participants. Leading questions or questions that may cause informants to reveal sensitive information or that may cause harm to the informants were also avoided.

At the data analysis stage, it was necessary to remain neutral and to avoid going native. In this case, it was important to present multiple perspectives from the participants and to avoid presenting only positive results. Respect for the privacy and anonymity of participants was observed by assigning codes to the participants. At the reporting stage, care was taken to ensure that authorship, evidence, data, findings, and conclusions were not falsified. This was done by reporting honestly and avoiding plagiarism. Care was also taken to avoid disclosing information that would harm participants. Ultimately, the research findings will be shared through the PhD thesis and journal articles.

As the moderator during the FGDs, it was imperative that I remain impartial while dealing with any form of bias that presented itself. This included allowing different opinions without appearing to approve of any particular view and being careful not to lead participants towards a certain line of questioning. I also tried to

accommodate all the respondents without focusing only on those with dominant personalities or who appeared louder than the others.

An explanation of the procedure to be followed and the purpose of the research was provided to the respondents during the interviews and the FGDs. The respondents were also assured that participation in the study was on a voluntary basis and that they had the right to accept or to decline to take part in it. Additionally, the respondents were assured that the data that they would provide would be treated with confidentiality and would only be used for the purposes of this study and that it would not be shared with their competitors. Respondents were also assured of anonymity as codes would be used to conceal their identity. The respondents were required to sign a consent form which gave them the liberty to withdraw consent and to discontinue participation in the study at any time.

The documents that were required before the data generation process included a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI) and clearance from the Daystar University Ethical Research Board (DU-ERB). These were duly obtained before going to the field. Additionally, it was also necessary to obtain authorization from the community radio stations under study for consent to carry out research in their premises. This was done through email by all the radio stations under study. These authorization documents are necessary as they address ethical issues on informed consent, minimizing risks of research, and protection of privacy and confidentiality (Creswell, 2014).

Reporting the Study

This being a qualitative research study, the report was presented in narrative form, and its organization was quite flexible. There are different formats for reporting the results of a research study. The format to be used usually depends on the research

design that is used in the data generation and analysis (Zohrabi, 2013). In qualitative research, the process is more important than the final product, hence the researcher endeavors to recount the entire process of the research (Zohrabi, 2013). It was, therefore, necessary to document every process during the data generation and analysis stages to ensure a comprehensive research report was obtained.

3.12 Summary

This chapter has discussed the research methodology that was used in the study, the target population, the sampling technique, and the sample size of the study. Types of data, data generation procedures, data coding, data generation instruments, pre-testing of instruments, data analysis procedures, and ethical considerations have also been discussed. This study sought to explore the appropriation of ICTs by community radio stations in enhancing audience access and participation. The qualitative data generation techniques used to answer the research questions in this study included in-depth interviews and FGDs with the community radio station staff and audiences, as well as observation and a review of documents from each of the selected radio stations.

Triangulation allowed for better results because of the use of various data generation methods which corroborates with Yin's (2009) argument that the use of multiple sources of evidence that provide triangulation and corroboration usually results in more convincing and accurate findings of conclusions. Stake (2005) advocated for varied sources of data to be used to obtain multiple perspectives and points of view in order to provide a holistic understanding of the phenomenon being researched and it was also by triangulating the data that any form of convergence or divergence in the findings could be identified.

For this study, being the main researcher and therefore the primary data gathering instrument, meant that I was mainly the one interacting with the participants.

The interpretation of data generated formed a reconstruction of multiple realities that existed at the time of gathering the data as it was based on people's varied opinions, attitudes, and perceptions as well as my own observations. Max Weber opposed the application of the positivist approach to the social sciences since people's actions are not related to the general laws of nature, being highly complex and dependent on their habits, emotions, beliefs, and rationales. This study was also cognizant of the fact that all social research is inherently biased, and complete neutrality and objectivity are impossible to achieve since the values of the researcher and the participants are always present (Weber as cited in Holloway, 1997).

Data presentation, analysis, and interpretation are discussed in the next chapter. Data has been analysed using thematic analysis, which is applied for the purpose of organizing, managing, and interpreting the data sets. The chapter presents a summary of the findings of the study and an analysis of these findings in reference to the objectives of the study. Using thematic analysis, several themes that have emerged from the data generated in the study have been discussed.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter begins with a brief description of each community radio station under study, for context and to show how each case speaks to the overall purpose of the study. This provides a good understanding of the background of each of the stations in order to appreciate the context within which each station operates and the nature of the integration of ICTs in the stations. Having this contextual information is relevant in assisting to make sense of the varied views expressed by the different respondents. This is then followed by a presentation of the findings of the study and analysis and interpretation of these findings. The sections on data presentation and interpretation have been organized around the three research questions that have guided the study and the key themes drawn from the data.

As demonstrated in the findings, this study leads to a general understanding of the nature of community radio in Kenya and specifically in their use of ICTs in enhancing community access and participation. The study was guided by three research questions: How are the internet and mobile phones incorporated into community radio to enhance access to information? What is the role of ICTs in promoting community participation through decision-making and content production in community radio? To what extent do ICTs enhance community access to community radio stations? The findings generally reveal that the appropriation of ICTs by community radio stations has not significantly enhanced community participation and access. The discussion on the nature of the appropriation of ICTs by community radio stations is centred around

the five main themes that have emerged from the data, that is, adoption of ICTs, digital divide, audience access, audience participation, and internet radio.

A brief description of each community radio station under study provides a brief historical background, nature of the location, characteristics of the community, and operations of the radio stations. This information is significant when seeking to find out how the community radio stations incorporate the internet and mobile phones in their work and the role that these ICTs play in promoting community access and participation. An understanding of the setting within which the community radio station exists is necessary because as mentioned in the literature reviewed in section 2.3.4, the rural poor face unique challenges in their quest to access ICTs and the more the concerns of the rural poor are marginalized in the market driven media outlets, the greater the potential for alternative media to redefine concepts of democracy, development, and identity (Pavarala & Malik, 2007). While this denotes the centrality of the community radio station among the rural poor, it also amplifies the need for the use of ICTs because in some cases, the community radio station plays a major role in linking the community to ICTs and vice versa.

A Brief Description of the Community Radio Stations Under Study Amani FM

Amani FM was established through the collaboration between The Sentinel Project for Genocide Prevention Canada that runs UnaHakika initiative (an SMS based misinformation management platform), Health Communication Resources, a UK-based organization, and Amani Centre, the local community-based organization (Green, 2017). It was established in the conflict prone area of Tana Delta in 2017 ahead of the general elections in Kenya in that year (Sentinel Project, 2017). The Tana River District comprises three constituencies, that is, Bura, Galole, and Garsen, where the radio station is located. The population in Tana River District is predominantly rural with the

two major communities, Orma and Pokomo, living on opposite sides of the Tana River which runs through the county. The Pokomo make their livelihoods from farming, while the Orma depend on cattle herding (Sentinel Project, 2017).

Other main groups in the area are ethnic Somalis and the Warday, who share an ethnic affinity with the Orma. The population of Tana River District is subject to several ethnic and religious divisions. Inter-ethnic disputes arise over land use and access to water, compounded by seasonal flooding and droughts, high rates of poverty, and unemployment. The youthful population (approximately 75% being under the age of 30) provides great opportunity and challenge to peace and stability. The main objective of the radio station is therefore to support and build on existing peace movements and to be a voice of peace especially during the general election periods in the country (Sentinel Project, 2017).

According to the station management, the radio station currently has 12 staff members, with one station manager and 11 volunteers who receive a monthly stipend (Interview, October 3, 2020). The station offers different types of programmes that cover a wide range of thematic areas informed by community feedback and needs such as peacebuilding, women and youth empowerment, education, religion, social enterprise, public health, leadership and governance, and music and entertainment, among others. Programmes that target the youth and those that focus on peace within the family set up and within the community as well as entertainment programmes tend to be the most popular.

The use of radio as a medium has been a great strength for Amani FM, as the listeners require no electricity, no ability to read, and it is cheaper than other media (Hieber, 2017). This is beneficial for the Tana River County whose population is mostly illiterate and poor. Hieber (2017) further explained that radio currently reaches the

widest audience, “it can cross geographical boundaries, reaching people isolated by language, poverty, illiteracy, and conflict” (p. 51). Amani FM’s geographical reach is 110km which means they are able to educate many surrounding communities and to bring communities together. Their goal is to provide a platform for dialogue to take place by letting people express their thoughts in a way that would not lead to conflict.

Data from in-depth interviews was gathered from 8 staff members via online means due to the Covid-19 restrictions of social distancing. This was done between 3rd and 5th October 2020 via email. All the respondents were provided with information about the study and were requested to sign the consent forms prior to the interview. The FGD for the radio station staff was conducted on 14th October 2020 and those of the audience members were conducted on 19th October 2020.

Bus Radio FM

According to the Bus Radio FM company profile, the objectives of the radio station are to advocate for peace, harmony, justice, and development in Kajiado County. Bus radio FM began in 2017 with the aim of empowering the community living in Kajiado County and specifically the youth, women, adolescents, people living with disabilities, and the elderly through broadcasting programs which are tailored to address their needs. These include programmes focusing on employment, entrepreneurship, empowerment, leadership, economic growth, and talent development. The station also aims to bridge the communication gap between the county government and the Kajiado community and to provide civic education to the community through radio programmes and entertainment shows tailored to address local issues. The station began with 5 staff and currently has 12 staff, with 6 of these being volunteers.

The programmes offered by the station mainly focus on local issues touching on development and local news, entrepreneurship (*jukua la kazi*), entertainment,

promoting local artists (*Reggae*), health programmes (*Afya bora, huduma bora*), local issues and the involvement of local leaders (*Mulika sisi, kikaostudioni*) among others. The programmes are mainly broadcast in Kiswahili and Kimaasai or Maa, the language of the local Maasai community.

Data from in-depth interviews was gathered via online means due to the Covid-19 restrictions of social distancing. This was done between 30th September 2020 and 1st October 2020 via email. Prior to the interview day, all respondents had received information about the study and had filled in the consent forms. The FGDs were conducted on 10th November 2020 at the radio station premises.

Kangema RANET FM

Kangema RANET is a partnership between the Government, through the KMD that falls under the Ministry of Environment and Forestry, and the Kangema community. The station was established as a RANET Kenya rural communications project that transmits vital weather and climate information to vulnerable central Kenya rural communities. According to the National Climatic Data Centre (2006), RANET is an international collaboration of meteorological and similar services to improve rural and remote community access to weather, climate, and related information which works in parts of Africa, the Pacific, and several Asian countries. The station disseminates advisories on occurrence of the weather to the public based on seasonal forecast and observed weather data. Being part of a rapid response in disaster management and early warning system, the station offers critical information to its listeners on climate change mitigation and adaptation.

The primary purpose of the station was initially to disseminate crucial advisory through radio that mitigate, forewarn, and advice the community on the expected weather hazards in the upper parts of Muranga County. The area is notorious for very

heavy rainfall that results in mudslides that leave a lot of destruction and deaths in their wake. Kangema RANET is therefore recognized as both a community radio station and a weather station (Kimani, 2017).

The Kangema RANET audience is estimated at about 150,000 listeners (KCOMNET, 2018). The station targets improving agricultural yields through the provision of weather services that are accurate and reliable, alongside environmental issues and seasonal changes. Besides these, most of the other programmes that are broadcast are either for entertainment or educational purposes or on topical issues touching on agricultural or social knowledge programmes, while avoiding politics. Most programmes are call-in programmes where the audience can give their feedback through asking questions, answering questions posed to them, making comments, or making song requests.

The station management notes that Kangema RANET currently has 12 staff members, with 1 paid employee, 8 working on a volunteer basis, and 3 interns. The station is run by a local management committee which is the policy-making body of the station and whose mandate is to make decisions, pay tokens to the volunteers and ensure that the station's overheads are duly paid. The committee requires that anyone seeking employment or internship at the station has a minimum qualification of a Diploma in Media Studies, Information Sciences, or related fields.

The station focuses on programmes that address topical issues targeting the local community such as current affairs, empowerment, and development, weather and climate, agricultural, health, education, and entertainment, among others. According to Internews in Kenya (2013), Kangema RANET is committed to producing programmes that meet the needs of the community in spite of the many challenges they face, including lack of good acoustics in their recording studio, lack of transport to get to the

community for stories, inconsistent supply of electricity and lack of reliable back up which means that the station is sometimes forced to be off air.

Data from in-depth interviews was gathered from Kangema RANET via online means due to the covid-19 restrictions of social distancing. This was done between 24th and 25th September 2020 via email. Data was gathered from 7 staff members, among them, 1 station manager. Prior to the interview day, all respondents had received information about the study and had filled in the consent forms. The FGDs for the radio station staff and the audience members were conducted on 13th October 2020. The one for the staff was conducted at the radio station premises while the one for the audience members was conducted at Gakira Market which is adjacent to the station.

4.2 Analysis and Interpretation

This section presents data extracts to show the prevalence of the themes that emerged from the data. Braun and Clark (2018) recommended that data presentation includes the data extracts, provides a concise, coherent, logical, non-repetitive, and interesting account of the story the data tells - within and across themes. The presentation of data in this study was done in narrative form involving the use of direct quotes, paraphrases, and summaries from the various data sources that were used. Narration and thick descriptions ensured that a holistic representation of the data on the use of ICTs by community radio stations in enhancing community access and participation was obtained. The qualitative data generation techniques used to answer the research questions in this study were in-depth interviews with community radio station staff, FGDs with community radio staff and audience members, review of documents, and non-participant observation. Data was also generated from field notes, audio recordings, and transcripts.

The themes that later became apparent were tagged with codes, which were extracted from the data and later grouped into categories. In interpreting the data gathered, the factors that helped to explain what had been observed during the study and how these factors can better be understood through a theoretical lens were considered. Breen (2006) noted that this provides depth and intensity of analysis and keeps the researcher from digressing. Figure 4.1 shows the themes and sub-themes that emerged for the data.

