AN INVESTIGATION OF THE STATUS OF DIGITAL MEDIA TRAINING IN KENYA; A CASE OF FOUR SELECTED UNIVERSITIES

BY

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DECLARATION

DECLARATION BY THE CANDIDATE:

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DEDICATION

This research is dedicated to all my family members: parents, Sammy Rugut and Dorcas Rugut; brothers and sisters; dear wife, Evalyne Rugut; and my lovely daughters Naomi Chepchumba and Nicole Cheptoo. Many thanks for helping, supporting and assisting me throughout my study.

ABSTRACT

Journalism education and training is changing due to the rapidly evolving information communication technologies. These technological developments have transformed the media environment leading to new ways of communication. As a result, there has been concern about the impact of digital technologies and consequently, appropriateness of journalism training in Kenya. The purpose of the study was therefore to establish the status of digital media training in four selected universities in Kenya, identify challenges and recommend strategies for improving digital media training in the country. The objectives of the study were: to established the status and adequacy of digital media training; to examine the perception of students and lecturers on digital media teaching and learning in universities; to determine the digital media skills that are crucial in the labour market and essential for training of journalism students; to identify the challenges that journalism schools face in learning and teaching digital media and to propose strategies for addressing the identified challenges. The study was guided by the diffusion of innovation theory and study adopted a survey research design targeting a total population of 223. Mixed research approach was used in the study. Stratified sampling, simple random sampling and purposive sampling techniques were used to select a sample size of 122 respondents. To ascertain the reliability of the instruments, a pilot study was undertaken at Moi University, Department of Communication and Public Relations and a total of 15 respondents were used. The department used in the pilot study was excluded from the study. Data were collected from various categories of respondents including lecturers, undergraduate students and editors. The study used interviews and questionnaires to collect data. The quantitative data were analyzed descriptively where mean, percentages was used. The analyzed data and findings were presented in charts, frequencies and graphs. The findings show that the graduates have inadequate knowledge and skills on web technologies, digital information systems, use of new digital equipment and software. It is recommended that universities should review journalism training and integrate their curricula with digital media courses required by the market. Furthermore, the study recommends that journalism departments need to identify and provide resources that enhance the quality of digital media training.

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LIST OF ABBREVIATIONS

CIMA	-	Centre for International Media Assistance
CUE	-	Commission for University Education
DOI	-	Diffusion of Innovation
ICT	-	Information Communication Technology
IT	-	Information Technology
KBC	-	Kenya Broadcasting Corporation
KIMC	-	Kenya Institute of Mass Communication
KMC	-	Kenya Media Council
KNCST	-	Kenya National Council for Science and Technology
KTN	-	Kenya Television Networks
NMG	-	Nation Media Group
SG	-	Standard Media Group
SOJ	-	School of Journalism

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

Digital media technology is rapidly evolving as are the practices of mass communication, including media production and distribution. As a communication medium, digital media now rivals print and broadcast media. Professionals in journalism and mass communication are therefore confronted by the need to acquire the knowledge and skills required by this new and still evolving media landscape. With regards to the dynamic changes in technology, it is important to investigate the status of the journalism curricula in order to better understand if it is aligned with the developments in the media industry.

This chapter presents background to the study, statement of the problem, purpose or aim and objectives of the study, research questions, assumptions, significance of the study, scope and limitations of the study, the summary of the chapter and definition of terms and concepts.

The chapter also presents the rationale of the study and an overview of development as well as trends in journalism education in Kenya.

1.2 Background to the Study

Digital media are emerging technologies used in gathering, processing and disseminating information. The technologies have had great impact on print and broadcast media, especially in making them accessible online. Digital media training incorporates practical aspect that prepares trainees to work in a converged newsroom environment.

Journalism students today are required to have fundamental skills of journalism i.e. mastery in writing, efficient and effective fact gathering skills, conducting interviews and editing stories as well as manage and use broadcast technology. In today's media landscape, students are required to know how to blog, podcast and design websites, shoot and edit digital video, use social media as well as put all text, graphics, audio and video online for cross-platform delivery.

Digital media and convergence is an ongoing process, occurring at various intersections of media technologies, industries, content and audiences; it is not an end state. Due to the proliferation of channels and the increasingly ubiquitous nature of computing and communications, we are in an era where media is everywhere, and people are now using all kinds of media in relation to one another.

In the wake of modern communication technologies, there is need for journalists to develop new skills for gathering, processing and managing information, new structures for transmitting information across different channels, and new creative genres to exploit the potentials of those emerging information structures.

Universities providing journalism courses have been adopting emerging technologies, taking into consideration social, political and economic demands. Burgh (2003) identified social, institutional and training challenges affecting the journalism practices. Consequentially, there is need to ensure that necessary skills are acquired by students in order to adapt to these changes.

The emergence of Web 2.0 technologies such as wikis, social networking sites, blogs, video sharing and podcasting has heralded a participatory culture (Hermida 2010) where

journalism students can not only contribute news content through their writing skills, but also rely on their ability to read, understand, interpret, and produce visual images for the new media.

Technologies are rapidly changing the way information is obtained, handled and conveyed, and this strikes directly at the heart of the traditional paradigms of universities as institutions. It is therefore important that universities need to re-evaluate their training programmes in order to align to the changes in the media technologies and emerging market needs.

On the other hand, media organisations are facing challenges as their environment is reconfigured by digital convergence. The traditional journalism practices do not apply and new ways of producing digital content and multimedia packages for different platforms (online, mobile and tablets) are emerging. In this connection, journalism training institutions require to review their curricular in order to address new market demands including technologies and associated skills. Consequently, universities are expected to graduate people with up to date knowledge and skills for purposes of employment, professional growth, and development.

The current proliferation of mobile devices is undoubtedly a game changer, offering journalists liberation from the newsroom (Pavlik 2005). Today, journalists can use smartphones and tablets to access legacy and social media news reports, use them in turn as news sources, respond through them and upload their own reports and/or post comments. Technologically, mobile devices provide the necessary preconditions to make "news on the move" a reality.

According to Pavlik (2005), journalists across the world are increasingly using mobile phones as their primary reporting tool needed to collect text, photo and even video. Most of the content is often distributed via the internet and is an early example of digital media and mobile medium.

1.2.1 Journalism Training and Digital Media

New interactive features of hypertext, multimedia and social media platforms demand new journalistic knowledge and skills that go beyond the traditional skills (Deuze, 2002). The need for media professionals to use digital media to moderate discussions, interact with the public or work with multimedia are becoming more and more important. Journalism training should therefore be up-to-date with emerging trends; consequently, universities have to re-align their journalism curricula to developments in media technologies.

According to Carpenter (2010), theoretical knowledge, basic writing and communication skills still remain top requirements in the era of digital convergence, but employers require journalism graduates to have knowledge and skills required in web content creation, multiplatform adaptability, and social media. Consequently, journalism programmes in universities should be reviewed to incorporate digital media aspects for the purpose of enhancing digital media competency in their students.

Digital media knowledge and skills, especially in multimedia, hypermedia, new media, social media, web based and online media technologies, are becoming essential for effective news reporting and career development and growth. In addition, Nyabuga and Booker (2013) agree that digital technologies have changed the working habits of

journalists. Today, journalists working in the newsrooms are expected to be multi-skilled in reporting on different platforms.

Consequently, journalism training needs to incorporate digital media concepts, knowledge, skills and proficiency into core competencies needed in work delivery. Hall (2001) argues that journalism training should integrate digital media knowledge and skills because the upsurge of the internet and associated technologies are increasingly defining the role of a media professional. Ugangu (2012) observes that the internet has transformed the way news and other media programmes are sourced, gathered, and transmitted to mass audiences in Kenya.