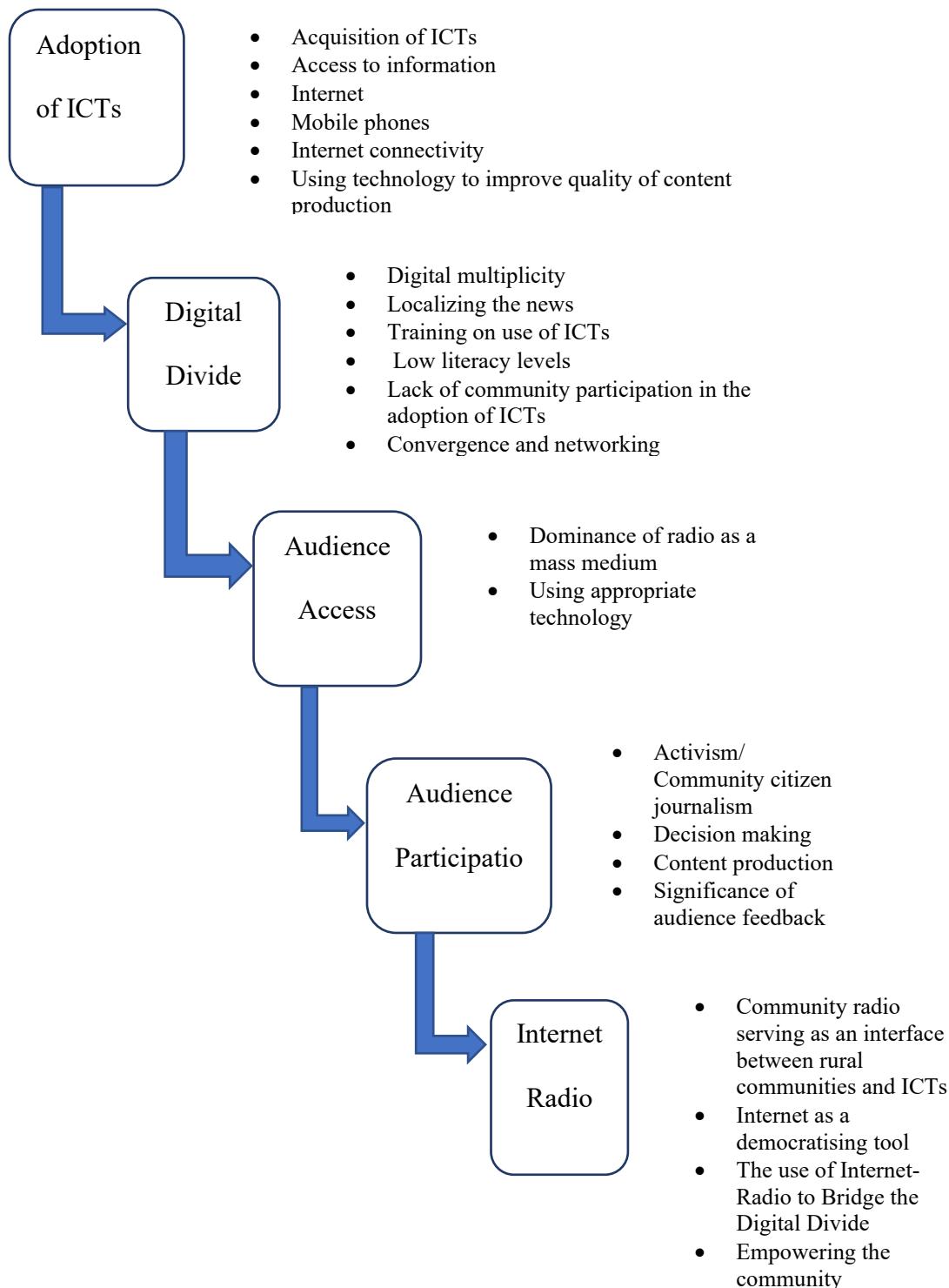


Figure 4.1: Themes Emerging from the Data

Research Question 1

How are the internet and mobile phones incorporated into community radio stations? This section discusses the themes that emerged in response to research question 1.

Adoption of ICTs

The theme on the adoption of ICTs comprised of several subthemes, that is, acquisition of ICTs, access to information, mobile phones, internet connectivity, and using technology to improve quality of content production. This theme focused on how community radio stations acquire digital technology including the internet and mobile phones and how they use them in their radio stations. It also focused on how the audience members acquired and used technology in accessing and participating in the radio station's programmes.

Acquisition of ICTs

The station managers were asked how they acquired the ICT equipment that they used at their radio stations. Most of the managers noted that they acquired the equipment either as donations from donors or by purchasing them through the revenue they received from advertising and sponsored programmes.

The Kangema RANET manager said as follows:

We have computers that we use as our broadcasting equipment. Some of this equipment was acquired by the Ministry of Environment through the Meteorological Department because this is one of the RANET stations that was set up to provide the community with weather reports....we also have donors such as NGOs like Internews Kenya and Farm Radio International who donated some of the equipment such as radio live recorders.

Most of these equipment were donated by the organization that helped us start the radio station but we have also managed to buy a couple of equipment with the revenue that the station generates, for example, computers, tablets and some softwares that are used in the station. The revenue is generated through advertising but majority of the revenue comes from civil society organizations that have campaigns ... talk shows

that we charge, they might want to run sports that we charge and we work a little bit with the county government when they have awareness campaigns and whenever they want to do some adverts (Participant A2).

When asked about the specific ICTs that they had acquired for their radio stations, the radio station staff mentioned the following: the internet, email, telephone, and other sound-based communication equipment; computers and mobile devices like phones and tablets, printers and scanners, a variety of software such Jazla, Multifactory, Zara Radio, and Audacity. Interestingly, Amani FM and Bus Radio FM seemed to be better digitally equipped than Kangema RANET, who seemed to be experiencing financial challenges since the Meteorological Department, which was their main sponsor had withdrawn their financial support from the station.

In addition to the financial challenges which hampered their acquisition of ICT equipment, Kangema RANET also faced other challenges such as lack of expertise or finances to repair the broken down equipment, lack of proper training on how to use the equipment, and unstable and unreliable internet. For example, the Kangema RANET manager noted the following:

We also have a backup generator supplied by the CDF office, but it has recently developed mechanical issues but due to financial constraints, we do not have enough funds to repair it. It is very essential because we experience frequent power outages and we have to go off air for some time.

Access to information

From the observations and interviews carried out, it was clear that all the three radio stations used the internet to access information and to do their research on topical issues. For Bus Radio FM for example, accessing information was mainly done through the various Facebook fan groups and WhatsApp groups that they had set up around the county. They accessed this information through their mobile phones and were able to get soundbites from this information.

There are these groups like the Kajiado County Citizen Forums... the Kajiado County News desk. So, I find that if anything happens on the ground and maybe you are not around because Kajiado County is large you get the information because immediately, they post the information there (Participant B1).

So, unapata information kutoka ile group halafu ndio unapata kufuatalia ndio upate soundbite. Ok.... Facebook kuna groups tofauti tofauti. Unakuta kuna Kajiado Central, Kajiado North, Kajiado South, Kajiado East and West so unapata every group something happened in Kajiado North and maybe your reporter wasn't around unapatawameipostkwa group then unaangalia saa imepostiwa then unapigia anybody from the place to verify whether it's true. So unaanza sasa kutafuta na soundbite. Sometimes....sometimes maybe kuna news imetokea huko Majengo, just around Kajiado, then you just get... you call the studio phone and tell them that something has happened then you get that news from there. So, for communication....." (You find that you may get information from a particular group and you are able to get a soundbite. There are several groups such as Kajiado Central, Kajiado North, Kajiado South, Kajiado East and Kajiado West. For example, there may be something that happens in Kajiado North and maybe our reporter is not there. Someone in the group may post information about what has happened. We then call someone in that area to verify that information) (Participant B4).

Na pia unapata sometimes... unapata wana post videos kwa group so you get to record the soundbite and get the information of what happened there." (Sometimes, they post videos on the group so you are able to record the soundbite and to get information about what happened) (Participant B2).

They also acknowledged that with the internet, accessing information from the audience had also become much easier. This was mainly because most of the people from the audience were in possession of mobile phones and this made it possible for them to relay any information that they had with the station. They were also able to access the internet using their mobile phones which corroborates what the CAK (2018) reported that indicates that with increased accessibility to mobile phones in Kenya, citizens use their mobile phones for internet access to a greater extent.

Accessing information imekuwa rahisi...pia unapata like feedback from the listeners" (Accessing information is much easier and you are able to get feedback from the listeners) (Participant B7)

Internet

Over time, the internet has consolidated itself as a powerful platform that has changed the way communication takes place. According to the Internet World Stats (2020), the number of internet users in the world is estimated at 4.9 billion with the global penetration rate estimated at about 60%. This indicates that over half the world population is connected to the internet. The internet has become the universal source of information used all over the world, hence having a significant impact on all the conditions of social interaction and the way in which individuals construct the reality of everyday lives. It has not only affected the way people communicate and interact with one another, but also affected the way media organizations operate. When asked about how they use the internet, all the three radio stations' staff acknowledged that the internet proved to be a good source of information where they could do their research or verify information. Kangema RANET FM staff noted the following:

We carry out research to provide some background information or for any breaking news in the country (Participant C3).

We also use the internet to reach other listeners who are far away and outside of our reach (Participant C5).

We use the internet to do our research. The presenters are also the researchers, they try to look for information from genuine sites and countercheck it on other sites to ensure that it is genuine and not fake news (Participant C1).

This was corroborated by a Bus Radio respondent B4 who noted as follows:

Halafu wale wakupost unapata sio vitu za ukweli.....bloggers....fake news, halafu sasa hakuna uwezo wa watu kuverify. (Sometimes the people who post information, that is bloggers post fake news and sometimes there is no way of verifying that information).

Amani FM staff said the following:

We normally use the internet to access information when it comes to ...when we get difficulties for example, ok I'm talking from my experience....you can imagine you have a story that is in English and most of our shows, most of our content is normally in Swahili so I have normally been using it for translation. For example, I get this story for example on female genital mutilation (FGM) and then you find there are these words

that are in English that I don't know in Swahili so I just google to get the words that I need and more information on the same in terms of Swahili...since our listeners, the content is normally in Swahili (Participant A4).

We usually use internet connection to do research on topics before going on air. A topic like for example you want to get the data of a population or the census that was conducted like 10-20 years back, through the internet, it's very much possible for you to get that kind of information coz its already uploaded there. So, it becomes very easy for me to go the internet to do a research for it and when I go on air, at least I have something to tell my listeners (Participant A3).

Also, on the access of information, the internet normally...there's a way you normally set your phone to be getting notifications. So, in case there's something like breaking news, like very important things that have been happening around us, the internet helps you to get these notifications and then that's when you are informed on what is happening around you and you get that information. So, this internet, in terms of notifications.... gives us the access of getting more information on things that are happening around us (Participant A2).

We also use the internet to access new music. For example, the listeners may want to get certain music to entertain themselves, we also use the internet to access that type of music for example, we are using Jazla and maybe that song is not in Jazla, we just search for it on the internet then we play it for the sake of the listener. We do this when the listener requests or in cases where there is a certain artist who has a new song and I want to access that new song, we usually search for it on online platforms where we get such songs and we load them in the Jazla.... the system that we use. We are at a grassroot level, internet helps us to get national news. Social media also helps us to reach many listeners through our live broadcasts (Participant A6).

An interesting observation on the nature of internet use revealed that while the radio station staff made an effort to make use of the internet in their work, some of the audience members did not seem to have access or even the need to access the internet. Hence, according to Ford and Gil (2001), while the internet has been lauded as a new era for alternative media due to its interactive capabilities, these communities do not seem to be reaping the full benefits of the internet and its affordances. Some of the audience members at Kangema RANET FM noted the following:

I do not use the internet at all (Participant CA3).

No, I don't have access to the internet, I only have a kabambe phone.... (shows phone that is not internet enabled). I don't use Facebook or internet because those phones are expensive and if I have such a phone it can get lost when I'm working (Participant CA2).

Mobile phones

Both the staff and the audience members in the three radio stations under study acknowledged that they used their mobile phones to access the radio station or the audience and to gather or verify information. From the staff FGDs, the following emerged:

We use the mobile phones for call-ins by the audience and we have a dedicated sms line for receiving text messages by the audience. We also have a phone line for weather data reports which uses a Safaricom broadband app. We also use our phones to research...sometimes we carry out telephone interviews with resource persons. We use our phones to get information from the local community. Sometimes we use our phones to verify information (Participant C3).

For example, maybe I'm not able to send a report or something that I did on time. So, because I'm very far maybe I'm in Torosei. Torosei is an area in Kajiado which is very far. It's interior. So.... for me to send the information on phone I use WhatsApp (Participant B5).

We get notifications... as an individual I also use my mobile phone to access information through calling....yes...I receive calls from people that I get stories from that are normally in the rural area so we normally have people that tell us the story. Sometimes when you want to go there you may not get there on time, these people, immediately something happens they call you and let you know so I normally use the phone to receive information on things that are happening around us so this phone is usually used for phone calls, text messages, so nowadays, we have this social platforms like WhatsApp (Participant A2).

We use our phones to call our news source, we also use our phones ... especially in this corona period people are not allowed to come to our studio, so we use our phones to interview them. We also use them in receiving smses and for call-ins during interactive sessions in the programmes (Participant A5).

We have a tab for live coverages, we use it to take photos and videos (Participant A6).

Some of the audience members of the three radio stations also acknowledged that they used ICTs to access the radio programmes demonstrating that ICTs had expanded their avenues of access to these radio stations. As has been mentioned earlier, while the traditional community radio exists to create social networks for those within a certain geographical or physical locality who are able to receive, listen and participate in radio programmes within that locality, the introduction of the internet brings with it

virtual communities whose needs may not be met by the traditional community radio (Blanchard & Horan, 1998; Fairchild, 2010; Hollander, 2002). The responses from the audiences indicated that with mobile phones, the radio programmes were made even more accessible. This is in support of Pandit and Chattopandhayay's (2018) findings that indicated that mobile phones played a major role in enhancing the local community's access to community radio programmes.

We listen to the news on the radio. Sometimes we listen to the radio through our phones. We also go online using Facebook live and we follow the fun page for Amani FM (Participant AA2).

I usually use my mobile phone to call the station (Participant CA2).

I make calls to the stations so that my voice can be heard on the radio. So, I prefer to call instead of sending messages (Participant CA4).

I don't have a smartphone...(laughing) ...I do not know how to use it and I don't have time to use it or to access the internet (Participant CA3).

Yes, using the mobile phone helps me to send greetings and request for songs. I usually participate in programmes like morning drive, Burugaandurimimukaru, by calling the station (Participant CA4).

I normally send text messages or call the station. Sometimes when I call, I find that the phone is engaged for a long time, so I prefer to send a text message (Participant CA2).

With the mobile phone, we can call, send messages and we can listen to the radio through the phone (Participant AA3).

Internet connectivity

From the data, it emerged that the radio stations were making great efforts to install internet connectivity at their stations. Even though the cost of connectivity had been significantly lowered due to the emergence of mobile internet (Stork et al., 2012), the cost was still prohibitive to the community radio stations. This was evident from the responses received from the radio stations' staff about their internet connectivity. All the three stations noted that they faced various challenges in their attempt to become and remain digitally connected.

Participant CI noted as follows:

We have been using modems to connect to the internet but now we are using Wifi. We have internet connectivity through an arrangement we have with one of our clients in that he could provide the internet connection and we would advertise his business through our radio station.

Sometimes Wifi is down (Participant C3).

We are using wifi and sometimes it has its own limitations...so in that case, we buy some bundles. Our providers are Safaricom and Orange... sorry its Telkom. We were using Telkom then we switched to Safaricom because of its coverage and it's not that reliable, Safaricom is reliable and its reach is better (Participant A2).

Sometimes it's hard to get the data bundles. Data bundles are efficient but a bit expensive (Participant B4).

Using technology to improve the quality of content production

On the question of how technology was used to enhance the quality of their content, the station managers noted that while technology made their radio stations more interactive, it also played a major role in enhancing the quality of their content. They were able to use the internet, social media, and different software to carry out varied tasks including research, hence affecting the quality of their programming positively.

The station manager at Amani FM said the following:

Technology plays significant roles in enhancing the quality of our content: Amani FM conducts regular surveys to assess the effectiveness of on air programming using tools such as Kobocollect, this in turn leads to improvement; voice calls and SMS platform enable community members to directly engage in on air debates; our feedback and community complaint handling mechanisms are all facilitated by SMS; we have a Whatsapp group where we conduct peer reviews on programs and that has greatly contributed to improvement; our Facebook page has also been used by our listeners to share their feedback on the programs; several organizations such as the Media Council of Kenya have conducted virtual training sessions with a focus on building the capacity of journalists which consequently influence programming; using the internet for research and drawing updates.

Kangema RANET FM station manager noted as follows:

We are able to reach our listeners through positive interactive phone calls and messages. Our social media platforms provide a successful correspondence medium with our listeners.

Bus radio FM station manager noted the following:

The station uses technology to enhance the quality of the programmes. Without technology, there's no radio. Technology and social media have taken over operations in the radio station from the way information is gathered to the way it is disseminated. Various softwares such as Adobe, Sonar, Cube base and protools among others are used to produce audios and videos. With the move from analogue to digital, there has also been a change in the transmitters that are used. Transmitters have been upgraded and they are able to enhance the quality of the production. The station is able to have online radio, website etc. Access to information has been made easier and production of programmes has also been made easier.

Most of the management staff at the radio stations indicated that the main reason why they used digital technology was to connect with their sponsors and donors.

Kangema RANET station manager noted as follows:

Technology has played a significant role especially in connecting with our sponsors because most of them are not based within the county, but they are interested in assessing what we are doing before they can commit themselves to sponsor a programme.

According to the Bus Radio Station manager...

We have various NGOs (Non-Governmental Organizations) or CSOs (Civil Society Organizations) who sponsor our programmes. For example, KEWASNET (water related programmes), Cess pad (County budget issues), AMREF (FGM and early marriages), ALIN (clean & renewable energy).

Ultimately, the community radio broadcasters under study noted that ICTs were useful because of the potential to provide information which corroborates the sentiments by Ndung'u et al. (2019) that the internet is a one-stop-shop where citizens access information. As they source for information online, then they are more equipped to provide information to their listeners. Their searches on the internet focus on issues that concern the community such as education, health, women, youth, and agriculture, among others. Sometimes finding content that relates well with the local context may be difficult as most of the information on the internet is foreign. Therefore, the question

on the consequences of western content on local audiences and the implications on their culture and how this affects especially the youth in the community, was brought to bear. Some of the content may be considered immoral or harmful to their morals and culture, which potentially means that there is need for a balance between accepting the technology and protecting the local culture from foreign practices. As noted in chapter one of this study, community radio serves as an intervention strategy of choice for deepening participation and community ownership as it provides communities with a space to assert and safeguard local cultures, a platform for advocating their rights, and an opportunity to hold to account those who govern them (Da Costa, 2012).

From the data, it was apparent that the community radio stations used the internet as information seekers and information providers. They not only get information from there but also post information there in form of their broadcasts. Mudhai (2011) noted that convergence has enabled radio to remain an important platform for disseminating and exchanging information in remote areas. The three community radio stations have their own websites and do live streaming of their programmes on Facebook live. The stations ensured that they identified the information that only they could produce as a way of making the internet more relevant to the local community. For example, while Amani FM was more focused on peace initiatives and messages, Bus Radio FM focused on the issues related to the Maasai community which is a pastoralists community and Kangema RANET FM was more focused on transmitting messages on weather and climate changes. The internet, therefore, offers an opportunity for exchange of information and interactiveness, hence providing a platform that can be used for sharing information with the listeners as well as networking with other rural community radio stations.

In all three radio stations, the internet served as an important tool for networking as it provided a platform for them to connect with their donors and to find other donors. It provided an opportunity for the station to present their programmes and for donors and potential donors to have access to their broadcasts. It also provided them a platform to interact with the donors and sponsors and especially the international donors whose only convenient platform for discussion is the internet. Strategic partnerships that can be enhanced online include those with current or potential donors and with other community radio stations. Networking with other radio stations can help to improve content and consequently, to attract more funding.

The Digital Divide

Besides having proper infrastructure in place, community radio stations that use the internet can serve as a bridge between the station and the community members, as technology has the potential to provide access to knowledge and information that helps them to improve their livelihoods. As mentioned in the literature review under section 2.2, the domestication framework helps to explain the reasons why certain technologies are not adopted or are adopted in a very limited way. It, therefore, becomes a suitable approach for discussion on the digital divide or social exclusion and is therefore ideal in explaining the appropriation of ICTs by community radio stations, bearing in mind the composition of community radio audiences and the assumption that they have lower access levels to the internet or mobile phones. The theory provides a framework within which to explain the social shaping that comes with the use of technology, as noted by Bakardjieva (2005) in section 2.2 of the Literature Review. In this way, the community radio stations serve as community intermediaries that come from within the community and are able to combine tech knowledge about ICTs with context knowledge that is relevant to the community. The theme on the digital divide focused on the following

subthemes: digital multiplicity, localizing the news, training on the use of ICTs, low literacy levels, lack of community participation in the adoption of ICTs, convergence, and networking.

When asked whether the community members were able to access ICTs, most of the community radio staff seemed to be aware that most community members were not able to access digital technology for various reasons. They noted the following:

Some are not able to access technology. The internet infrastructure in Kajiado County is not well developed (Participant B6).

Not really because they are not exposed to digital technology, most of them access our programmes through radio (Participant C3).

Digital platforms are mostly used by people who are not within Kajiado county or even those outside the country, that is the diaspora audience (Participant B4).

Even though we have a youthful audience who possess smartphones, they will usually use radio rather than the digital platforms because of the cost of bundles (Participant A1).

Girard (2003) noted that the digital divide has become a matter of global concern and is part of the agenda for governments, civil society organizations, and international organizations. Many governments have established national ICT policies and made major strides in the liberalization of the telecommunication sector as a way of attracting investors. The civil society is actively involved in extending the network affordably and promoting its effective use and many UN agencies have also prioritized the use of ICTs in development projects (UNESCO, 2017). However, as was evident from the data, rural communities have had challenges accessing the internet in the same way they face challenges in accessing drinking water, education, healthcare, electricity, and transport. The respondents from Amani FM noted the following:

It is also expensive to use internet because of data bundles (Participant A7).

Those who use the internet are usually those living in town, when you get to the interior parts, network is a problem (Participant A5).

In the town, people have smartphones and laptops, mostly those who are educated... (Participant A3).

In order to explain the issues on the digital divide better, this study identified five subthemes under this theme. These included digital multiplicity, localizing the news, training on the use of ICTs, low literacy levels, lack of community participation in the adoption of ICTs, and convergence and networking.

Digital multiplicity

Community radio stations are appropriating the internet and other digital technologies in order to address the issue of the digital divide and consequently, multiplying the effectiveness of the limited internet access in the rural areas. While internet connection serves as a clear indicator of the gap that exists, multiplication occurs when a single community radio station with limited resources and just a few digital devices multiplies the number of people being connected, through their radio broadcasts. Despite low levels of internet access in the rural areas in Kenya, the findings of this study indicated that there was evidence of digital multiplicity in these stations.

This corroborates with findings from other studies. Robinson (2000), for example, provides an illustration of a Bolivian farmer who was faced with a threat to his farming and livelihood when he noticed some unusual pests that were attacking his crops. Having not experienced this before, he turned to Radio Yungus, a rural community radio station for answers. Radio Yungus was known for offering answers to listeners' questions. Initially, they found answers in the encyclopedia but with the advent of the internet, they were able to find answers through online research. Radio Yungus was able to track down an expert in another part of the world who explained what the farmers could do. This information helped not only the farmer who had sent in his request for help but all other farmers in the region. This illustrates how

community radio stations are able to use the internet to bridge the digital divide and to have a multiplying effect of the limited access to the internet in that community. Lack of internet connectivity is one major indicator of the digital divide.

The rate of internet access in Kenya is steadily rising and according to the CAK (2018), most Kenyans use their mobile phones to access the internet. However, as mentioned in section 2.3.2 of the literature review, access to ICTs is significantly lower in rural areas compared to urban areas (Ndung'u et al., 2019). This disparity is said to be a result of inadequate infrastructure in the rural areas, the lack of electricity, lack of digital skills, and affordability issues. Ndung'u et al.'s (2019) study also established that despite having high mobile phone penetration levels in Kenya, only a quarter of the population owned smartphones. The majority of the people (84%) in Kenya do not have access to the internet and are based in rural areas. This is corroborated by one of the respondents who was among the audience focus group of Kangema RANET who when asked whether he had access to digital technology like mobile phones and the internet said as follows:

No, I don't have access to the internet, I only have a kabambe phone ... (a mobile phone that is not a smart phone). I don't use Facebook or internet because those phones are expensive and if I have such a phone it can get lost when I'm working.

Most of the respondents indicated that they used mobile phones but did not access the internet through their mobile phones and only used the mobile phones for calling or texting. Most of the phones that they had were not internet-enabled, therefore they mainly used them to send greetings to one another through the radio either by calling or sending a text message to the radio station and having the presenter read it out on their behalf. They were not able to access and participate in the radio stations' online platforms.

Yes, I use my mobile phone to send greetings to other listeners (Participant CA2).

Yes, using the mobile phone helps me to send greetings and request for songs (Participant CA4).

I usually participate in programmes like morning drive, buruga (a programme on Covid 19 awareness), urimimukaru (a programme on farming) (Participant CA3).

I usually make calls to the station so that my voice can be heard on the radio. So, I prefer to make calls instead of sending messages. I usually participate in the evening shows and the question of the day. During the day, I'm busy at work so I like to listen to the radio in the evening (Participant CA3).

Most respondents also indicated that they did not access the radio station through the internet or using any form of digital technology.

I usually listen to Kangema FM through the radio because I like to listen to country music and Sunday services on Sunday morning. I participate by sending messages and requesting for songs. What I like about the station are the weather updates, country music and mass services on Sunday morning (Participant CA1).

In spite of the low uptake of digital technology and especially the internet, when asked if the use of digital technology by the radio station had enhanced their participation, some noted that it had and especially the use of the mobile phone which they used for calling and texting the radio station. Robinson (2000) noted that the effect of the internet can be increased through what he calls, “digital multiplication” which means the building of networks to share information and gateways to process information. This digital multiplication can take the form of a radio station that actively uses the internet to multiply the impact of its internet connectivity through sharing information with its listeners. It may also take the form of a community telecentre that offers computer and internet services to the community.

Localizing the news

The community radio station has the potential of filtering through the internet for national and global news and localizing it for the community while highlighting areas of importance to the community. This was evident in all the three community radio stations under study in that they found relevant information online and

contextualized and translated it for the sake of the community. The member of staff at Bus Radio said as follows:

We consider the feedback we get from the community when making a decision on what to include in our programmes. We also try to localize national issues by inviting experts to discuss these issues at the local level. We also work with NGOs and county governments to influence policy development (Participant B2).

Perry (2002) supported the need to localize information as he notes that mass communication is basically about massified forms of communication and may influence some people directly as when a person reads about an event from a newspaper. In some cases, interpersonal communication may expand its effects for example in a situation where this person passes on that information to others. Today's society is experiencing a demassification of forms of communication as the internet supplements existing media. The integration of ICTs by community radio stations has created possibilities for greater demassification of forms of communication as the audience is presented with information that meets their local information needs hence the potential for greater access to information. This is closely linked to the questions posed in Lasswell's (1948) model - who, says what, in which channel, to whom, with what effect?

The argument here is that when radio and the internet are combined together, there emerges a new range of opportunities for communication (Moyo, 2012; 2013). This may be through creating and supporting networks of broadcasters, radio stations providing mediated access to the information and knowledge on the internet and through facilitation of communication with different communities and mediating access to the communication potential of the internet.

Therefore, it is critical for a community radio station using ICTs to develop local content if they want to have an impact on the local community. Usually, most of the information on the internet does not correspond with the needs of the local community.

Specific community issues need specific approaches hence, local community media would probably be more useful than the internet in that context. A local community radio station can be a more useful resource for the community, local school, dispensary, farmers, churches, among others. Bus Radio FM for example puts emphasis on local issues such as FGM, a practice that is rampant within that community. There can therefore be a great symbiosis between the community radio station and the internet when the community radio station makes use of technological convergence to produce content that is local, relevant, and at the same time acknowledging what is happening in the rest of the world. Kothmale Community Radio in Sri Lanka is a good example of this as they respond to community questions by searching for answers on the internet and translating them to local languages (Pringle & David, 2003).

Robinson (2000) recognizes the role that community radio stations play in empowering remote and marginalized communities. Community radio stations focus on local issues. While it may sometimes seem easier to tune in to the national broadcaster, the news or information provided may not be relevant to a particular local community. Robinson (2000) referred to the ownership of the media in the hands of a few conglomerates with diversified interests in radio, television, print and the internet as a threat to public information. The result of acquisition of smaller stations leads to a situation where the residents in a particular region access information that affects other regions more than information that affects them directly.

Training on use of ICTs

Githethwa (2008) argued that the need for training for community radio stations' volunteers is a challenge that they face perpetually. From the data, it was evident that even though all the three radio stations under study had adopted the use of ICTs in their stations, training on how to use the equipment was not necessarily a

priority. In some cases, training was done in-house while in other cases, the staff learnt on the job, sometimes through peer-to-peer training or at other times, on their own. They noted the following:

I think we had some training concerning how to use those ICTs, I think we also had other trainings by the engineer who installed the equipment, later on he came back and trained us on how to use the mixers ... how to look after distortion and all those (Participant A4).

Yeah, we have had a training concerning the Facebook Live like how you're supposed to ... (Participant B3).

We were trained on how you can place the phone on the stand so that you can have a good view of the presenter (Participant B1).

Maybe when you say internal (training) ... like me when I came here, I didn't know how to use Audacity. It's my colleagues my colleagues who helped me ... how to use it (Participant B2).

Not really, we have not had any training on ICTs. Internews trained us on production and the Meteorological Department trained us on weather reporting (Participant C5).

When asked whether they had also facilitated any trainings for the audience, the radio station staff looked surprised at the question. However, they noted that in most cases, they guided their audiences during their programmes on how to use ICTs to participate in their programmes, and specifically how to follow them on Facebook Live and send their comments on the chats.

I guess that happens a lot when one is doing a show and then one comes up with a topic and says something like, "Wewe kama mpenzi msikilizaji, wewe kama kijana, how do you use the internet, ama hii mtandao ya kijamii na hii mambo digital yote? Unatumia vipi we kama kijana, wewe kama msikilizaji? (My dear listener, as a young person, how do you use the internet and social media? How do you use them as a listener of our radio station?) Then, people begin to call and say how they use the internet like this... and our phones like this... (Participant A3).

Now how...? Maybe you just keep them knowing by just saying, go to Facebook, search Sauti Ya Kajiado then you say maybe you'll be on at a specific time then when they are (there)... utawaambia tu (you will just tell them) ... to like and to click the page. (Participant B5).

We have not had any formal training for the audience. What we do is that we sometimes mention how to use certain digital gadgets especially when promoting the

products on our shows. We guide the listeners on how they should use them, and this is what we call “Tunukiwa advertising. We also guide our audience on how to use Facebook live to access our programmes online (Participant C3).

Low literacy levels

A few respondents from the audience FGDs noted that they preferred to text rather than call while others noted that they preferred to call the radio station because they found it easier than texting. One of the challenges they may have faced in texting was the low literacy levels and hence calling was more convenient.

I normally send smses or call the station. Sometimes when I call, I find that the phone is engaged for a long time, so I prefer to send an sms (Participant CA1).

When I call the station, sometimes the presenter asks me to reduce my volume, but I don't like that because I also want to hear my voice on the radio (Participant CA3).