According to Kwanya (2014), journalists are now using various digital media tools to collect, process and transmit news. The tools include recorders, audio players (iPods), cell phones, digital cameras, laptops, as well as video and audio editing software. Therefore, there is need to provide sufficient content and practice on digital media in order to prepare graduates to confidently work in the rapidly evolving work environment.

1.3 Statement of the Problem

Knowledge and skills required in managing and using digital technologies are today deemed to be as vital for entry level journalism as competency in writing, editing, knowledge of law and ethics and critical thinking. Most media studies lecturers acknowledge the necessity of integrating the latest media technologies into the curricula, and course instructors in updating their knowledge and skills (Voakes et al. 2003). Most journalism graduates have attributed the challenges they encounter to inadequate knowledge and skills needed to manage emerging media technologies in reporting and

inadequate preparation in journalism schools (Callaghan & McManus 2010; Huang et al. 2006; Singer 2004).

Some journalism schools have not yet fully incorporated digital media aspects in their curricula. Consequently, there is need to incorporate the new technologies in order to enable graduates meet the new market demands. It is important that journalism schools should incorporate emerging media technologies into their curricula and in order to produce journalism graduates with a broader set of skills beyond those useful in the traditional niches of print or broadcast media. In view of this, it is necessary to examine the status of the journalism curricula in journalism schools in order to better understand if they are in tandem with the trends in the media industry.

1.4 Purpose of the Study

The purpose of this study was to establish the status of digital media training in Kenya; a case of four selected universities, identify challenges and recommend strategies for addressing challenges affecting digital media training in the country.

1.5 Objectives of the Study

The objectives of the study were to:

i. Establish the adequacy of the digital media content in curricula offered by the selected universities.
ii. Examine the perception of students and lecturers on digital media teaching and learning in universities.
iii. Identify the digital media knowledge, competencies and skills that are crucial in the labour market and essential for training of journalism students.

iv. Identify challenges in teaching and learning digital media.

v. Propose strategies for addressing identified challenges

1.6 Assumptions

The study was based on the following assumptions:

i. Although digital media training is essential for professional journalists in Kenya, it is not adequately provided to undergraduate journalism students.

ii. Inadequate digital media exposure hinders or negatively affects journalism student's competitiveness in handling digital media.

iii. Universities have not developed curricula that adequately address the current professional needs of journalists, especially digital media.

iv. There is no consensus among experts on critical and essential new media knowledge, competencies and skills in journalism curricula in Kenya leading to universities offering different new media courses to the undergraduate students.

1.7 Significance of the Study

We currently live in a world where digital media has proliferated extensively. The rapid trends in ICT have enabled digital devices and high speed broadband to become more ubiquitous and affordable. With more people interacting and accessing information online, the media organizations too have migrated to digital services to tap on the growing audience segment.

The digitized media technologies require graduates to work in the increasingly converged media landscape, hence the importance of undertaking this study. Thus, the upcoming

journalists need to learn, not only to engage with these technologies, but more importantly, to understand the implications brought by these technologies such as the ethical issues and the new possibilities brought by the digital media.

This study is expected to give an insight into the journalism programmes, especially with regard to digital media training by universities. The findings could provide a framework for reviewing and developing curricula which would address digital media training challenges as well as determine digital media needs for subsequent planning and implementation of necessary change.

It is further envisaged that the study would add to the relatively small but growing literature on digital media training in Kenya and would thus be useful to other researchers. This forms a significant reference for research, especially because of its scope and breadth. This study is important to researchers as a means of deepening one's knowledge and developing expertise in the field of digital media. Furthermore, future researchers and scholars are expected to benefit from the findings of his study.

1.8 Scope and Limitations of the Study

This study focused on journalism departments in sampled universities. The study was carried out in four universities in Kenya i.e. Moi, Nairobi, Daystar and USIU. The study interviewed lecturers and editors. Questionnaires were used to collect information from fourth year students pursuing media and journalism programmes.

The study only covered undergraduate journalism training programmes and therefore the findings of the study were limited to this area and may not be generalized. A limitation anticipated was that some respondents would not be willing to give information about the

status of digital media training and the curricula. The sample of the study was limited to 122 respondents who were the representatives of the target population.

1.9 Summary

This chapter provides a review of issues related to study topic. The areas covered include: background to the study; statement of the problem; purpose or aim and objectives of the study; research questions; assumptions; significance of the study; scope and limitations of the study; summary of the chapter; and definitions of terms and concepts. The evolving digital media journalism curriculum has been examined in the context of the present and future challenges facing undergraduate journalism education. The chapter has also set the aim, objectives and research questions that guided the research.

1.11 Definition of Terms and Concepts

Curriculum – Curriculum defines the educational foundations and contents, their sequencing in relation to the amount of time available for the learning experiences, the characteristics of the teaching institutions, the characteristics of the learning experiences, in particular from the point of view of methods to be used, the resources for learning and teaching (e.g. textbooks and new technologies), evaluation and teachers' profiles.

Information Technology - The study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware to acquire, create, store, protect, process, transmit and retrieve information and knowledge.

Media convergence – Media convergence is a theory in communications where every mass medium eventually merges to the point where they are indistinguishable to each other, creating a new medium from the synthesis due to the advent of new communication technologies. It is also a phenomenon involving the interconnection of information and communications technologies, computer networks, and media content. It brings together the computing, communication, and content which is a direct consequence of the digitization of media content and the popularization of the Internet.

Digital media - Are forms of communicating in the digital world, which includes publishing on CDs, DVDs and, most significantly, over the Internet. It implies that the user obtains the material via desktop and laptop computers, smartphones and tablets. It can also be described as the concept that new methods of communicating in the digital

world which allows a smaller groups of people to congregate online and share, sell and swap goods and information.

Technology - The process of systematic application of scientific or other organized knowledge to practical tasks. Can also be defined as a product that comprises of computer hardware and software systems that result from the application of technological processes.

Theory - The set of general principles that underlie and provide a holistic view of a subject matter, as distinguished from the methods of the subject's practice. Theory is also a doctrine, or scheme of things that terminate in speculation or contemplation, without a view to practice, hypothesis or speculation.

Multimedia production

Producing and editing news stories on video, for the web and for print; re-purposing the same story for different media.

New technology

Knowledge of software for producing video, web sites, graphics, newspapers, and magazines; knowledge of how to operate a computer and use the Internet.

Computer-assisted reporting

Expert's knowledge of conducting online information search, database knowledge.

Visual production

A newspaper writer must know how to take photos or a TV reporter must know how to shoot video.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on digital media training and journalism curricula. According to Hart (2006) literature review is done to find out what knowledge already exists in the area in which the study is being researched on. The review forms the foundation for research and the researcher needs to know about the contributions others have made to the knowledge pool relevant to the topic.

The review considered emerging factors that have necessitated change in journalism training resulting in the need to develop different digital media competencies and skills currently being taught. The review also included the response of universities to new technologies as they have influenced information gathering and dissemination, such as: web 2.0, web 3.0 technologies, internet and related technologies, social media, networked systems and digital information environment.

2.2 Theoretical framework

A theoretical framework comprises concepts or ideas based on theories and supported by data or evidence that is meant to form a basis around which a study like this one rotates while giving their interrelations. Kombo and Tromp (2006) noted that theoretical framework provides a generalized explanation to an occurrence and clarifies why things are the way they are. Maxwell (2005), in his contribution, adds that it is a model of what is out there that a researcher plans to study including what is going on with the things and why.