One of the issues in this community is low literacy levels therefore many listen to us through their radios (Participant A2).

Many listeners therefore prefer to call rather than text messages because they are able to express themselves better that way. “Wachache ndio wamepata elimu ya mbili tatu hapo darasani” (only a few here have formal education). Majority of those using social media are the youth (Participant A6).

Along with low literacy levels in these rural communities, another factor that was of concern was the fact that these communities are not well represented on the internet. The internet does not represent the diversity of world languages and cultures. Because of the dominance of English and western culture, the spread of the internet may pose as a great contributing factor in the oppression of under-represented cultures. The International Development Research Centre (2003) report noted that the internet is dominated by content, language, class and culture that can have a negative effect due to the production of a uniformity of ideas. Ultimately, this waters down the assumption that the internet necessarily leads to plurality and increased democracy through its interactive potential.

Inadvertently, without the presence of local cultures and languages, there is little possibility that ICTs can contribute towards the progress of communities because language and cultural identity are at the centre of any successful intervention with ICTs. While the internet provides for a possibility for cultural interactions, with the advancement of the internet, there is a clear imbalance in the cultural exchange taking place as the rules of the game are dictated unilaterally. Web content is not representative of our cultural diversity. This can only be handled if more local content is produced to reflect our diverse cultures and languages. This should provide a community's collective history, their cultural identity, and artistic expression. The convergence of the internet and radio presents greater opportunities for the creation of local content that is relevant to the needs of the local community and that propagates the local culture and presents content in the local languages.

Lack of community participation in the adoption of ICTs

Many internet-based community centres such as community radio stations, telecentres, and community multimedia centres are established without community participation and ownership. This phenomenon was observed in the three community radio stations. None of them conducted a needs assessment prior to establishing the community radio station. It was also apparent that the adoption of ICTs was not based on the specific needs of the local community but rather on the push from sponsors and donors of each of these stations. While it was evident that the use of the internet and mobile phones had broadened possibilities for greater community participation, it was also evident that there was a lack of community participation in the acquisition of these ICTs and substantial content creation by the community. This agrees with Desta et al.'s (2014) assertion that while new technologies such as the mobile phone and social media

played a significant role in citizen participation, they also require finances, professionalism, and financial self-sufficiency.

Community involvement in community radio stations is key in order to achieve social and economic development. There can be no social change without community participation. The problem with working from the outside is that the project eventually becomes unsustainable as opposed to working from within the local community, by first identifying the need for ICTs for specific needs. The establishment should begin with discussions by community representatives to establish the need for ICTs. In the case of Amani FM for example, the community radio station was established by an NGO that was not originally based in the local community within Garsen town where it was established. It was not an initiative of the local community, and the idea was only sold to the local community once the station was established. Bus Radio FM was also established in a similar way, as a private entity and the idea was later sold to the community within which it had been established. Kangema RANET FM was originally established by the local Member of Parliament before it was later taken over by the Meteorological Department. Therefore, it was originally viewed with a lot of suspicion by the local community due to the obvious political connections.

All the three stations then formed local management committees comprised of people from different sectors of the society who were selected to steer the project. Besides being a decision-making body, the idea behind these committees was also that members of the committee would be involved in content production according to their expertise. Hence, the youth representative would handle youth topics and music for example, and a teacher could handle education-related issues while a health practitioner could deal with health-related content. In this way, the station is able to handle the real

needs of the community. It is necessary to understand the real needs of the community as opposed to the felt needs of the community.

Convergence and Networking

Overall, it would be more beneficial to use ICTs to enhance existing practices than to promote new activities for the primary purpose of using ICTs. Castells (1997) argued that these technologies can lead to greater citizen participation and enhance horizontal communication among individuals and communities. For example, if the community was not actively participating in the community radio activities before, they will probably not do so because technology has been incorporated into the operations of the radio station. This was a common observation across the three radio stations. The level of participation was generally low. The three radio stations under study involved the communities through establishing local management committees in which the community was represented by a select group of people from each community. These committees were mainly involved in the decision-making process while the rest of the community was mostly involved in making comments and suggestions on the programmes, participating in ongoing discussions and debates, and sending song requests to the station. There was a lack of substantial participation in content production by the audiences.

During the Kangema RANET FGD for the community members, one respondent noted the following:

I always participate in the debates on the evening shows. I also make requests for certain songs to be played especially songs by our local musicians. I want to promote our local musicians. I also send greetings to my neighbours and relatives (Participant C3).

From the data, it has been observed that convergence between the internet and radio has had an impact on the audience as well as on the broadcasting. ICTs in the

radio stations under study seem to be a tool in the work of community radio stations as well as a factor that enhances better performance of tasks. However, it has also emerged that it is not necessarily the equipping of these stations with computers and connectivity for better performance that matters, but using the ICTs to develop local content and allowing the community easy access to this information in order to meet their needs. In that way, the technology will benefit people as citizens of that community. Citizen projects like community radio stations should be about inclusion and development purposes and not about the donors and sponsors. Mudhai et al. (2009) argued that the value of new ICTs lies in the extent to which they are enmeshed with traditional media to provide multimedia platforms that give room for greater participation, inclusion, and expression.

Convergence of community radio and digital technologies offers new opportunities for access and participation. Enhanced participation can be observed from direct involvement by the community, their feedback on the programming, and the quality of the programming by the producers of content. While the private media are mainly focused on commercial interests and not on public interest agendas, community radio is for, by, and of the community. As mentioned in the literature reviewed, participation also involves engagement of non-professionals in the production of media content and in the decision-making process. Essentially, this study acknowledges that there is substantial access to content and to the airwaves that has been occasioned by the adoption of ICTs by community radio stations.

Research Question 2

What is the role of ICTs in promoting community participation through decision making and content production in community radio? The following themes emerged in response to research question 2.

Audience Participation

This theme encompassed several subthemes including activism/community citizen journalism, decision making, content production, and significance of audience feedback.

Activism/community citizen journalism

From the responses received, it emerged that the community members participated in providing information to the station in various ways and in most of these cases, ICTs played a major role. Access to mobile phones was especially significant as most staff and community members used their phones to call or send a message to the station. This corroborates the statistics provided by the CAK (2018) that showed that most Kenyans used their mobile phones to access the internet. WhatsApp was also used extensively to send messages through the various groups that had been formed by the radio stations. This was especially evident in Bus Radio FM. The radio station staff were also able to use their phones to send information to the station.

Sometimes we report something that has just happened by making a call to the station (Participant AA4).

Sometimes there are issues in the community like, maybe people in Oroseia.... Oroseia is an area in Kajiado and maybe they're not having water and water is there and maybe they're having a problem reaching out to the county government they can use Bus Radio to reach to the MCA. Yes...." (Participant B2).

OK ... you also find that on WhatsApp there's a group for SautiYa Kajiado news desk whereby different people are in the group, so you find that if somebody gets into an occasion and maybe reporters for Bus Radio were not around that person takes a step and records soundbites then anaandika hiyo script anatumwa kwa ile group. So, unapata hiyo news kwa...kwa group." (someone may record soundbites then write the script and send it to the group and the news then reaches the group) (Participant B6).

Decision making

All the three radio stations involved the community in the decision-making process through the local management committees. The committees are considered

representative of the community due to their composition. While the committees appeared to be the main decision-making organs of the stations, it was also evident that some of the decisions were made by the station management while in some cases, the radio station also considered some of the views of the community concerning their programming and eventually incorporated their suggestions into their decisions.

The Amani FM manager noted the following:

Yes ...the board members are drawn from the local community and are members from diverse backgrounds. After every year the station conducts evaluation of programs through focus group discussions and surveys in order to identify the gaps and capture issues that the community feels the station needs to focus on. The radio also encourages amplification of community voices through vox pops, listening clubs, etc.

The Bus Radio station manager noted as follows:

Decisions are made by the Board of Directors. The Board then informs the Friends of Bus Radio about the decision that they have made and they can then implement the decisions. Friends of Bus Radio are part of the audience and include investors in Kajiado, Juakali artisans, Bodaboda riders, farmers, livestock herders, etc.

The Board of directors decide on the programmes to be broadcast. They mainly focus on the issues affecting the community (Kajiado county) such as early marriage, FGM, early pregnancies, they have started an initiative to get donations for sanitary towels as they have realized that the girls are exchanging sex for pads during the covid-19 season when they are not in school, climate change adaptation – pastoralism and farming activities, unemployment, etc. (Participant B5).

For example, there's a new Programme of KiMaasai.... so... we got the fans of Bus Radio but, from the Maasai community. They were suggesting that kama tunaweza kuwa na Programme itakuwa inaenda hewani na KiMaasai. (they requested for a programme in their Maasai language). So, we presented that to the management and they told us to write a proposal about it. So, we had to sit down and think about it and write a proposal.... what we should be doing in this programme each and every Friday so finally they gave us the day and finally the show is on air... (Participant B3).

The management body of the station, that is the local management committee drawn from the community makes decisions on policies and day to day running of the station and also budget allocations and staffing. They also source for content development from the community. The Kangema RANET fan groups also participate in content development through topical discussions (Participant C2).

Content production

In all the three stations, it was clear that community participation that concerned content production was mainly in terms of feedback through call-ins or text messaging. Some of the feedback included comments on certain issues being discussed, responding to questions that the presenters had asked or participating in the on-going debates on topical issues. Feedback was also sent via the stations' Facebook pages, WhatsApp, or Twitter.

The audience send their feedback via text messages and Facebook. They also alert us when the transmission is not clear. They give information on what is happening where they are, and they are therefore a source of news and information. They also provide suggestions on what programmes should be aired or the experts that should be invited to the radio show (Participant B6).

For example ... you are in the studio and you are talking like right now with the Covid-19 pandemic, so in the studio we have phones that are normally used in the studio so the audience participation is normally with the questions that are asked to them... so this audience normally call, and they answer the questions that are presented to them by the presenters (Participant A4).

We also have social media platforms for example Facebook page, Twitter, sms, WhatsApp, calling where audiences normally give their feedback. We just ask them to give us their feedback that is through sms, they can also participate through Facebook.... alafu pia kunaile chocha like the presenter can also go live through Facebook and they post their comments there (Participant A7).

We have the vox pop – a tactic where the reporters go out of the studio, and they start asking questions and the question that is normally asked especially in terms of content is just that same question and then you get the different opinions from the different people we use this public opinion for community participation... (Participant A3).

The board members of the station are all members of the community, and we usually meet once in two or three months and they then have an opportunity to make decisions about the radio station (Participant A1).

We have programmes like Tamaduni zetu which runs twice, that is on Saturday and on Sunday. It is the audience that requested for the show to be aired twice a week. So, the audience participates in telling us the programmes they want, how they want to be entertained and all that (Participant A4).

I think I have also observed the community participating in deciding on the watershed period...that is when someone is discussing a topic that is not good for children, I think I have observed that one member of the audience who commented

about a programme that was not good at a particular time so they also give ideas on the time that a particular programme should be aired (Participant A5).

There was a programme called Jamii Bila Balaa. Before that programme was aired, we did a research as a radio station to find out the kind of topics that the community wanted because it was covering sensitive topics about the family. The community gave their views and then we began airing the programmes because it was a recorded programme which was running at night... (Participant A2).

During the Kangema RANET FGD, one of the respondents indicated that she was previously more involved in the station as she had been given a chance to co-host a radio show.

I have been co-hosting the country music programme at the station although I do not do it anymore. I do not think there is any other way to participate but if an opportunity arose, I would participate (Participant CA1).

Significance of audience feedback

It was evident from the data that all the three radio stations valued the feedback they received from their audiences. Some of the feedback was received from individual listeners while some of it came through the fun clubs that the stations have established. As noted by Berrigan (1979), feedback is key in defining access opportunities of the community.

The Amani FM station manager noted as follows:

We also have in every radio show a one-hour segment where community members are free to call or send messages and make contributions to debates or even ask questions on a particular topic of discussion, live on air.... Our Facebook page has also been used by our listeners to share their feedback on the programmes.

According to their comments you get maoni tofauti, unapata different views concerning the topic you're discussing. So, sometimes you get encouraged. That the messages ...imewafikia watu." (you get to hear different views about the topic being discussed and you get encouraged that they have received the message) (Participant B4).

Our community radio station has fan clubs and they usually send us their comments. Through the radio station, the community is able to make an appeal for assistance in case of a calamity such as destruction of houses and we are able to organize for harambees (fundraising drives) by mobilizing funds from the community to build them new houses (Participant C2).

Internet Radio

As mentioned in the literature review chapter (see pages 22, 26, and 35), it is the people who shape and integrate ICTs into their behaviours and it is necessary to determine the interface between community radio stations and their communities in order to establish whether ICTs really enhance opportunities for greater participation or not. This study focused on the role of ICTs within the perspective of alternative media, on investigating how the use of ICTs enhances community participation and access, with particular reference to community radio.

Community Radio serving as an interface between rural communities and ICTs

As observed in chapter one page 34 under the section on ‘the role of ICTs in Community Radio, the integration between radio and the internet helps to develop a holistic response to community information needs allowing for more access to information for the audience members. While RANET stations mainly focus on training farmers on specific informational areas especially with regards to climate conditions and on using ICTs to deliver information to farmers, the use of ICTs by all other community radio stations seems to have enhanced community access to information as well as access to the radio station itself. Therefore, while the rural areas have experienced the effects of the digital divide due to their limited or lack of access to ICTs, as the data has shown, community radio has served as a bridge between rural communities and the ICTs.

The debate on the digital divide between the North and the South has focused on the role of technology in narrowing or widening the knowledge gap between these countries. In the rural areas in developing countries, the situation may be much worse due to lack of access to electricity and internet infrastructure. The people are therefore left with no access to platforms through which they can voice their opinions,

communicate with government officials, development officials, development partners, or even participate more in decision making (Ilboudo & Castello, 2003). ICTs have the potential to bring about solutions to development matters in rural areas as they lead to alternative hybrid models by integrating traditional media with new ICTs. They are perceived as being able to bring about advancement in different sectors such as agriculture, entrepreneurship, health, education among others. This can only become sustainable if the community has affordable and effective access to ICTs. In many communities, this has not yet become a reality hence the need for an approach that allows the integration of traditional forms of communication media such as community radio to serve as an interface between rural communities and ICTs. For example, Kangema RANET integrates traditional media in form of radio with ICTs to focus on programmes concerned with the weather and climatic conditions as well as those that focus on the activities of the local community.

The local chief also uses the community radio to reach the community whenever she has some information to pass on to them (Participant C3).

Information Communication Technologies have the potential to provide the community with the knowledge they need to improve their livelihoods. They act as powerful tools through which information resources are made available to the communities. When these ICTs are inaccessible to local communities, local communication initiatives can be used to disseminate this information. The community radio also plays a major role in the community because the community is more receptive to information that is disseminated through trusted sources of information, especially people or institutions that they are already familiar with. This also affects how they choose to participate in various development activities.

A link between ICTs and community radio provides a good example of how different communication tools can be used together for the benefit of both of them and

how the potential of one can be extended by the characteristics of the other. ICTs have the potential to help rural communities in improving their livelihoods based on innovative techniques and strategies that are built upon existing and trusted communication networks. This will then turn the digital divide into digital opportunities. As observed from the data, community radio stations in Kenya play a pivotal role in enhancing the development agenda in the local community. They are instrumental in passing on information and providing a platform where people can share their experiences and knowledge. They are usually integrated into the community in which they exist and are accessible to these communities. The use of ICTs can help the community radio stations by enhancing participation since it is a highly interactive and informative medium. Radio, on the other hand, plays an important role in the community as it is already well established in the community (Attias & Deflander, 2003).