This study was informed by three theoretical frameworks which included: Cognitive Constructivism, Diffusion of Innovation and Theory and Media theory.

The reason for combining the three theories was based on the understanding that digital media training is best conducted as a social practice that requires constructivism among learners. However, several aspects of society such as media, the self and need for reinforcements tend to dictate eventual mode of journalism training warranting consideration of diffusion of innovation theory. Cognitive constructivism was employed to reinforce the incorporation of the life approach to digital media training. Journalism and media class rooms are often small communities that require interaction among the class members. Media theory, and in particular symbolic interactionism was used in assessing relationships such as teacher to learner, learner to teacher, and learner to teacher as exists in micro-teaching sessions. Reinforcements encourage reaction to stimuli. Considering that use of educational media could be regarded as external stimuli there was a need to incorporate operant conditioning in the manner in which lecturers are encouraged to use digital media.

2.2.1 Cognitive Constructivism

Founded on the works of Piaget and Vygotsky (as cited in Guo, 2009), cognitive constructivism posits that learning ought to be treated as a social practice. Accordingly, assimilation of new problems does require that individual learners are able to explore their own environment. Besides, under social constructivism as postulated by Vygotsky, to reach their zones of proximal development (ZPD), learners do require some scaffolding. In essence therefore, it is argued that a combination of corrective feedback,

self-reflection, and teachers' guidance enables effective learning (Guo, 2009). A focus on micro-teaching practice therefore owes much to cognitive constructivism. By preparing and offering lessons to peers, followed with sessions of critique and reflection, micro-teaching allows pre-service teachers opportunities of exploring their environment, to gain corrective feedback and self reflection as advocated for by cognitive constructivists. Moreover, the presence of lecturer during such sessions offers the scaffolding that journalism lecturers may require to achieve their ZPD.

Cognitive constructivism was proposed by Jean Piaget who argued that, humans cannot be given information, in which they immediately understand and use. Instead, learners ought to construct their own knowledge (Samuel & Bryant, 1984).Constructivism as defined by David (2015) is a paradigm that posits learning as a process that involves active construction or creation of knowledge. Constructivism is noted to have been a reaction to the hitherto didactic approaches such as programmed instruction and behaviourism which were more traditional in nature. According to David (2015) constructivism perceives learning as a contextualized process of actively constructing knowledge as opposed to acquiring it. It builds on the premise by Ertmer and Newby (1993) as well as that by Cooper (1993), that the learner should not be considered as an empty slate (tabula rasa) but rather as one who has potential to use past experiences and cultural factors in a given situation. Engaging pre-service teachers in the development of educational media therefore no doubt fits into the ethos of constructivism.

Social constructivism therefore accounts for the choice of the variable relating to support given to pre-service teachers during micro-teaching sessions. Moreover, the social

constructivism model through the three features of inter-subjectivity, scaffolding and guided participation gives a justification as to why the digital media training was deemed very ideal for a study focusing on ability to develop media under the guidance of journalism and media lecturers such as the present one.

2.2.2 Diffusion of Innovation Theory

Diffusion of innovation theory is widely used in various disciplines to explain aspects of adoption of innovative products and services. Diffusion of innovation theory is the process by which an innovation in the form of new ideas, practices or products and services is adopted and communicated through certain channels over time among the members of a social system, society or community (Rogers 2003).

Diffusion of innovation theory is primarily concerned with the integration, adoption and communication of new ideas in a society or community. The theory is built on the premise that new ideas have perceivable channels, time and mode of being adopted by individuals or organizations based on various elements or attributes. Multiple authors highlight various elements of the diffusion of innovation theory (Al-Mobaideen, 2009; Minishi-Majanja & Kiplang'at, 2004; Rogers, 2003). The theory states that various aspects make the theory complete such as innovation, communication channels, time, social system, organizational structure, leadership, and innovative decisions in the organization. Innovation is an idea, practice or object that is perceived as new by the members of a social system.

The diffusion of innovation theory is important in understanding and explaining digital media training in journalism and mass media in universities. The application and use of

this theory provided useful insights into the need for digital training and media convergence in universities. The diffusion of innovation theory is the best approach and strategy for understanding and explaining all aspects of curriculum convergence. Against this background, the study adopted the diffusion of innovation theory to explain digital media training in Kenyan universities. The diffusion of innovation theory was adopted as a guide to the study of digital media training because it provides a suitable framework for investigating the reasons for and rate of adoption of any new ideas, practices or objects. Digital media is brought by new innovations in the information technology and therefore adoption of such technology takes a process that occurs over time.

Digital media is an example of innovation that requires undergraduate journalism students to acquire new knowledge and skills that are essential in the modern journalism environment. Universities are expected to adopt and integrate appropriate training so as to produce quality journalism graduates with high technological abilities for employment purposes and career development.

In today's society, digital media has become an important element and central in the journalism profession because of its impact in all aspects of information management and dissemination.

Journalism programmes in universities are supposed to produce graduates with adequate knowledge and digital media technological abilities because all aspects of information work are extensively linked to ICT and related systems. The integration of information communication technology in journalism training is essential in addressing the issues facing the journalists such as: pedagogical, social, vocational and equity (Abuhmaid,

2008; Maddux & Cummings, 2001; Flanagan & Michele, 2003). Pedagogical issues equally involve lecturers, educators, students and technology in improving and enhancing the teaching and learning process in universities. Digital media training is essential to the society at large and to the student in particular. Information work is now purely defined by evolving ICT technology making digital media training in the journalism profession a basic need to enable graduates to qualify with sufficient required knowledge and skills.

Vocational issues require knowledgeable and skilled workers in the media profession, hence the need for the graduates to acquire adequate knowledge and technological abilities for employment purposes and career progression. Technological literacy facilitates access to the high technology job market, participation in the global economy and success in the new information age (Flanagan & Michele, 2003). Universities are expected to train students in new media and digital media knowledge and skills as well as attributes needed to fully participate in the present and future media environment. Universities also need to ensure that the learning and teaching environment has adequate infrastructure and facilities needed to provide adequate digital media training. In the increasingly knowledge-based society, there has been demand for educational systems to undertake changes that embrace ICT in order to stay abreast of emerging and new developments (Abuhmaid, 2008). Globally, education and training programmes including media and journalism are upgrading the courses in order to be compliant with up-to date knowledge and technologies. The process of innovation involves getting new ideas accepted and new technologies adopted and used (Tatnall & Davey, 2003). The use and application of information and communication technologies in learning and training has great potential of producing significant changes in the education system (Roth 2011).

Media professionals need to be proactively involved in the current developments in the media profession and practice. In the current digital environment, journalists need adequate knowledge and skills in different media since efficient delivery and support of media services highly relies upon technological solutions.

In the case of digital media training, there are four main stages of diffusion and integration of innovation in organizations. These include: initiation, implementation, continuation and outcomes (Abuhmaid 2008 & Rogers, 2003). These four stages underlie the principle of innovation theory in implementation of digital media training. The process of managing the management of journalism programmes in universities should be guided by needs assessment and relevant technologies. This would ensure that new innovations are in line with the missions of the universities learning needs, career opportunities and the job market. Based on the results of the needs assessment, universities should plan for adoption and implementation of innovations. The needs assessment should be based on specific problems need to be solved.

Undergraduate journalism students need to acquire appropriate technological abilities for employment purposes and career development. In the knowledge and learning society, education and training in the media must take into consideration the needs of the students and the employers. Planning is fundamental not only in ensuring that the process of innovation is implemented successfully in solving identified problems but also in laying the foundation for the implementation stage.

The implementation stage involves the processes of reinventing and restructuring of the innovation so as to meet the needs and demands of the programme (Abuhmaid, 2008). At this stage, the innovation is assimilated into mainstream objectives and goals of the university. A number of activities are initiated to ensure the success of the innovation such as: training, communication, monitoring and evaluation. The last stage involves the process of planning and management to ensure continuation and outcomes of the innovation. This is closely related to the sustainability of the intervention after the initial efforts for the adoption are complete. The implementation process involves routinizing the innovation as a regular activity of the organization and programme (Rogers, 2003). Implementation of innovation would fails if sufficient measures are not taken into consideration to institutionalize the process.

The success of digital media projects depends on the recognition of the need to understand innovation, identification of the need to recognize and effect cultural change and provision of comprehensive staff development and support structure (Al-Mobaideen, 2009). Normally, the decision to adopt an innovation tends to start with unrealistic optimism, followed by hasty and widespread adoption (Maddux & Cummings, 2004). As a result, the innovation fails to meet the initial expectations leading to premature abandonment.

The process of diffusion of innovation and integration of digital media involves five main categories: early adopters, early majority, late majority and laggards. Innovators are those obsessed with new ideas and trying to find better ways to do things. Early adopters include those who are the first to adopt new innovations and facilitate the same to others.

Early majority is made up of those who do not lead in the adoption process but take longer than early adopters in deciding and making the decision. Late majority is made up of those who adopt an innovation after the average members of the organization due to pressure or fear of being left behind. Laggards include those who firmly believe in the past and see no need to change (Abuhmaid 2008 & Rogers, 2003).

Education and training is the best method to influence diffusion and integration of innovations. Currently, the critical concern is for the journalism programmes in the universities to address issues facing the students in relation to digital media courses. The other major concern is for the universities to act as agents of change and to ensure that the graduates leave with adequate knowledge, and skills to function effectively and efficiently in the media industry. The change agents are the lecturers, undergraduate students and other stakeholders who play important roles in ensuring successful adoption, integration and implementation of digital media curricula.

Innovation and integration of digital media curricula needs the cooperation and support of all stakeholders in the training of undergraduate journalism and media courses. This is because journalism training is operating in extremely dynamic and highly competitive environments. The practice of journalism is undergoing radical changes due to the emergence of the digital media leading to new areas of information gathering and dissemination. There is need for journalism students to receive adequate training in digital media knowledge and skills in relation to modern journalism requirements. This will help produce journalism graduates with knowledge and skills for the purposes of employment, professional growth, and development.

Receiving adequate training on digital media prepares the graduates for the workplace and will not only be seen as the best strategy in the journalism profession but also a means of adopting fast to the ever changing media landscape. Universities need to provide facilities, resources, personnel and conditions necessary for adequate and quality training for the purpose of meeting use needs in the job market. Measures to improve journalism programmes are fundamental in promoting digital media training in the universities. This can only be achieved if journalism programmes take into account the rapidly growing and evolving digital media knowledge and skills in relation to job requirements and the modern journalism environment.

The diffusion of innovation theory is important in understanding and explaining digital media training. The application of this theory provides useful insights into the need for digital media training in universities. The diffusion of innovation theory was adopted because it gives a simple explanation of all aspects of digital media training by Kenyan universities.

2.2.2 Justification for using Cognitive Constructivism and Diffusion of Innovation Theory

Human learning is the combination of processes whereby whole persons construct experiences of situation and transform them into knowledge, skills, attitudes, values, emotions and the senses, and integrate the outcomes into their own biographies. Clark (1983) assert that technologies are merely vehicles that deliver instruction, but do not influence student achievement.

As Clark notes, meta-analysis studies on media research have shown that students gain significant learning benefits when learning from audio-visual or digital media, as opposed to conventional instruction; however, the same studies suggest that the reason for those benefits is not the medium of instruction, but the instructional strategies built into the learning materials. Social constructivism therefore accounts for the choice of the variable relating to support given to students while learning digital media courses. Moreover, the social constructivism model through the three features of inter-subjectivity, scaffolding and guided participation gives a justification as to why the teaching digital media was deemed very ideal for a study focusing on ability to develop media under the guidance of lecturers.

Consequently, an understanding of the technological background of the intended students is crucial including their expectations, financial and other resources, access to the Web or other online networks bandwidth limitations, and any other pertinent information about their preparedness and ability to participate equally and fully in their learning experience (Davis, 2004).

Digital media training keeps on changing in relation to emerging knowledge and skills required of journalists. In particular, digital media training has all the characteristics of innovation: innovation, communication channels, time, social system, organizational structure, leadership in the organization, and innovative-decisions in the organization. Diffusion of innovation theory involves various stages such as: invention, introduction, diffusion or assimilation and permeation (Bell & Bell, 2005; Boris, 2001; Rogers, 2003).

The study looks at diffusion of innovation theory as a process of communicating and spreading digital media innovation through certain channels over time to the undergraduate journalism training in the universities. Integration and diffusion of innovation involves the process of imparting and developing digital media knowledge, skills, abilities and attributes to the learners.

Journalists need to acquire sufficient knowledge, competencies and skills in order to work in modern information and communication environments. Digital media skills need to be introduced and diffused into the educational and training curricula. Factors that hinder adoption of innovation include: resistance to change; bureaucracies; and inadequate or lack of funding.

Diffusion of innovation theory has been used to explain aspects of ICT and innovation and integration of digital media into journalism. The theory explains all aspects of digital media diffusion into the journalism training. The theory provides a sound base for descriptive research, although a number of writers (Kiplang'at, 2004; Lundblad, 2003; Minishi-Majanja, 2004b) have noted the inadequacy of the theory. The theory does not adequately provide the basis for predicting outcomes or providing guidance for accelerating adoption rates. There is also doubt about the extent to which the theory gives rise to readily refutable hypotheses, since it focuses mainly on socio-economic issues. It provides the opportunity of extending Rogers' work into organizational setting, some of which may be accomplished through research by scholars.

There is need to explain how the various elements involved in the interaction process such as: innovation, adopter, social system and other influencers relate to diffusion of

innovation within organizations. The theory provides a platform for studying innovations in the mass media industry. Diffusion of innovation theory provides the best approach for understanding and describing digital media training in Kenyan universities. The theory takes into account all the aspects related to curricula and training of digital media in terms of initiation, implementation, continuation and confirmation.

Despite the relevance of the theory to the study, there were some weaknesses in the theory, for instance, the Diffusion of Innovation Theory is more of a descriptive tool, and weak in its explanatory power. Clarke (1999) argues that the theory is less useful in predicting the outcomes and provides guidance on how to accelerate the rate of adoption. There is doubt about the extent to which it can give rise to readily refutable hypotheses because many of its elements may be specific to the culture in which it was derived in (North America in the 1950s and 60s), and hence less relevant in East Asian and African countries. However, the current study, being largely descriptive, exploited this aspect of the theory.

The study also reviewed other theories that have been used to explain the aspects of ICTs adoption and integration in organizations like technology acceptance model. The technology acceptance model is similar to diffusion theory in the sense that it places emphasis on psychological predilection and social influences. The theory has been widely applied and adopted in investigating, explaining and predicting computer user behaviour towards new technologies and application (Al-Mobaideen, 2009).