Internet as a democratising tool

As mentioned in chapter 2, particularly in section 2.3.8 on media globalization and media democratization, community radio aims to make a contribution to the democratization of information and ultimately to affect the existing power structures and to promote social change through its programming. The integration of radio and the internet, therefore, provides an opportunity for convergence and promotes the democratizing effect of the internet through the radio. Some scholars have referred to the internet as a democratic tool as it has the potential to provide everyone an opportunity to participate. One of the challenges with this is that for it to be considered democratic, it should be accessible. This is not always the case due to various challenges that may be financial, organizational, infrastructural, and linguistic. From the data generated in this study, it was evident that both the community radio stations and the

community members faced various challenges in accessing the internet as summarized below.

a) Financial Challenges

Most community radio stations face financial challenges. To mitigate this, they charge some money for sponsored programmes, announcements, and death notices, among others. Their communities are mainly low-income earners such as small-scale farmers and traders. Due to financial limitations, the community radio station is not able to take advantage of the full potential of the internet. Community radio stations will only be able to do so when the access is fully made possible by the government, through provision of low-cost internet access. In this way, then, the aspect of democratization of the internet will be made possible. The Bus Radio FM station manager noted that while they faced financial challenges, they still had limitations on advertising and hence had to depend mainly on sponsors. He said the following:

Our registration by Communications Authority of Kenya as a community radio station limits us from advertising and generating revenue from the station. Hence, we have to depend on NGOs and the civil society who sponsor certain programmes.

b) Organizational challenges

Access to ICTs by the broadcasters at the community radio station can be a major challenge due to organizational factors. The ICT equipment may be kept locked up and out of reach of the staff and only a few staff may have access. The community radio stations under study for example are not managed in a community-style and equipment was not always made available to all. One reason for this is lack of maintenance personnel. Once an equipment breaks down, it may take months to get repaired or replaced. Hence some people do not get the chance to use the equipment.

At Kangema RANET, Participant C2 noted as follows:

We also have a backup generator supplied by the CDF office but it has recently developed mechanical issues but due to financial constraints, we do not have enough funds to repair it. It is very essential because we experience frequent power outages and we have to go off air for some time.

c) Linguistic challenges

The language on the internet often poses a problem to the community radio station as most of the presenters may not have an advanced level of education and may therefore not be very comfortable with English. They prefer to communicate in their local languages. A second challenge occurs due to the fact that the internet contains information that may be presented in a complex way due to its scientific and academic nature. Many internet users are therefore not able to make use of this information due to language barriers. In most cases, the presenters need to translate the information that they gather online for the sake of their listeners. Participant A3 from Amani FM said as follows:

One of the issues in this community is low literacy levels therefore many listen to us through their radios.

d) Infrastructural challenges

Availability of internet infrastructure can pose a challenge to community radio broadcasters in terms of inadequate bandwidth for all their activities. Other issues constitute frequent service interruptions and power outages as well as unreliable network providers. Power can be lacking for hours and sometimes days, disrupting the community radio station's operations. In situations where a generator is available, maintenance may become a big issue. In some cases, the station lacks adequate computers, recorders and printers among other equipment. Participant C2 said the following:

The challenges include slow internet, lack of up to date computer hardware and software and inadequate computer hardware and software.

Access to infrastructure that facilitates knowledge sharing has become more critical now in this knowledge society era. Knowledge is considered important for development purposes. For knowledge, communication, and information to trickle down to the people in the community and not remain as a preserve of the experts, the introduction of new ICTs into community radio stations becomes a priority. ICTs become most effective if they are integrated with traditional communication media and when these traditional communication media draw from a collection of indigenous knowledge from the community. The people in these communities require access to new ways of accessing information and an opportunity for information and knowledge exchange. New ICTs, therefore, become instrumental in providing a means of acquiring and sharing knowledge, consequently promoting public debate which is necessary for strengthening democracy.

The use of Internet Radio to bridge the digital divide

As mentioned in chapter 2 on page 33, Pulsar, a Latin American station was the first independent radio to link radio to the internet in 1996, at a time when internet connectivity was still very low. They began by sending a daily text-only rip-and-read news bulletin to forty-eight subscribers, as they did not have access to the internet. It served to provide stations with poor or no connectivity at all to daily news bulletins via email while those with better connection received audio clips from the internet.

What is most significant about the adoption of new ICTs in developing countries is not just the internet in and of itself but the potential it brings for interaction with other electronic media like radio. The convergence based on internet-based technologies benefits radio mainly from the speed and reach offered by new ICTs. Radio is one of the most effective communication tools when it comes to development, especially in rural areas. It propagates information on development in local languages and reinforces

and strengthens cultural identity and expression. It also acts as a platform for democratic discussion and expression of political ideas by rural communities and a platform to raise awareness on local development and social issues. Community radio also promotes the local pride of the community and reinforces community memory and history.

Empowering the community

The literature review has made reference to the empowering potential of ICTs, particularly in community radio (page 29 and 33). The availability of ICTs in community radio stations challenges misconceptions about ICTs being for professionals and academics or that they are promoting a consumer lifestyle through their entertainment content. The presenters mainly focus on local issues affecting the community and respond to their listeners questions through their programmes. They also select information from relevant and authentic websites and use local experts as resource persons or studio guests (for example inviting a local medical officer to a health programme). They use local languages to discuss issues, which appear on the internet in English. In some instances, the presenters explain the process of accessing information on the internet and the audience is able to understand how it works. Basically, the community radio presenters play a major role in demystifying the internet and ICTs in general to the local community while empowering them with information, in the process. Participant B6 at Bus Radio noted as follows:

Er ICTs actually are the best thing that has ever happened to a community radio station as it initiates decision making in the community. We give them information.... So, it's up to them to make decisions. We also give them opportunity to give their opinions.

Accessing the internet on behalf of the community is one way of creating shared meanings based on information found online and interpreting this information for the community in a way that applies to their context. This daily browsing of the web

narrowing down the knowledge gap and provides a link between ICT users and non-users. That is direct and indirect access to ICTs. All the radio stations under study demonstrated that they all accessed the internet on behalf of their listeners. They also contextualized and translated the information for their listeners, similar to the Kothmale “Radio browsing” situation, in which the listeners send their questions over the radio by calling and the “radio browsing” producers get answers on the internet. The broadcasters also browse the internet while on air and they are able to discuss and contextualize information in their local language. The radio programme contributes to raise awareness about the internet as the listeners request the broadcasters to surf the net on their behalf and the programme transmits information in response to their requests. This occurs in a participatory manner. In some cases, this information is explained and contextualized with the help of the studio guests. For example, a local doctor may explain data on a health website.

From the data, it also emerged that most of the producers and presenters had digital skills and that they were either self-taught or peer-taught. Some had also attended in-house trainings. It was also evident that most of the community radio stations used either Kiswahili or the local languages in the programmes. That means that the information presented in English on the internet is translated into the local language. Most of this information has to be contextualized because it has been presented for a global or national audience.

The internet has great potential as a tool for development within the community due to its large quantity of knowledge and information, effective platform for knowledge and information exchange, source of learning (for self-education). There is a gap between those who have access to ICTs as tools and those who do not. The question of access is closely linked to the notion of the digital divide. The urban areas

are well connected with infrastructure for new ICTs while the rural areas are still lacking basic necessities like clean water, electricity, and a good transport system.

Research Question 3

To what extent do ICTs enhance community access to community radio stations? The following themes emerged in response to research question 3:

Audience Access

This theme had two main subthemes, that is the dominance of radio as a mass medium and using appropriate technology. The main focus of this theme was the manner in which the audience members accessed the radio stations and the factors that affected the ways in which they did this.

The dominance of Radio as a mass medium

As mentioned in chapter 2 on page 38, many years after radio was invented, radio still remains the most persuasive, accessible, affordable, and flexible mass medium available. In the rural areas, it is usually the only mass medium available to most of the residents. Local radio broadcasts in the language and accents of the community and reflects local interests in its programming and therefore plays a major role in promoting the heritage and culture of the community. In many rural areas, radio is the main source of information about what is happening in the community and also plays a major role in promoting development and preserving the local culture and language. When asked whether digital technology had enhanced their participation in the radio station, the audience participants noted the following:

I usually listen to Kangema FM through the radio because I like to listen to country music and Sunday services on Sunday morning. I participate by sending messages and requesting for songs. What I like about the station are the weather updates, country music and mass services on Sunday morning (Participant CA1).

I don't listen to the radio programmes through the phone because it is noisy and I'm not able to hear what is being said because there is some noise in the background. So, I prefer to listen to Kangema FM programmes through the radio (Participant CA4).

A number of respondents mentioned that they preferred to listen to the radio programmes through the radio and did not use the internet or social media such as Facebook to participate in the radio programmes. They still preferred the traditional radio because it was more convenient for them. Those who had tried to access the radio programmes through the internet mentioned that they had faced many challenges such as poor connectivity, high cost of smartphones and internet bundles as well as digital illiteracy among others. However, some of the respondents mentioned that ICTs had enhanced their participation in the radio station's programmes.

With the mobile phone, we can call, send messages and we can listen to the radio through the phone (Participant AA3).

The internet has helped us to bring people together. However, majority of our audience still use radio to listen to our programmes (Participant A5).

Going online has mostly been beneficial to those who are able to access our online platforms and for our sponsors and donors (Participant B4).

So... to get these ones.... Juu hao hawana time yaredio, (they do not have time for radio), when they go on Facebook, it is more simpler to themso we decided that other than kuwa concerned tuna hawa wenye wanasi kia radio na phone (other than concentrate only on those who prefer listening to our programmes through the phone) also we consider the people who like using social media on Facebook.....adding to that it was during that time we had sponsored programmes, so most of the sponsors are not even from Africa they're from outside the continent and they had to be following our programmes, to be monitoring. So, we had to be going on Facebook so that they can be watching us (Participant C2).

Majority ...especially those at the grassroot levels who do not have smartphones usually access our programmes through the FM radio. Those with smartphones also prefer accessing through the radios and they attach the headphones and they can listen to the radio station wherever they are (Participant A2).

Usually only the youth access the radio station through the social media platforms... and also the digital mothers and fathers that we have. But the old school kind of people, it is easier to access us through radio (Participant C3).

One of the issues in this community is low literacy levels therefore many listen to us through their radios (Participant A3).

The data showed that audience access across the three community radio stations was mainly through the traditional means, that is through the radio rather than through digital platforms. However, it also emerged that the youth were more open to accessing radio programmes through their mobile phones and they were able to access the stations through social media such as Facebook live. However, they also faced many challenges in doing so.

The 2019/20 CAK report indicated that there were 57.03 million mobile subscribers in Kenya and over 40 million internet subscribers (CAK, 2020). Studies have shown that most of these are found in the urban areas leaving the rural areas with little or no connection to the internet. Many respondents noted that even though they had mobile phones, they did not have smartphones and they, therefore, could not access the internet on their phones.

Using appropriate technology

According to Attias and Deflander (2003), for technology to be considered appropriate, it should have the potential of meeting the needs of the community as far as utilization, learning and adoption are concerned and not just in terms of technical aspects only. The tools are considered appropriate when the community has been able to develop a sense of ownership, which occurs through a continuous process of utilization of the technology. This is not just about the mere adoption of technology or the development of skills to handle it but rather other factors such as management of the community radio station, production of local content, and outreach activities also come into play.

As observed from the data, when the community radio station is converging with the internet, the station may need more speed, better connectivity, and more memory and storage capacity. The acquisition of computers helped with managing

content production while the process of editing and storing programmes digitally was made more convenient. Computers also proved to be an effective way of improving the quality of work and with digitization, the community radio stations under study had developed their own websites that provided information about the stations and their programmes. They also had some of their programmes on Facebook live.

Most of the respondents indicated that even though they did not access the internet, they still used their mobile phones to participate in the radio programmes while others indicated that they preferred to talk to the presenters face-to-face in case they needed to do so. This showed that the listeners were more comfortable with the traditional way of interaction through face-to-face communication or only accessed the radio station programmes through the traditional way, that is the radio. Overall, it was evident that, as Pavarala and Malik (2007) argued, community radio can be seen as “part of a broader struggle for access to communication media and as a mechanism for social groups to reproduce their cultural identity, to voice their social and economic demands and to create new social relations” (p. 18).

I always participate in the debates on the evening shows. I also make requests for certain songs to be played especially songs by our local musicians. I want to promote our local musicians. I also send greetings to my neighbours and relatives (Participant CA3).

When I meet the programme producers, I normally give them my feedback of their programmes. I prefer to give the feedback in person or to call. The producers normally listen to us and they make changes to the programmes according to our recommendations (Participant CA4).

I usually comment on programmes that speak on farming. I contribute my own ideas to the topic of the day. I also share information of farm commodity prices because I sell some of those things here at the market (Participant CA2).

When asked what challenges they faced when using ICTs to access the station, the audience participants noted the following:

Some of the challenges are lack of credit, sometimes we have challenges with the network and sometimes we have sudden power outages, then we are not able to listen to the radio (Participant AA8).

Lack of credit and yet you may have some important information, sometimes there are power outages (Participant AA7).

The radio station management were also aware that most of their listeners accessed their programmes through the radio.

We do not get many people who listen to us via online platforms. Some members of the audience do not know how to access our Facebook account. Some have smartphones but they do not know how to use the phones to access our programmes (Participant A3).

Access to the station is through listenership fan base groups such as the Isinya Massive Group, Bisil Massive Group. We involve local leaders, nyumbakumi elders, youth groups and women's groups. We also carry out initiatives in the community such as food drives for the needy. We focus on issues affecting the community such as water shortage, FGM, GBV, early pregnancies, early marriages... (Participant B1).

As Participant B1 indicated, to mitigate this situation, the radio stations provided their listeners with information on how to use their online platforms to access their radio programmes.

We try to educate the viewers on how to access our programmes through Facebook live (Participant B1).

In spite of the benefits derived from using the internet, the danger with using it as a source of information is that there is too much foreign information that can easily influence and distance the presenters from their local communities and cause them not to focus on the community's concerns and needs. The internet should only act as a support to the existing communication strategies and not their replacement. As noted by Nafiz (2012), elitist media threatens multiple cultures and communities, leading to media democratization and media globalization.

From the observation made in the course of gathering data, it was apparent that some of the programmes were not really in line with the needs of the community, for example, some of the presenters preferred to play foreign music rather than their own

local music. It was also clear that in some cases, the programming was influenced by the donors and the sponsors.

There is also the danger of having the voices that are propagated by the public and commercial broadcasters being amplified by the community radio stations at the local level, hence further ignoring the voices of the community. This situation can be averted if community radio stations offer alternative content rather than trying to measure up to their public or commercial counterparts or be in competition with them. When alternative content production is not offered, community radio stations end up amplifying the dominant voices.