The concern of the study is the suitability of the theory in explaining and predicting all aspects of digital media training in journalism. In diffusion of innovation theory, many

factors play critical roles in ensuring successful adoption and development of new ideas such as: human, social, economic, organisational, technological and environmental factors. Al-Mobaideen (2009) postulates that when studying technology in organisations, it is important to not only concentrate on technology alone, but to also focus on other related or associated factors.

2.3 Media Convergence

Often there is confusion when using the term "media convergence" because, those who use the term often refer to one of the following processes;

[1] Technological convergence,

[2] Economic convergence,

[3] Social or organic convergence,

[4] Cultural convergence and

[5] Global convergence.

According to Negroponte (1995), technological convergence is the transformation of atoms in bits, the digitalization of the contents of all media. It occurs when words, images and sounds are converted into digital information, a phenomenon that expands the potential for integration between them and allows their flow between platforms.

Economic convergence is the horizontal integration in various sectors of the economy, for example, a single company, such as *America Online*, now controls interests in movies, television, books, games, web, real estate market and other economic sectors. The result has been the restructuring of cultural production around "*synergy*" and the exploitation of brands in the process of trans- or cross-media.

Organic convergence, according to Jenkins (2001), happens when a university student watches football on high-resolution television, plays music on the iPod, types a text or writes an e-mail - everything at the same time, here and now. The explosion of new forms of creativity and intersections of the various technologies of media, industries and consumers characterizes cultural convergence. Media convergence encourages a new culture of popular participation by allowing people to access the tools for production, storing, ownership and circulation of content. Jenkins (2001) asserts that shrewd companies tap this culture to foster consumer loyalty and generate lowcost content.

Media convergence also encourages trans-media storytelling, the development of content across multiple channels. The more fully consumers exploit the potential of organic convergence, the more content producers will use different ways to communicate various types and levels of information, choosing the media that most appropriately presents the content and meets the needs of their audience.

Global convergence is defined by Jenkins (2001) as being the cultural hybridism that results from the international circulation of media content. It is the case of music, news agencies and cinema. The global circulation of Asian popular cinema profoundly shapes Hollywood entertainment. These new forms of convergence reflect the experience of being a citizen of the ‘global village’ (Jenkins, 2001). Whether in the form of production or distribution of content, the communications industry is changing and with it the consumers´ habits.

2.4 Incorporating Digital Media in Journalism Education

Initially, media education was focused on the mass media (print, radio, film and television). With the development of ICT, interest moved on to digital media. In recent times, interest has been shared between mass media and digital media and is based around concern for the new digital environment, including both digital and new media.

Nevertheless, in Europe, it is still the norm to separate skills related to media education and digital skills. The former has a more critical component, and the latter, a more instrumental component. There are few curricula, formal or for lifelong learning, based on the convergence between media education and digital literacy. If, despite everything, the convergence takes place, it is more down to changes in technology and an integration of the media in a new communicative environment, than a theoretical discussion or disciplinary change.

The objective of the new digital media education is to prepare students for excellence in their professions. With a view to achieving the object of quality media education, universities in Kenya are in dire need of reconfiguring and updating their curricula to produce graduates who are prepared for excellent professional performance and leadership roles in the media and communication industry. Consequently, it is necessary to provide students with strong core content in critical thinking, research and analysis, information gathering, writing, graphics and design, and law and ethics as well as media technologies and skills.

Media organisations are hard-pressed to comply with the highest professional standards while remaining relevant to their audiences at all times. Currently, educators and

communication professionals are seen to be busy discussing the ethical, economic and emerging issues on mass communication education both globally and locally. Scholars from around the world are increasingly researching on issues such as the changing multicultural society, the popularity of "infotainment" genres, the convergence of media technologies and the effects of internationalisation.

Admittedly, today the core knowledge required by media professionals is undergoing rapid changes reflective of media convergence and the increasing prominence of multimedia. Media students are seen to be unequipped with digital media knowledge and skills as well as a conceptual map of the nature, scope and range of their field of study and industry. One of the reasons for this is that concentration on traditional ideas about journalism is impacting strongly on the journalism industry. However, it is necessary to reflect on the social and cultural diversity of current societies, as well as meeting the diverse societal needs. Hence the urgent need for a detailed investigation into the context and direction of media education and training in the new millennium.

Deuze (2002) asserts that media education should focus on the best practices of teaching, both theory and practical skills, including cultural and critical reflective didactics. Students must not only be made to learn how to write; but also be taught how to think or rather how to reflect critically, analyze, interpret and move beyond basic reportage to the heart of journalism as watchdog.

Many scholars believe that the more sophisticated and complex technology becomes, the more time it takes to learn how to use it. On the contrary, technology is becoming easier and easier to use. For example, many video cameras today can be used in totally

automatic mode (where the shooter only has to worry about shot size and composition and not iris/focus/white balance, etc.) and this means, in a teaching/learning environment, one can worry less about the fine points about what the 'buttons' do and more about what the pictures say and how they work to tell a story. Further, new digital editing programmes are often incredibly easy to learn at a basic level. More and more, journalists are expected to be able to 'do' the technology as well as the journalism. Twenty years ago, reporters didn't need to know the first thing about how a camera works, whereas today more and more reporters are being asked to do basic editing and even their own photo shooting.

According to Chowdhury (2014), the universities teaching journalism should introduce students to computerized reporting and editing as well as create digital classroom and laboratory systems. They must orient themselves to revise their journalism curricula and always be ready to undergo continual adjustments in response to changes in the technology and profession. Far from print and broadcast sequences running separate as is the case today, students in the two sequences need to plan news coverage together and work together in the labs. Tomorrow, it is quite likely that the sequences might disappear and students will be required to work seamlessly on stories for print, electronic media and the Internet; or whatever systems will exist in the future.

To be able to meet the challenge and the new demands of digital information, it is vital to understand how the mass media influences societies and how crucial it is for new media graduates beginning their careers in the digital information age to be able to effectively

carry out research and collect news stories on the internet and become flexible in the presentation of the news to different media.

Due to rapid changes in technology, there is an acute rise in different platforms that can be used to dessimate information. However, it is not quite certain which will ultimately prevail. It is important for journalism students to be trained on all aspects including hands on exposure and field work. This would ingrain in them skills that they can adopt in the rapidly evolving field of media and communication. Mass communication programs in universities must respond to this technological revolution by increasing their focus on relevant digital media applications.

2.4.1 Training Resources for Digital Media Courses

Effective training of digital media courses largely relies on the technological capacity and the sufficiency of training equipment. Adequate and modern computer labs are fundamental to effective training (Agba 2001). With the rapid evolution of information technology taking place, it is vital that journalism graduates have good exposure and experience of using digital media resources including computers, camcorders, digital recorders, e.t.c. If media environment is increasingly converging, then media professionals should also be familiar with the use of technology which in turn, underscores the importance of having appropriate and adequate infrastructure for training.

According to Bhuiyan (2010) the major challenge facing journalism schools is the financial constraint limiting them to upgrade the multimedia teaching laboratories. The upgrade of aging and analog equipment, adherence to modern digital environments and

maintaining the laboratories once adopted are serious impediments to digital media instruction.

Oriare, Okello, and Ugangu (2010) observe that most journalism programmes especially in public universities do not have adequate facilities or equipment such as broadcast studios, editing suites, digital processing machines, and digital cameras, among other resources. Most institutions have obsolete technology, which compels journalism students to seek further training elsewhere immediately after completing college or while on the job.

2.4.2 Infrastructure in Journalism Departments

A well-equipped and adequate media laboratory is important as it would enable students to learn digital media practically. Journalism departments are required to have an optimum number of computers and other resources which are proportionate to the number of students. Computers in the media laboratory should cater for audio and video editing, graphics design for production of magazines, newsletters and newspapers.

UNESCO (2007) recommends that training materials in radio and television as well as computer equipment need to be increased and brought up to date so that media programmes are able to facilitate teaching and learning. Sufficient infrastructure for the journalism programmes should consist of networked computer hardware, modems, local area networks, intranets or campus wide backbone connecting LANs and multi-campus networks.

Houston (2010) argues that students should have access to equipment and supportive resources for practical use and demonstration. Accessibility of resources could be

measured in terms of computer to student ratio, departmental access to internet, supporting ICT infrastructures including reliable electricity supply with a standby uninterrupted power supply (UPS) system, among others. It is important that the laboratories should have modern computers installed with updated programs which reflect what is on-going in the journalism environment.

Skjerdal and Ngugi (2007) argue that many journalism programmes encounter a number of challenges, including inadequate and lack of digital recording equipment, computers, cameras and editing suits. Journalism students should be trained for the professional environment. It is evident that when the programmes lack or have inadequate equipment then students will encounter challenges in terms of digital media knowledge and skills acquisition.

Another challenge facing universities training journalism is access to the latest books and current journals on digital media. Inadequate current literature, especially books, hinders the quality of teaching and learning and due to such challenges, lecturers and students are forced to rely on electronic literature through the internet. According to Eshiwani (2009) most universities are forced to work under adverse conditions; lack of textbooks, journals, teaching and research equipment and maintenance of such equipment. He asserts that the situation has resulted in a lowering of academic standards and of quality of graduates. Graduates are deficient in written communication and technical proficiency which make them inadequate for the market.

Okwakol (2008) observed that while computers are increasingly becoming the major means of accessing information, some universities fail to utilize the benefits of the digital

age-computer assisted learning, web connectivity and networked learning. Skjerdal and Ngugi (2007) recommend that students should be knowledgeable about equipment so that they can take on an innovator's role and later function as change agents in the industry.

2.4.3 Lecturers Capacity on Digital Media

Students in this era have various media backgrounds; there are those whose backgrounds have already been exposed to different digital media platforms and also from different diversities in both intellectual capacity and aptitudes. Their experiences outside school may differ drastically from those traditionally expected to promote learning, particularly where education is teacher and text book centred.

Bhuiyan (2010) asserts that some journalism instructors and even students are often 'threatened' by the study and practice of cross-platform journalism. Instructors fear that teaching journalism in the digital environment will dilute the very foundation of good writing, reporting, and ethics.

Most of the digital media courses are still new and requirements such as writing, reporting and editing media content for different digital medium are still new to lecturers. Castaeda (2003) observes that journalism educators should learn how to write and produce across platforms and practice what they teach students.

2.5 Journalism Education in Kenya

Introduction and development of journalism training in Kenya arose as a result of need to Africanise mass media in East Africa resulting into professional journalism training in the 1960s (Banya 2001). The International press ran six months series for training in Nairobi for English speaking African countries, setting standards for the curriculum content in the

training institutions that came up thereafter. Kenya Institute of Mass Communication (KIMC) and School of Journalism and Mass Communication (SOJ) in the University of Nairobi established in 1965 and 1968 respectively then dominated Kenyan training in Journalism (UNESCO 2004).

Other public universities like Moi University, Ergerton University and Kenyatta University later began to provide training on communication and media studies. Private universities like United States International University, Daystar University, Catholic University of Eastern Africa through Tangaza College started offering generalized courses in journalism and mass communication with a specialization in the final year in either Broadcast or Print journalism, Public Relations or Development Communication.

Media liberalisation in the 1990s fueled the demand for trained journalists and the industry witnessed stiff competition that resulted in shifting of journalists from one media house to another, especially for the experienced and popular journalists in the main stream media houses (MCK 2008).

In the recent past, there has been an increase in the number of universities with communication and journalism programmes. Besides the School of Journalism at the University of Nairobi, that has been in existence for almost five decades, other public universities such as Kenyatta University, Jomo Kenyatta University of Agriculture and Technology, Moi University, and Maseno University all have either courses or departments of communication or journalism. Daystar University, United States International University-Nairobi and Nazarene University are among the private universities offering both undergraduate and graduate degrees in communication,

journalism and media related courses. There are also smaller colleges and institutes that offer training in media and other associated areas of interest.

2.5.1 Overview of the Current State of Journalism

The current state of journalism in the country has been characterized by the high presence of digital technologies which have impacted on media house operations. The means of production, distribution and also the consumption of media products have been hugely affected and transformed by digital technologies. According to Bolter and Grusin (1999) traditional media are now fighting to survive and realign their place in the hypercompetitive digital media environment.

A report by Centre for International Media Assistance (CIMA 2007) highlight the challenges and opportunities for professional development of journalists and the key among them is the surging number of student's enrolments for journalism programmes, challenges in the universities in terms of facilities and curricula that do not match the changing needs of journalism practice.

Kwanya (2014) asserts that on average, a student-journalist in Kenya takes about one substantive ICT course during the entire degree programme which cannot be adequate to empower them to use the dynamic ICT tools effectively for journalism. It is therefore important for universities to address this gap by introducing more substantive ICT courses in the journalism curricula. For example, broadcasting students could take courses that build their capacity to embrace digital multimedia production, for instance, through podcasting and video casting.

2.5.2 Perspectives on Digital Media Training

Digitization has ushered in an era where notions of journalist, source, and audience are blurred. New technologies have also allowed new forms of storytelling to emerge, such as enriched multimedia content and data visualization, as well as new forms of audience engagement and measurement, each a development that challenges expectations of what journalists need to know how to do (Huesca, 2000). At the center of these changes often rests an idealized notion of the technologically adept journalist who creates compelling content by mastering digitally based techniques of reporting, producing, and distributing the news, thus offering a blueprint for managing journalism's current crisis.

Since the invention of personal computers in the 1970s, digital technology has expanded quickly, permeating society with new formats and possibilities of communication. Hypertext, multimedia, hypermedia have become part of the routine of the vast majority of professionals and require universities to change their ways of teaching and learning. The newsrooms have embraced, to a greater or lesser degree, electronic or digital publishing, which has greatly changed the working environment and routines for production of all types of media (Pavlik, 2005).

In the constantly changing journalism environment, journalism training should offer appropriate digital media knowledge, competencies and skills in order to suit the modern job market requirements. Emerging and new areas of journalism work have rapidly developed outside the traditional mass media, including new media, social media and computer assisted reporting. This is in response to modern technological innovations affecting all practices of gathering and disseminating news stories. Revision of

journalism curricula is necessary if the undergraduate journalism student is to be equipped with the knowledge and skills necessary for achieving effectiveness in the converged media industry.

The internet potentially joins readers and producers of information around the world, demanding of journalists not only the mastery of new technologies, but also the ability to respond with great speed and accuracy to the interactivity made possible by individual demands.

Facing the changes in the media and in the press services, journalism schools are now forced to adjust to this new model. Some universities have installed well equiped laboratories and created new subjects, reformulating curriculum structures and purchasing new equipment. Each one has been seeking, in its own way, to educate professionals who are able to satisfy the new demands of the labour market and of their audience.

According to Jenkins (2001), there will never be one black box controlling all media. The proliferation of channels and the increasingly ubiquitous nature of computing and communications, has enabled us to enter an era where media will be everywhere, and people will use all kinds of media in relation to one another. There is need to develop new skills for managing information, new structures for transmitting information across channels, and new creative genres that exploit the potentials of those emerging information structures.