4.3 Summary of Key Findings

This study sought to explore the appropriation of ICTs by community radio stations in enhancing community access and participation. The qualitative data generation techniques used to answer the research questions in this study included in-depth interviews and FGDs with the community radio stations' staff and audiences, as well as observation and a review of documents from each of the selected stations. Triangulation allowed for better results because of the use of various data generation methods. The data that was generated was categorised into themes and sub-themes and was used to address the study research questions: How are the internet and mobile phones incorporated into community radio to enhance access to information? What is the role of ICTs in promoting community participation through decision making and content production in community Radio? To what extent do ICTs enhance community access to community radio stations?

The theme on the adoption of ICTs comprised of several subthemes, that is, acquisition of ICTs, access to information, internet, mobile phones, internet connectivity, and using technology to improve quality of content production. This

theme focused on how community radio stations acquire digital technology and especially the internet and mobile phones and how they use them in their radio stations. It also focused on how the audience members acquired and used technology in accessing and participating in the radio stations' programmes. The findings presented evidence of increased uptake of ICTs, and especially mobile phones and the internet both by the community radio stations and the audience members. While the stations used ICTs to look for information, contact their sources, communicate with their audiences, and broadcast their programmes, the audience generally used ICTs and especially mobile phones to make calls or to send texts to the radio stations. They were also able to access the radio programmes through their mobile phones.

The theme on the digital divide focused on the following subthemes: digital multiplicity, localizing the news, training on the use of ICTs, low literacy levels, lack of community participation in the adoption of ICTs, convergence, and networking. The data showed that community radio stations serve as community intermediaries in communities with little or no access to ICTs as they are able to combine tech knowledge about ICTs with context knowledge that is relevant to the community.

The theme on audience participation encompassed several subthemes including activism/community citizen journalism, decision making, content production, and significance of audience feedback. It emerged that the community members participated in providing information to the station in various ways and in most of these cases, ICTs played a major role. Access to mobile phones was especially significant as most staff and community members used their phones to call or send messages to the station. WhatsApp was also used extensively to send messages through the various groups that had been formed by the radio stations.

The theme on internet radio demonstrated what had already been discussed in the literature that it is the people who shape and integrate ICTs into their behaviours, and that it is, therefore, necessary to determine the interface between community radio stations and their communities in order to establish whether ICTs really enhance opportunities for greater participation or not. This study focused on the role of ICTs within the perspective of alternative media, on investigating how the use of ICTs enhances community participation and access, with particular reference to community radio. The data showed that the adoption of new ICTs had great potential when ICTs were integrated with other electronic media like radio.

The theme on audience access had two main subthemes, that is the dominance of radio as a mass medium and using appropriate technology. The main focus of this theme was the manner in which the audience members accessed the radio stations and the factors that affected the ways in which they did this. From the data, it emerged that radio still remains the most persuasive, accessible, affordable, and flexible mass medium available, especially in rural areas. Most of the respondents indicated that even though they did not access the internet, they still used their mobile phones to participate in the radio programmes through calls and text messages. Ultimately, it was evident that the preference for most audiences was still the traditional way of accessing radio programmes through the radio.

4.4 Summary

This chapter has provided a nuanced discussion of some of the core issues that define the nature of the appropriation of ICTs by community radio stations by addressing the study's research questions. The five main themes that have emerged from the data included adoption of ICTs, digital divide, audience access, audience participation, and internet radio. This chapter provided an in-depth analysis of each of

the community radio stations under study and went ahead to systematically present the themes that emerged from the data in respect to the research questions. As demonstrated in the findings, this study leads to a general understanding of the nature of community radio in Kenya and specifically in their use of ICTs in enhancing community access and participation. This study argues that while there have been advancements in the uptake of ICTs by community radio stations, the appropriation of these ICTs by community radio stations has not significantly enhanced community participation and access.

An understanding of the settings within which the community radio stations exist was also necessary because it demonstrates the unique challenges they face in their quest to access ICTs which impacts the centrality of the community radio and amplifies the need for the use of ICTs because as earlier mentioned, in some cases, the community radio station becomes the main link between the community and ICTs.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter aims to discuss the key findings already presented in chapter four, with a view to gain an understanding of the nature of the appropriation of ICTs by community radio stations in enhancing community access and participation. Consequently, the discussion on the key findings will be followed by the conclusions of the study to outline what the study has established. Implications of the study on policy and practice and suggestions on areas of further research will also be presented here. From the findings, it has been observed that the use of ICTs by community radio stations has the potential to affect the ways in which citizens access, engage and participate in community radio broadcasting and that the convergence of the community radio environment brings with it possibilities and challenges for community access and participation. This study sought to investigate how ICTs are being adopted and used by community radio stations in their daily routines and operations to enhance access and participation of their audiences.

This study was mainly premised upon the domestication theory that not only demonstrates why people adopt ICTs or not, but also how people adapt the technology to their own use and how this adaptation affects their use of ICTs as they fit them into their daily lives. The theory proved to be an appropriate framework upon which to investigate the appropriation of ICTs by community radio stations to enhance community access and participation and to understand how this affects community radio broadcasting in the radio stations under study. Domestication theory explains the bottom-up approach to the role of media, as media is evaluated based on how they are

used, and by their effects on society. Domestication theory portends that how an ICT is used is important and it, therefore, seeks to explain the use of technology beyond simple adoption. As has been demonstrated in this study, the domestication framework requires an in-depth approach to research, which involves interviews and observation, to elicit information.

Data analysis and interpretation for this study mainly concentrated on the data from the interviews and FGDs that were carried out. The data obtained from the review of documents and from observation was used as supplementary data. The data was thematically reported to ensure that repetition was avoided and that similar themes emerging from the 3 community radio stations had been captured. The five main themes that emerged from the data were: adoption of ICTs, digital divide, audience access, audience participation, and internet radio.

5.2 Discussions of Key Findings

This section presents a discussion of the key findings presented in the previous chapter. From the study, various observations have come to the fore and these have been discussed here based on the theories used to investigate the phenomenon, the literature reviewed, and the research questions that guided the study.

Research Question 1: How are the Internet and Mobile Phones Incorporated into Community Radio Stations?

The internet has been perceived as a democratizing tool because of its contribution to the democratization of information hence the adoption of this digital technology globally. This study looked at the appropriation of ICTs and specifically the internet and mobile phones in community radio stations. This study showed how digital technologies have seemingly extended the reach of media in community radio

stations. The theory provided a framework within which to understand how ICTs affected the community radio stations and their audiences.

One of the main factors in domestication theory is appropriation. Appropriation focuses on the way in which technology is acquired and the kind of negotiations and considerations that lead to such acquisition and how the introduction of technology is managed as the users seek to fit it into their daily routines and time schedules (Haddon, 2011). The radio stations under study demonstrated that they had all adopted digital technology in their stations and that they were using them to improve on the quality of their programmes, to gather news and information, to interact with their audiences, and to communicate with their sponsors and donors.

The process of domestication begins when the potential user is made aware of the technology and begins to develop perceptions of its potential usefulness until the user acquires the technology and continues to use it. This was evident in the radio station's under study as they seemed to know the potential usefulness of the technology before acquiring it. Acquisition of technology was based on the benefits that the radio stations would derive from them. For example, the radio stations identified the need to install Wi-Fi at their stations if they were going to be effective in their broadcasting. During the FGD at Bus Radio, for example, it emerged that the staff was still using data bundles to access the internet but already had established a service provider who would install Wi-Fi at their premises. At Kangema RANET, installation of Wi-Fi was a trade-off between the service provider and the radio station. The station committed to advertising the service provider's services in exchange for the installation that was done.

One fundamental aspect of domestication theory is that it not only explains why technologies are adopted, it also explains why some are adopted in a limited way or not

at all. Consistent with previous studies on the adoption of technology by community radio stations, this study found that community radio stations face various challenges in their efforts to integrate new ICTs in their work. The theory was therefore instrumental in providing a basis upon which to discuss issues pertaining to social exclusion and the digital divide.

Domestication theory applies in situations where technology is appropriated in context-specific environments. In this study, the theory has been used to investigate how ICTs are incorporated into community radio stations to enhance community access and participation. Three rural community radio stations based in different socio-cultural environments were selected for the study. While Bus Radio FM is located in Kajiado County in the Rift Valley region, Amani FM is located in Tana River County in the coastal region, and Kangema RANET FM is located in Muranga County in the central region of Kenya. The different contexts provided an interesting perspective of the appropriation of ICTs in community radio stations due to their unique characteristics. Bus Radio FM for example is located in an area where the cultural practices of the community are highly oppressive especially with regards to the girl child who is subjected to FGM and forced marriage at an early age. Consequently, this has had a bearing on the focus of the radio station in terms of their programming. The high poverty levels experienced in the areas served by these radio stations also had an impact on the way they acquired ICTs and on how they made use of them.

The participatory culture model was instrumental in explaining the changing media environment in a networked era where technology seems to be taking a more central place. This phenomenon was witnessed in all three radio stations and it was clear that all the stations were making great efforts to integrate digital technology into their work. The manager at Bus Radio stated as follows:

Without technology, there's no radio. Technology and social media have taken over operations in the radio station from the way information is gathered to the way it is disseminated. Various softwares such as Adobe, Sonar, Cube base and protocols are used to produce audios and videos. With the move from analogue to digital, there has also been a change in the transmitters that are used. Transmitters have been upgraded and they are able to enhance the quality of the production. The station is able to have online radio and a website among others. Access to information has been made easier and production of programmes has also been made easier.

The central place that technology occupies in the radio station is summarized in this statement. This feeling was replicated in all the stations and hence they went to great lengths to ensure that they adopted digital technology in spite of the financial and infrastructural challenges they faced. Their aim was for a more participatory environment in which the community's contributions mattered and there was a higher degree of social connection with one another (Jenkins et al., 2016). However, from the data, it emerged that the community members faced various challenges in accessing these digital platforms and hence they did not benefit from them as had been envisaged.

However, it is noteworthy that digital technologies enhanced access to information as audience members were presented with information that had been sourced from online platforms. Digital technologies also enhanced the participation of the audience to some degree as most of the audience members seemed to own mobile phones with which they were able to communicate with the radio station while making comments about their radio programmes or informing the station about an incident that had occurred. They were also able to provide feedback and participate in radio shows or competitions by the radio station.

Consistent with previous studies on the adoption of ICTs by radio stations in Africa (Bosch, 2014b; Buckley, 2011; Mudhai, 2011), this study shows that despite the infrastructural and financial challenges they face, community radio stations in Kenya are adopting ICTs. As the internet and mobile phones are changing the face of radio globally, the effect is being felt even in these small community radio stations with their

limited resources and sometimes unskilled personnel. As noted in the literature review on page 30, technological convergence on radio is inevitable because, it is expected to open up a radio to audiences (Moyo, 2012, 2013). However, from the data, it emerged that while the radio is now not just a physical space but a virtual and networked space, most of the audience members in the radio stations under study still preferred the traditional way of accessing radio content through the radio rather than using digital platforms such as Facebook, Twitter, or WhatsApp. However, it was also evident that younger audience members were more adaptive to digital technologies than the older ones.

Contrary to the assumption that digitization would make radio more participative and lead to greater accessibility, the findings of this study showed that this was only true to some extent. The focus of this study was mainly on the radio stations found in rural areas. This was significant because of the unique environment in which these stations exist. Mudhai et al. (2009) summarized this environment as one characterized by poor electricity and telecommunication network, low per capita income, low literacy levels, and language barriers, hence leading to a low level of internet uptake. While convergence offers multiple platforms of engagement such as social media, websites, and live streaming, the community audiences of the radio stations under study did not seem to appreciate these affordances presented by digitization. This concurs with Moyo's (2013) assertion that radio remains more or less traditional for most people in Africa as they still receive it through the simple mode of traditional broadcasts.

In spite of the low uptake by the audiences, it was evident in all the stations that the community radio stations' management and staff were appropriating ICTs in their work. Hence, as Bruno (2011) and Gulyas (2013) have noted, the staff at the radio

stations seemed to be changing the traditional practices of news gathering and verification of stories through incorporating digital technology in their daily routines and practices. This is in line with Mudhai et al.'s (2009) assertion that the value of new media lies in the extent to which they enmesh with old media to provide multimedia platforms that allow for greater democratic participation, inclusion, and expression.

It was clear from the data that mobile phones played a significant role as most of the respondents indicated that they accessed the internet through mobile phones. As noted in previous sections, mobile phone penetration in Kenya is among the highest in the developing world. Internet penetration in Kenya has also grown exponentially. The 2019/20 CAK report indicated that there were 57.03 million mobile subscribers in Kenya and over 40 million internet subscribers. Studies have shown that most of these are found in the urban areas leaving the rural areas with little or no connection to the internet. Many respondents noted that even though they had mobile phones, they did not have smartphones and they, therefore, could not access the internet on their phones.

Therefore, in response to research question one that sought to find out in what ways the internet and mobile phones are incorporated into community radio to enhance access to information, this study found that the radio stations under study had fully embraced digital technology and were using it in their work. This study also established that digital technology had opened up the media space for the community radio station and that they were able to extend their reach beyond the confines of the limited geographical area prescribed by the regulatory bodies. They were also able to do their research, improve the quality of their content and be accessible to their sponsors and donors through the various digital platforms they were using.

These findings are therefore consistent with findings of other studies that showed that community radio stations are appropriating technology in their daily

routines and activities and that mobile phones are key in accessing the internet (Nafiz, 2012). It also emerged that most of these community radio stations used digital technology for the sake of communicating with their sponsors and donors and for networking opportunities and not so much to increase the participation of the community as most of the community members did not have access to digital technology. In my observation, I also noted that all the staff at the radio stations under study were young and possessed the skills required to navigate digital technology in their broadcasting. Some had received the relevant training to equip them with the skills they required to use the technology while most of them were either self-taught or peer-taught.

In spite of the challenges faced, the fact that younger audience members were more adaptive to digital technologies was a significant observation for this study as it has a bearing on predictions of the use of the internet and mobile phones in these areas in the future. From the 2019 population census in Kenya, in Kajiado county, out of a population of 1,117,840 people, over 800,000 were reported to be below the age of 35 years. In Muranga county, the total population was said to be 1,056,640 people and out of these, over 700,000 were below the age of 40. Tana River county reported a similar scenario where out of a population of 315,943, over 250,000 people were below the age of 35 years (City Population, 2019). Therefore, given the fact that there is an increasingly youthful and possibly more educated population in these areas, it is highly likely that the use of ICTs will be on the rise and this will possibly have an impact on the use of ICTs in community radio stations.

Therefore, in response to research question one, it was observed that ICTs were beneficial in content production because they enhanced the quality of the content produced; community radio stations look for innovative ways of using the available

digital technology in their stations; and in the process of adopting technology in their work, community radio stations are faced with many challenges. In spite of these challenges, it was evident that younger members of the community were more adaptive to using ICTs to access information on the radio stations.

Research Question 2: What is the Role of ICTs in Promoting Community Participation through Decision Making and Content Production in Community Radio?

The use of ICTs has often been regarded as a threat to traditional media. However, the convergence of the radio and the internet has made it possible for radio to remain an important platform for information, dissemination, and exchange. This has particularly proved to be useful in the rural areas which as earlier noted, are not well served by ICT infrastructure. However, the decentralization effect that was expected in the production process and democratic decision-making has not really been realized with digitization. As Pavarala (2008) noted, the control over technologies has instead become more centralized and there has been greater inequality in the distribution of access and skills required to exploit the technology hence making technology a source of power only under specific conditions of equity. ICTs have been known to be dualistic in nature as they can facilitate one's participation in society while at the same time becoming significant barriers to others.