For digital media training to work successfully it requires a well thought-out strategic approach and good communication and planning in journalism schools by developing a

curricula that will cut across all the emerging media platforms. Training of undergraduate journalism students seems to be facing multifaceted challenges, yet one of the solutions to revamp and enhance the profession seems to go unnoticed. Against these developments, there is no doubt regarding the importance of digital media training for undergraduate journalism education in the country.

2.6 Summary

This chapter has presents a detailed review of the literature on the various issues arising from the area of study. The emergence of new media technologies has made profound changes in communication and journalism education. Generally, ICT and digital media proficiency is now at the centre of required skills in the journalism profession. Integrating digital media education in instruction is crucial, as it means harnessing technology to perform learning skills. It encompasses the use of information technology to manage complexity, solve problems, and think critically, creatively, and systematically towards the goal of acquiring, thinking, and problem solving skills. Lecturers also have to use digital media tools to access, manage, integrate, evaluate, create, and communicate information in order to develop information and communication skills that can fit in the present technological world.

With proliferation of ICT, emerging and new challenging avenues of communication have come up in response to diverse skills requirements for the media industry. In the presence of media convergence, upcoming journalists require adequate digital media knowledge and skills that focus on working on different media platforms. There is no doubt that lecturers are critical in facilitating learning and in making it more effective, they hold the key to the success to digital media training in journalism training

institutions especially at the university level. The instructional use of ICT on its own cannot enhance learning it requires individual lecturer's effort to utilize it in a way that will help achieve the outcomes they have for instruction. This can only be possible if lecturers accept that ICT can be adopted to enrich instruction.

The literature review examined the theoretical framework, digital media training and media convergences, among others. From the review, it is clear that very little research has been carried out on the relationship between perceived attributes and the training of digital media in journalism training institutions; this is the gap that the present study tries to address.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology employed in conducting the study. It describes the research design, target population, sampling techniques used, data collection, data analysis and ethical considerations. The study used both qualitative and quantitative techniques. According to Mugenda and Mugenda (2003), qualitative research is detailed information about a phenomena being studied and establishing patterns, trends and relationships from the information gathered. Quantitative research is the systematic scientific investigation of quantitative properties and phenomena and their relationships.

3.2 Research Design

Kumar (2005) stated that research design is the conceptual structure within which research is conducted, while Borg and Gall (2007) define research design as the procedures used by researchers to explore relationships between variables to form subjects into groups, administer measures, apply treatment conditions and analyze the data.

This study employed descriptive survey research design. Lavrakas (2008) describes a descriptive survey research design as a systematic research method for collecting data from a representative sample of individuals using instruments composed of closed-ended and/or open-ended questions, observations, and interviews. It is one of the most widely used non-experimental research designs across disciplines to collect large amounts of survey data from a representative sample of individuals sampled from the targeted

population. Kothari (2009) stated that a descriptive survey design seeks to portray accurately the characteristics of a particular individual, situation or a group. Polit and Beck (2003) asserted that in a descriptive study, researchers observe, count, delineate, and classify. They stated that descriptive research is the study that can either have, the main objective, the accurate portrayal of the characteristics of persons, situations, or groups, and/or the frequency with which certain phenomena occur.

3.3 Area of Study

This study was conducted in four leading universities that offer journalism and mass communication training, namely: University of Nairobi, Moi University, Daystar University and United States International University as well as three media houses namely: The Standard Media Group, Royal Media Services and Radio Africa Group. All the four universities offer media and journalism related courses both at the undergraduate and graduate levels.

3.4 Target Study Population

The primary focus of the research was to get relevant data and information regarding the research topic from all the stakeholders. The study population was drawn from the four leading universities that offer journalism and mass communication training (Nairobi, Moi, Daystar and USIU) and three media houses, namely: The Standard Media Group, Royal Media Services and Radio Africa Group. The target population consisted of 58 lecturers, 322 fourth year students and 36 editors.

Lecturers are proactively involved in the training, curriculum design and implementation of undergraduate journalism programme, and therefore, they are centrally placed to offer

valid information regarding the issues of the research topic. Fourth year undergraduate journalism students were instrumental in providing first-hand information in regard to the issues of digital media training in the universities. The students acquire media knowledge, skills and competencies that have a direct bearing on the media industry and can assess the value of the training they receive in the courses. The study involved fourth year undergraduate journalism students in order to get their views on the status of digital media training in the universities.

Editors play a critical role when advising their respective organizations in terms of recruitment process. They manage news desks and know quite clearly the possible challenges facing upcoming journalist; and provide a direct link between the media industry and training institutions.

Professional working experiences, ideas and opinions directly reflect the demands and desires of employers in terms of career opportunities, job market, performance requirements, and competence in information work and activities. As practitioners, editors provided vital information and knowledge, and shared their personal experiences and opinions regarding digital media training in the modern environment. Universities are the leading institutions in training high level human resources worldwide.

3.5 Sampling Strategy and Techniques

Sampling is the process of selecting a component of the whole population through methods such as: purposive, random and stratified methods (Bakenman & Bell, 1992). Random sampling procedure involves the random selection of subjects from the whole population of the study. This was considered the appropriate method of subject selection,

although there is great discussion as to the extent to which it is possible to select a truly representative sample. Stratified sampling aims at combating some criticisms by providing a more representative selection of the general population. This method involves random sampling within the restricted categories of the population in order to try and represent subgroups within the population.

In the study, purposive sampling, simple random and stratified sampling procedures were used to select the units and the respondents for data collection purposes. The selected sample, for the study, was sufficient and enabled the respondents to answer questions regarding digital media training for the undergraduate journalism students in the universities. The sampled respondents were better placed to provide in-depth and detailed information on research topic. In total, there are 55 accredited universities in Kenya comprised of 33 public and 22 private universities (Commission for University Education, 2015).

The study purposively selected three media houses and four universities training journalism and mass media programmes in the country. The sampled universities were University of Nairobi, Moi University, Daystar University and United States International University; and the following media houses were sampled; Radio Africa Group, The Standard Media Group and The Royal Media Group. Simple random sampling was used to select 97 fourth year students from a total population of 322, while stratified and purposive sampling procedures were used to select 22 lecturers from a total population of 58 lecturers. The study purposively sampled 12 editors from a total number of 36 editors in the sampled media organizations.

Mugenda and Mugenda (2003) observe that the minimum acceptable sample size depends on the type of research design used. For a descriptive survey research design, 30% of the target population is recommended as an acceptable sample (Gay, 2004). A total of 131 respondents were sampled from the target population for this study (Table 3.1). This constitutes 30% of the population. To obtain the sample size from each category, the following formula advanced by Kothari (2009) was used:

Stratum sample Size = No. of elements in the stratum X Sample Size
Total Number of elements

Table 3.1: Sampled Respondents of the Study

Institution	**Lecturers**		**Students**	
	Total	**Sampled**	**Total**	**Sampled**
University of Nairobi (School of Journalism and Mass Communication)	19	6	97	29
Moi University (School of Information Sciences)	13	6	86	26
United States International University (USIU) (School of Science and Technology)	11	5	76	23
Daystar University (School of Communication, Language and Performing Arts)	15	5	63	19
Total	**58**	**22**	**322**	**97**

Editors in sampled media houses		
	Total	**Sampled**
Royal Media Services	9	3
Radio Africa Group	13	3
Standard Media Group	14	3
Total	**36**	**12**

3.6 Data Collection Methods and Approaches

Data were collected through a variety of methods i.e. questionnaires, interviews and document analysis.