This study focused on the use of ICTs in community radio stations, taking cognizance of the fact that by making use of the internet enabled radio, the community radio station would be opening up channels of media content distribution without necessarily relying on the radio frequency spectrum. As Bosch (2014b) noted, the intersection between radio and the internet offers community radio stations the opportunity to close the gaps between the producer and the consumer within the networked public sphere. This is the ideal situation that is expected when such

convergence takes place. However, from the data, it emerged that the community did not have much room to participate in producing content for the radio station besides the comments and suggestions they made on certain aspects of the programming. Decision-making was also left to the local management committees who were assumed to represent the community and the station management.

When considering the issue of community participation, another pertinent issue that cannot be ignored is the philosophy of community radio, which puts emphasis on the medium being a non-profit making entity, a voice of the voiceless, a tool for development, community ownership, and control and community participation. Therefore, as Tabing (2002) noted, a community radio station should be operated by the community, for the community, about the community, and by the community. Therefore, the most distinguishing factor about the community radio is the aspect of community participation in the management of the station and in programme production. However, this study established that while the community was represented by a local management committee in each of the stations under study, their participation in decision-making was minimal.

In Kangema RANET FM for example, this study established that the local management committee usually made decisions about financial matters and rarely touched on issues that concerned content production. In all the stations, it appeared that such decisions were made by the station management and also noteworthy was the influence of donors and sponsors on the programming and the content of these programmes. Hence, contrary to what is considered as greater possibilities for community engagement in a community radio station as opposed to public radio or private radio, the findings of this study showed that there was minimal participation by the community in the programming. Possible reasons for this lack of participation may

include a lack of awareness by the community, a lack of engagement of the community by the radio station, illiteracy which may lead to feelings of inadequacy on the part of the community members and a general feeling of apathy in the community. I also observed that the community members trusted the radio station staff as they considered them educated and advanced in many ways, hence they may have felt inadequate to make any meaningful contributions to the radio station. This finding concurs with Javuru's (2011) assertion that community radio stations also suffer from limited ownership by the community and poor or under-representation of members of the community. For example, during the audience FGD at Kangema RANET, when asked what they would like the radio station to do so that they could participate better, one respondent noted the following:

I don't have any recommendations for them, I don't have any ideas I can share with them. I have never gone to the station. Nobody has ever invited me.

However, consistent with previous studies, this study also established that the use of ICTs has enhanced the community's access and participation to the community radio stations. This study also found that, in spite of the impediments to access technology, rural communities may be deterred from participating in the radio stations' programmes by other factors such as lack of or low literacy levels, lack of or low digital literacy levels, poverty, cultural or religious factors among others. As noted in previous studies, community participation can be in form of management, governance, programming decisions, financial decisions, and live studio discussions, among others (Bailey et al., 2008; Kimani, 2017). Participation gives the community a sense of ownership and control, hence limiting the influence of donors or sponsors. For community radio stations, the community ought to remain the focal point, hence their participation should be considered an important factor.

This study also established that access to the internet and digital technology is still minimal in the rural areas, hence the digital divide has not been bridged. However, despite the challenges experienced, it was evident that community radio stations in rural areas are making strides in trying to bridge the gap between the information-rich and information-poor. It was also evident that community members still prefer to access the radio programmes the traditional way - through the radio frequency.

**Research Question 3: To What Extent do ICTS Enhance Community Access to
Community Radio Stations?**

This study considers community access to include aspects of content and infrastructure as well as opportunities available to the community to choose a variety of relevant programmes and have a means of feedback to transmit its reactions and demands. Community access to content is mainly supported by access to infrastructure which in this case entails opening of the airwaves for alternative broadcasting that is accessible by the community (Coyer, 2011). The focus for this study was mainly on how ICTs were facilitating community access to the community radio station. From the data, it was evident that most of the participants still preferred to listen to the radio programmes through the traditional radio and did not use the internet or social media such as Facebook to participate in the radio programmes because they found that radio was still more convenient and affordable for them. Those who had tried to access the radio programmes through the internet mentioned that they had faced various challenges such as poor connectivity, high cost of smartphones and internet bundles as well as digital illiteracy, among others.

In line with AMARC's (1998) findings on the barriers to community access to community media, this study concurs that community access can be hampered by insufficient or inappropriate spectrum allocation, poor levels of connectivity,

insufficient access to bandwidth, market failure to deliver new systems based on appropriate technology at affordable costs of access, socio-cultural barriers to access, and inappropriate or hostile public policy framework to support non-profit access to broadcasting, among others. In the community radio stations under study, community access appeared to be minimal. This situation was exacerbated by poor internet infrastructure in the rural areas where these radios stations are based.

As noted by Javuru (2011) and Lewis (2015), community radio stations seem to operate like any other media organizations in terms of regulating access to both the airwaves and their media assets through formal and informal structures. This was observed in all the three radio stations under study where clear restrictions are put in place and access for community members is limited. In some way, these limitations are occasioned by the restrictions meted on the radio stations by the regulatory bodies such as the CAK. Githethwa (2008) noted that community radio stations are granted FM frequencies on the basis of low power transmitters, shared frequencies, and limited coverage. Subsequently, the main areas regulated through licensing include the frequency spectrum which considers the geographical sites, antenna height, radiation patterns, frequency deviation, and polarization. Other factors include conditions of use such as time frame and ownership of the broadcaster and type of information that is disseminated. It is important that the content is culturally, educationally, socially, and politically impartial. They should also avoid programmes that are indecent, obscene, or in bad taste or that may cause harm to the listeners in any way. The findings of this study showed that the radio stations under study basically adhered to these policies and were keen to deliver content that met the needs of the community, were impartial, and caused no harm to the listeners.

As explained by Lewis (2015), the emergence of the internet creates virtual communities where members no longer need a fixed space to become a community. Nafiz (2012) further argued that the internet opens up spaces for dialogue and participation and that social media evolves around virtual communities in the same way that traditional community media evolve around a local community. The radio stations under study demonstrated that the internet indeed created virtual spaces in which interaction and participation was enhanced as the community was able to form bonds through their participation on Facebook live, WhatsApp, text messaging, and calling the station. For Bus Radio, for example, various WhatsApp groups had been formed by the radio station for the audience members to share information on what was happening in their locality. Nafiz (2012) noted that these virtual communities are able to interact much like in the real world and to form new movements that pursue their own agenda.

While community radio stations provide opportunities for the community to tell their own story, as noted by Howley (2010), this study established that access to the stations was limited in many ways. Access to community media is necessary in order to provide the community with an opportunity to represent themselves directly. Therefore, access to media infrastructure means that the community can participate in the planning, decision making, and production of media content. Consequently, when this access is denied or not provided, then there is increased marginalization of the concerns of the rural poor. Unlike other studies whose findings showed that community radio stations have the potential to redefine democracy, development, and identity and to forge a public sphere that is more egalitarian and more equitable, this study found that community access was still limited even with the introduction of ICTs and that the community did not have as much access to ICTs as had been envisaged.

From the findings, it also emerged that most audience members still prefer to listen to the radio programmes through the traditional media, that is on radio rather than using online platforms, and that most of the community members faced various challenges when trying to access the station through digital technology. That notwithstanding, this study acknowledges that the use of technology has opened up new avenues of interacting with the audience and has led to the emergence of citizen journalism in rural areas. Digital technology has also enhanced the interaction between the community radio station and the sponsors. The study also established that technology was instrumental in reaching people who are not within the radio station's area of coverage.

The blending of old/traditional media with ICTs has the potential to make a significant contribution towards development and democracy. However, from the findings of this study, it is clear that access to new ICTs is not necessarily the greatest barrier to being able to participate in an information society or being able to access and use the internet for development. Hence, communities do not have to wait until access to the internet is universal before embracing the development opportunities it offers. In most cases, people use the technology available to serve their community needs. Community radio stations for example have harnessed on adaptability to the ICTs and especially the internet to become more effective in their interactivity and content production, using existing social communication networks. Radio-ICT initiatives emphasize on adaptability by using technological solutions that are most suitable to their communication needs.

From the data, it was established that ICTs enable community radio audiences to access information that they would otherwise not receive and to participate in community radio activities. Various scholars argued that when we are dealing with

technology, we are dealing with the instruments and not actually affecting the social, economic, or cultural environment. However, Girard (2003) argued that ICTs on their own will not necessarily make a difference without going beyond connectivity and promoting enabling environments for the community to participate in community activities through their access to ICTs. This, therefore, means that ICTs are not inherently beneficial but rather, it is more beneficial for communities to adapt technologies to their needs and culture and not vice versa. It is also important to question whether these ICTs will still be sustainable and beneficial to the communities in the future.

The findings also showed that due to the challenges occasioned by the digital divide, rural residents hardly benefit from the opportunities afforded by broadband such as education, health, information, civic participation thus leaving these areas are in danger of greater exclusion in the digital space. A UNESCO (2017) report stated that “in the 21st century, broadband will have a significant impact on productivity, hence affecting how people live and work” (p. 10). We are at the threshold of a knowledge society, where access to knowledge and communication systems are becoming necessary in political, cultural, and economic development. Despite interventions by UNESCO to provide ICT training for community radio stations, research studies on the appropriation of ICTs by community radio stations have been few. These trainings are as a response to combating the effects of the digital divide and in support of inclusivity and promoting dialogue, for the purpose of including rural, marginalised communities in public debate.

One of the aims of the national broadband strategy (2018-2023) is that broadband connectivity will enhance broadcasting by delivering multimedia content to the end-user in a variety of formats and using different platforms in a converged

environment. Therefore, the implementation of national broadband strategy will enhance the provision of broadcasting information to the majority of Kenyans and ultimately promote national, political, economic, and cultural cohesion. Rural communities will be empowered to participate and contribute towards national socio-economic development. The opportunities presented by the democratization of the airwaves for the community-based organizations is enormous and includes building capacities of non-literate rural people, exploring viable, cost-effective technology options, establishing more democratic management structures, and more ethical standards of media practice (Pavarala & Malik, 2007).

The rural areas in Kenya are generally politically and economically marginalized, making them unable to effectively influence government policies. The rationale of introducing a national ICT policy strategy is to enable provision of universal access to broadband services to previously marginalized, disadvantaged, and excluded communities. This brings about a significant gap between the information-rich and the information-poor, the latter of whom are mostly found in the rural areas. Kenya's ICT readiness is captured in Vision 2030 that envisages a knowledge economy that will be more equitable and inclusive, therefore ensuring that rural communities can gain from increased connectivity.

One of the main characteristics of the internet is interactivity and the wealth of information that it has in store. In spite of the challenges encountered when using the internet, alternative hybrid models are taking effect, making the internet more accessible by blending local radio with the internet. As was evident in the data, community radio stations are broadcasting their programmes on the internet through live streaming. They are also using various social media platforms to communicate with their audiences. Usually, streaming services are for the purpose of reaching those who

are not within their geographical reach, hence extending their reach, as well as to encourage interaction with their listeners and therefore enhancing interactive social communication.

In spite of myriad challenges facing rural communities, including illiteracy, digital illiteracy, language barrier, lack of digital equipment and the resources to acquire them, and lack of/poor internet infrastructure, this study shows that rural community radio stations are making great efforts to incorporate digital technology in their work. The internet helps to improve livelihoods as lack of internet access has been seen to create a growth in the inequality between the info-rich and the info-poor. The danger with ICTs is that when not used appropriately, ICTs can make the knowledge gap wider and worsen the social inequality in the society. It is therefore important to use them effectively and this entails having an understanding of the knowledge needs of the community. B

esides using ICTs effectively, it is also necessary to use the appropriate technology that can be applied using the correct media and media messages. This study also showed that ICT projects that converge around other communication media projects such as community radio stations have a better success rate because there is already a history of community participation. Hence these ICT initiatives are more likely to be accepted by the community to strengthen the activities of the radio station.

5.3 Conclusion

The purpose of this section is to summarize the core themes emerging from the entire study and to show what the study has established. The implications for practice, policy, and future research have also been discussed here.

The purpose of this study was to explore the appropriation of ICTs by community radio stations in enhancing community access and participation. This study

recognizes the significance of enhanced community access and participation in community radio stations that includes an opportunity to make contributions in the local and national debates. Community participation can be in form of management, governance, programming decisions, financing decisions, live studio discussions, and feedback on programming, among others. Participation gives the community a sense of ownership and control, hence limiting the influence of donors or sponsors.

For community radio stations, the community remains the focal point, hence their participation is an important factor. This study has established that ICTs do not necessarily make the community radio station better. The significance of the ICTs in this context is determined by whether the ICTs are perceived as a tool to help community radio stations enhance their work or as something to overhaul the programming entirely. The data revealed that while presenters may have perceived ICTs as a source of news to supplement what they have and as a platform for information exchange, the community members had challenges in navigating the use of ICTs in accessing and participating in the community radio station's activities.

This study recognizes that community radio stations in Kenya are faced with major challenges that include insufficient or inappropriate spectrum allocation, poor levels of connectivity or insufficient access to bandwidth, market failure to deliver new systems based on appropriate technology at affordable cost, socio-cultural barriers, and inappropriate and/or hostile public policy frameworks among others. These challenges notwithstanding, this study established that community radio stations are appropriating ICTs in their radio stations.

This study, therefore, concludes that whereas community radio stations in Kenya have embraced the use of ICTs in their radio stations, this has not necessarily resulted in enhanced community access to the community radio's content or to the radio

station itself. This study also concludes that the use of ICTs does not necessarily result in enhanced community participation in the community radio's content production or decision-making processes. It has also been established that several barriers may hinder the expected results in the use of ICTs such as poor internet infrastructure in the rural areas, cost of connectivity, poverty, illiteracy, digital illiteracy, and cultural factors. However, this study has also established that the appropriation of ICTs by rural community radio stations has enhanced the quality of the content produced and provided greater visibility for their sponsors and donors while enhancing opportunities for networking with like-minded partners.

The study confirms that in most cases, a needs assessment is not usually done prior to the establishment of the community radio station and in most cases, the adoption of ICTs is not based on the specific needs of the local community but rather on the push by donors and sponsors. While mobile phones and the internet have broadened possibilities for community participation, this study has established that there is generally a lack of community participation in the acquisition of ICTs and there is limited community access and participation in content production and decision making in community radio stations in spite of the appropriation of ICTs in these stations. The integration between the internet and the community radio station has brought about a convergence of the two media platforms, connecting radio listeners to the internet. Interfacing the internet through radio has enhanced web browsing for the radio station staff for purposes of research and verification of information. The assumption here is that this leads to greater accessibility to their audiences as digitization and convergence creates a participatory culture within radio that is potentially organic, bottom-up, and democratic. Convergence offers multiple platforms

of engagement such as online streaming, social media, websites, and podcasts, ensuring that the community radio is accessible beyond the defined geographical boundaries.

The data also showed that community radio stations seek to create an opportunity for the voice of the community through providing access to the airwaves as well as access to content. The idea is to involve the community in their activities and to encourage them to participate as much as possible. This study has also established that in spite of the availability of ICTs such as mobile phones and the internet, the community members still prefer using the traditional media to access the radio programmes of the stations under study. However, the ICTs seem to have increased the community's participation as they used them for making calls and sending text messages where they made song requests or participated in the debates on issues affecting the community or sent their feedback on particular issues or programmes. This content-based participation was evident in all three radio stations. Structural participation by the community in the management of the radio station was mainly through the local management committees that were selected by the management. Therefore, the local community members were rarely involved in decision making which remained the sole responsibility of the station management and the local management committees.

Community radio stations use ICTs for various purposes including sourcing for content, engaging their audiences, and expanding the space for audience participation. Mobile phones and the internet have therefore become an integral part of the stations. This study demonstrates that the aspects of access and participation in community radio are a negotiation between the community radio station and the community and that leveraging ICTs has broadened the possibilities for such access and participation. This

study has also shown that these possibilities have been hampered by the many challenges that the radio stations have encountered in their efforts to remain digitized.

Through the five themes that have emerged, that is adoption of ICTs, digital divide, audience access, audience participation, and internet radio, it is evident that while community radio stations are using ICTs in their work, the use of this technology by the audience has been minimal. The push towards using ICTs in the community radio stations has largely been influenced by the need to comply with the community radio stations' sponsors' and donors' demands.

5.4 Recommendations

Based on the study findings discussed here, this study recommends that when integrating community radio with ICTs, various considerations need to be made. These include the needs, perceptions, and expectations of the community radio station and the potential challenges that this integration may bring about to the community around it. When these considerations are not factored in, then the ICTs may remain foreign to the community they are intended for and therefore not become as useful as was initially intended. The access of the community to the ICTs and their level of digital literacy should also be factored in.

5.5 Implications of the Study

The introduction of the internet into radio production means that the audience is also changing as the radio stations are now required to relate to the community in a different way. The use of the internet offers new opportunities to broadcasters and to the audience. While community radio is a mirror that reflects a community's knowledge back to itself, the internet offers a view that includes both a wealth of knowledge and information to these communities. Rural communities in some of the remote parts are

now accessing digital content through their radios. The challenge is to ensure that these areas have access to the benefits of the internet in spite of the barriers they face which include affordability, cultural, linguistic, and content-related challenges. To make information available, the establishment of ICT infrastructure should be prioritized.

From the literature review, section 2.3.3, it emerged that before the introduction of community radio, rural radio in Africa was not local. It was a model of state paternalism, in which programmes were produced by experts in the cities. This is different from community radio which aims to be more local and participatory. As the concept of community radio in Kenya evolved, so did the regulation around it. However, this study has established that the introduction of ICTs may result in the emergence of a new commercial paternalism as previous regulatory policies do not seem to cater to this new phenomenon. Adequate policies are required to secure the community radio station's mandate is that of serving the community in this digital era.

The findings of this study have demonstrated that while the combination of the internet and broadcast radio offers new possibilities in community access and participation, there are limitations that are experienced in the appropriation of ICTs by community radio stations. These limitations are mostly linked to the limited or lack of access to ICTs by community radio audiences, poverty, illiteracy, and digital illiteracy. The study also reveals that all the three community radio stations under study had access to ICTs even though their audiences had little or no access and that the push for the appropriation of ICTs was mainly from the sponsors and donors of the community radio stations.

This study makes a significant contribution to scholarship in media studies and especially in the area of community radio. While studies in community radio have mainly focused on providing information and news that addresses the needs of the

community and on the promotion of political and social empowering of community members among other areas, this study has focused on the appropriation of ICTs by community radio stations to enhance community access and participation. A study on convergence and digitization in community radio is significant as it focuses on the potential of the internet and mobile phones to democratize and open up community radio stations to the community signifying greater access and participation opportunities. This study is also significant as approaches to the use and adoption of technology tend to either focus on the impact of the technology on society or on how the user influences the impact of the technology. However, this study adopted a social constructivist approach that assumes that an innovation is shaped in use. This approach considers the importance of the user's cultural context in shaping the meaning, perceptions, and impact of technology. The use of the domestication theory, the participatory culture model and Fraser's (1990) notion of alternative public sphere in the study is also a significant contribution to already existing literature.

5.6 Recommendations for Further Research

This study addressed the research problem within the confines of particular contexts, locations, and cultures within which the community radio stations under study belong. Future studies that address a similar research problem may consider a different setting, context, and location. While this study was anchored upon the domestication theory, the participatory culture model, and Fraser's (1990) notion of alternative public sphere, other scholars may consider using a different theoretical framework in their investigation on phenomena relating to community radio stations. While this study adopted a constructivist/interpretivist approach, other scholars may also consider a different research paradigm in their studies.

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APPENDICES

Appendix A: Interview Guide for Community Radio Station Management

Date	
Place	
Interviewer	
Interviewee	

Introduction to the study

My name is Susan Mwangi and I'm a PhD student at Daystar University. I'm carrying out research that seeks to investigate how ICTs are being adopted and used by community radio stations in their daily routines and operations to enhance access and participation of their audiences. The main objectives of the study are: To establish how ICTs are incorporated into journalistic routines within community radio stations; to determine the role that ICTs play in community radio stations in creating possibilities for greater community participation in their programming; to find out how community radio stations' appropriation of new technologies provides for greater access to content and democratization of information within the community. As a respondent in the interview, please note that participation is voluntary and you can withdraw from the study at any time; your name and personal details such as phone number and address will not be revealed to people outside the research study; and your words may be quoted in publications and other research outputs but your name will not be used unless you otherwise request that it is used.

Questions

1. How do members of the community gain access to the radio station? – whether physically or otherwise?
2. In what particular ways do you encourage them to participate?
3. What challenges does the radio station encounter as far as community participation is concerned?
4. Outline the ICTs that you make use of in your radio station?
5. Do you use this technology to encourage community participation? How?
6. What kind of software do you use to manage calls and text messages at your radio station?
7. What challenges do you face when using these ICTs?
8. What challenges do the community members face in using technology?

Thank you for taking your time to participate in this interview and for all the information you have provided. Thank you.

Appendix B: Interview Guide for Producers and Journalists

Date	
Place	
Interviewer	
Interviewee	

Introduction to the study

My name is Susan Mwangi and I'm a PhD student at Daystar University. I'm carrying out research that seeks to investigate how ICTs are being adopted and used by community radio stations in their daily routines and operations to enhance access and participation of their audiences. The main objectives of the study are: To establish how ICTs are incorporated into journalistic routines within community radio stations; to determine the role that ICTs play in community radio stations in creating possibilities for greater community participation in their programming; to find out how community radio stations' appropriation of new technologies provides for greater access to content and democratization of information within the community. As a respondent in the interview, please note that participation is voluntary and you can withdraw from the study at any time; your name and personal details such as phone number and address will not be revealed to people outside the research study; and your words may be quoted in publications and other research outputs but your name will not be used unless you otherwise request that it is used.

1. What kind of technology do you use to connect to your members?
2. Are community members able to access digital technology with ease?
3. Are they able to access the internet?
4. How has technology helped in connecting with your audience?
5. What challenges do you face in connecting with them in this way?
6. What other challenges do you face in your efforts to enhance community access and participation?
7. How do you mitigate these challenges?

Appendix C: Focus Group Discussion Guide for Radio Station Audience

My name is Susan Mwangi and I'm a PhD student at Daystar University. I'm carrying out research that seeks to investigate how ICTs are being adopted and used by community radio stations in their daily routines and operations to enhance access and participation of their audiences. I will be moderating this discussion by asking questions and facilitating the conversation about the use of ICTs by community radio stations. Please feel free to participate and answer the questions honestly and to share your opinions freely. Also, please note that this discussion will be audio-recorded and I shall also be taking notes as we go along.

Questions

- 1) Do you have access to digital technology like mobile phones and the internet?
- 2) Has the use of digital technology by the radio station enhanced your (audience) participation?
- 3) How do you use the internet to access the radio station?
- 4) How do you use the mobile phone to access the radio station?
- 5) What challenges do you face when use digital technology to access the radio station?
- 6) In what ways do you participate in content production at the community radio station?
- 7) In what ways do you use technology to participate in decision making at the community radio station?
- 8) What challenges do you face when using technology?
- 9) What would you want the community radio station to do so that you can participate better?

Appendix D: Focus Group Discussion Guide for Radio Station Staff

My name is Susan Mwangi and I'm a PhD student at Daystar University. I'm carrying out research that seeks to investigate how ICTs are being adopted and used by community radio stations in their daily routines and operations to enhance access and participation of their audiences. I will be moderating this discussion by asking questions and facilitating the conversation about the use of ICTs by community radio stations. Please feel free to participate and answer the questions honestly and to share your opinions freely. Also, please note that this discussion will be audio-recorded and I shall also be taking notes as we go along.

Questions

- 1) What kind of digital technology does the station have? How is this equipment acquired?
- 2) What kind of internet connectivity do you have in place to ensure that you are always connected? Do you have access to broadband connectivity/networks?
- 3) How do you use the internet to access information?
- 4) How do you use mobile phones to access information?
- 5) Have you had any training on the use of ICTs? Explain.
- 6) Have you trained your audience on how to use ICTs when interacting with your radio station?
- 7) How long have you been using ICTs in your work?
- 8) How do you use ICTs to promote community participation in content production?
- 9) How do you use ICTs to promote community participation in decision making?

10) How does the use of ICTs encourage community access to the community radio station?

11) How does the use of ICTs enhance interaction between the producers/presenters and the audience? Has technology brought about new ways of interaction?

Appendix E: Observation Protocol

Date	
Time	
Place	
Descriptive Notes	Reflective Notes

Appendix F: Document Review Guide

NAME OF DOCUMENT	
RELEVANCE-ARE THE CONTENTS PERTINENT TO THE SCOPE, PURPOSE AND OBJECTIVES OF THE STUDY?	
ACCURACY AND INTEGRITY-ARE THE CONTENTS FAITHFUL TO ORIGINAL SOURCES?	
WRITING CLARITY-IS THE CONTENT EASY FOR THE AUDIENCE TO READ AND UNDERSTAND?	
PRESENTATION-IS THE FORMATTING DONE IN A WAY THAT ENCOURAGES PARTICIPANTS TO READ? Cover page Table of Contents Introduction Sections with headings & subheadings Illustrations – charts, graphs, etc	
REVIEW-HAS THE DOCUMENT BEEN REVIEWED OR EDITED? CHECK FOR RELEVANCE AND ACCURACY; LANGUAGE AND PRESENTATION.	

Appendix G: Consent Form

Please tick in the boxes provided (as will be appropriate)

APPROPRIATION OF ICTS IN ENHANCING ACCESS AND PARTICIPATION IN SELECT COMMUNITY RADIO STATIONS IN KENYA

I agree to take part in this research study with the full knowledge that participation will include being interviewed and observed while at work. []

I understand that my taking part is voluntary; I can withdraw from the study at any time and I will not be asked any questions about why I no longer want to take part. []

I understand that my name and personal details such as phone number and address will not be revealed to people outside the research study. []

I understand that my words may be quoted in publications, reports, web pages, and other research outputs but my name will not be used unless I otherwise request that it is used. []

I understand that other researchers may use my words in publications, reports, web pages, and other research outputs as they shall appear in this research study. []

Name of Participant

Signature

Date

Researcher

Signature

Date

Appendix H: Ethical Clearance

VERDICT – APPROVAL WITH COMMENTS

Daystar University Ethics Review Board

Our Ref: DU-ERB/26/08/2020/000445

Date: 26th August 2020

To: Susan Wanja Mwangi

Dear Susan,

RE: THE APPROPRIATION OF ICTS IN ENHANCING ACCESS AND PARTICIPATION IN SELECT COMMUNITY RADIO STATIONS IN KENYA

Reference is made to your ERB application reference no. 210820-01 dated 21st August 2020 in which you requested for ethical approval of your proposal by Daystar University Ethics Review Board.

We are pleased to inform you that ethical review has been done and the verdict is to revise to the satisfaction of your Supervisors and Head of Department before proceeding to the next stage. As guidance, ensure that the attached comments are addressed. Please be advised that it is an offence to proceed to collect data without addressing the concerns of Ethics Review board. Your application approval number is **DU-ERB-000445**. The approval period for the research is between **26th August 2020 to 29th August 2021** after which the ethical approval lapses. Should you wish to continue with the research after the lapse you will be required to apply for an extension from DU-ERB at half the review charges.

This approval is subject to compliance with the following requirements;

- i. Only approved documents including (informed consents, study instruments, MTA) will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by Daystar University Ethics Review Board.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to Daystar University Ethics Review Board within 72 hours of notification.
- iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to Daystar University Ethics Review Board within 72 hours.
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of a signed one-page executive summary report and a closure report within 90 days upon completion of the study to Daystar University Ethics Review Board via email [duerb@daystar.ac.ke].

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://cisr.nacosti.go.ke> and other clearances needed.

Yours sincerely,



Mrs. Purity Kiambi,
Secretary, Daystar University Ethics Review Board

End. Review Report



804 River Campus
P.O. Box 377 - 00100
Ngong Road, Nairobi
Tel: +254 20 321 11 00 / 01
Fax: +254 20 321 11 02
Email: duerb@daystar.ac.ke

Mombasa Campus
P.O. Box 30477 - 80130
Chamble, Mombasa
Tel: +254 20 321 11 00 / 01
Fax: +254 20 321 11 02
Email: duerb@daystar.ac.ke

Masai Mara Campus
Box 301-50100-00100
P.O. Box 50100-50100-00100
Masai Mara
Tel: +254 20 321 11 00 / 01
Fax: +254 20 321 11 02
Email: duerb@daystar.ac.ke

www.daystar.ac.ke

Appendix I: Research Permit

 <p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION REPUBLIC OF KENYA REF No: 269313</p> <p>RESEARCH LICENSE</p> <p>This is to Certify that Ms. Susan Wanjia Mwangi of St. Paul's University, has been licensed to conduct research in Marsabit, Taita-Taveta on the topic: THE ROLE OF COMMUNITY RADIO IN COMMUNITY ENGAGEMENT IN RESPONSE TO THE COVID-19 PANDEMIC AMONG SELECTED MARGINALIZED COMMUNITIES IN KENYA: A CASE STUDY OF SIFA-FM for the period ending : 11/06/2023.</p> <p>Applicant Identification Number</p> <p>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>	 <p>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION Date of Issue: 11/06/2023</p> <p>RESEARCH LICENSE</p> <p>This is to Certify that Ms. Susan Wanjia Mwangi of St. Paul's University, has been licensed to conduct research in Marsabit, Taita-Taveta on the topic: THE ROLE OF COMMUNITY RADIO IN COMMUNITY ENGAGEMENT IN RESPONSE TO THE COVID-19 PANDEMIC AMONG SELECTED MARGINALIZED COMMUNITIES IN KENYA: A CASE STUDY OF SIFA-FM for the period ending : 11/06/2023.</p> <p>Applicant Identification Number</p> <p>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>
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Appendix J: Plagiarism Report

Susan Mwangi dissertation - 2nd Nov. 2021

ORIGINALITY REPORT

17	%	15%	5%	5%
SIMILARITY INDEX		INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	journals.spu.ac.ke Internet Source	4%
2	ir.canterbury.ac.nz Internet Source	1 %
3	www.smallstock.info Internet Source	1 %
4	onlinelibrary.wiley.com Internet Source	<1 %
5	kcomnet.org Internet Source	<1 %
6	Submitted to Saint Paul University Student Paper	<1 %
7	docplayer.net Internet Source	<1 %
8	etheses.whiterose.ac.uk Internet Source	<1 %
9	erepository.uonbi.ac.ke Internet Source	<1 %