3.6.1 Questionnaires

Questionnaires are commonly used to obtain important information about the population. Schwab (2005) defines questionnaires as measuring instruments that ask individuals to answer a set of questions or respond to a set of statement. Mugenda and Mugenda (2003) and Kothari (2007) define a questionnaire as a document that consists of a number of questions printed or typed in a definite order on a form or set of forms.

According to Dawson (2009), there are three basic types of questionnaires; closed ended, open ended or a combination of both. Closed-ended questionnaires are used to generate statistics in quantitative research whereas open-ended questionnaires are used to generate qualitative data. The questionnaires were developed because they enabled the researcher to collect information on the background of the respondents and their views on the research problem.

Questionnaires were also preferred since they were easily administered to a whole sample group of students in each university. This led to easier tallying of the final results during data analysis and interpretation. Both structured and unstructured items in the questionnaire were employed to cater for both qualitative and quantitative data collection and analysis. Both have advantages: for closed ended questions, they are easier to analyze since they are in an immediate usable form, they are easier to administer in that each item

is followed by alternative answers and lastly they are economical to use in terms of time and money.

Open ended questions which give the respondents complete freedom of response were used in this study because they permitted greater depth of response and were simpler to formulate. The study used questionnaires to gather information from fourth year students pursuing journalism in the selected universities. Each item in the questionnaire was developed to address a specific objective of the study. Questionnaire was developed to enable the respondents to give their own answers and opinions and also to give greater depth of response.

3.6.2 Interview Guides

Interview guides are widely used instruments for data collection because the method allows participants to provide detailed and in-depth information or descriptions of events (Amaratunga, 2002; Byrne, 2009; Kvale, 1996; McNamara, 1999). The study used interview guides as instrument for collecting data and provided an excellent opportunity for collecting ideas and information from the respondents on a wide range of issues.

The questions were based on the objectives of the study and also the problem statement. In this case, the researcher personally visited the sampled universities with the intention of establishing the status of training digital media in undergraduate journalism programmes. The researcher also visited the media houses in order to get information on personal working experiences and opinions regarding the effectiveness and efficiency of the graduates on digital media competencies.

In the interview guides, respondents were expected to provide brief answers to the questions. The researcher conducted the interviews through face-to-face technique at the interviewees workplaces. The interview guides were handed to the interviewees prior to the interviews to enable time for preparation and reflection. The interviews were designed to obtaining detailed information or sought for clarification as well as obtaining information that otherwise would not be adequately obtained through the other data collection procedures.

3.6.3 Content Analysis

According to Powell (1991), content analysis is essentially a systematic, objective, quantitative analysis of occurrence of words, phrases, or concepts in documents. Content analysis allows a researcher to compare content across many texts and subsequently analyse it using quantitative techniques. Neuman (2000) observes that researchers use content analysis for different purposes such as studying trends in topics, themes in songs, ideological tones in literature/speeches or even propaganda in political dispatches. The researcher employed objective and systematic coding, counting and recording to come up with quantitative descriptions of the variable(s) being studied, and then analysed these descriptions. In content analysis, coding and measurement are important because the constructs in content analysis are operationalised with a coding system i.e. “a set of instructions or rules on how to systematically observe and record” the data (Neuman, 2000:294).

It is important to note the significance of content analysis on the objectivity of research data since content analysis is reactive. That is because the process and circumstance of providing content analysis data is without initiation by, or influence from the researcher.

The researcher is able to probe into, and/or extract the data as it has been pre-presented. This means that the phenomenon of respondents expressing what they think the researcher wants to hear, or what will portray the respondent in a positive manner, is largely eliminated. But of particular relevance to this study is Neuman's (2000) observation that content analysis is helpful when a topic must be studied at a distance.

For this study, content analysis was based on an examination of existing documents available in the journalism departments such as syllabi, conference proceedings and course outlines. Other documents analysed included the mission statements of departments, programmes being offered, structures of programmes, course descriptions, annual reports and the research programmes/publications.

3.7 Data Collection Procedure

The study was carried out in four leading universities offering journalism education programmes in Kenya and three major media houses. Data were collected from different categories of respondents in the sampled institutions. The researcher obtained research permit from the National Commission for Science, Technology and Innovation (NACOSTI) (Appendix IV).

Data were obtained from both primary and secondary sources. The primary data were obtained through face to face interviews and self-administered questionnaires; the questionnaires had both closed and open-ended questions. The closed ended questions enabled the researcher to collect quantitative data, while open-ended questions were used to enable the researcher to collect qualitative data.

A pilot study was undertaken and few interviews and questionnaire schedules were tested on a limited number of people in a university that was not sampled. The purpose was to establish if the data collection instruments would be effective in collecting the required information. After this, necessary amendments and appropriate corrections were made before the instruments were finally used in data collection.

The researcher then embarked on the process of collecting and gathering data from those institutions. The Letter of Introduction (Appendix I) was used to introduce the researcher to the selected institutions.

3.8 Validity and Reliability of instruments

To establish the validity and reliability of the instruments a pilot study was undertaken. According to Polit and Beck (2003), a pilot study or test is a small scale version, or trial run, done in preparation for a major study. Polit and Beck (2003) states that the purpose of a pilot test is not so much to test research hypotheses, but rather to test protocols, data collection instruments, sample recruitment strategies and other aspects of a study in preparation for a larger study.

To determine the reliability of instruments that were used, Masinde Muliro University and Nation Media Group were chosen for piloting because they had similar characteristics with the study area. During the pilot testing phase, the questionnaire involving 5 students, 3 interview schedules for lecturers and 2 for editors were randomly selected. Their views were evaluated and incorporated to enhance content and construct validity of the research instruments. The researcher prepared the instruments in close

consultation with the lecturers and editors. The necessary adjustments were then made on the instruments to enhance their validity.

Also, to ascertain validity of questionnaires and interview schedule, the researcher consulted experts and experienced personnel in research methodology who critiqued the format and content of the instruments. Reliability is the consistency of a test to estimate performance similarly over time.

There are four major categories of reliability – intra-rater, test-retest, parallel forms and internal consistency (Carmines & Zeller, 1981). Test-retest reliability was used to test the instrument's consistency over time. In this case, the researcher administered 10 questionnaires to students and interviewed 3 lecturers to test the instrument at one point in time and again at a later point in time in the same environment using the same set of instructions. For the test instrument to be reliable, it was expected that the subject with the best performance in the initial session performed at or near the best performance in a subsequent session. The researcher also used test-retest method since it was primarily used in questionnaires as well as in interviewing i.e. data collection methods that the researcher used.

3.9 Ethical Considerations

Ethical requirements and considerations were adhered to throughout the study. The researcher in essence assured the respondents of anonymity and confidence of their responses. The researcher sought participants' consent to use information obtained in confidence when writing this report with a promise of protecting their identities. Further,

the researcher assured the respondents that he would respect their freedom to withdraw from participating in the study if they so wished and respected their privacy.

3.10 Summary

This chapter describes the research methodology approach that was used in the study and the justification for adoption. The areas covered include: research design; population of the study; sampling strategy and techniques; data collection methods; reliability and validity; data analysis; and ethical considerations.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents analysis and interpretation of the data based on issues examined related with digital media training of undergraduate degree programmes in journalism and mass media. Data have been analysed and interpreted from the three categories of respondents (lecturers, students and editors from the media houses) through questionnaires and interview guides. Data presented were analysed and organised in a way that could allow interpretation to be done. The data were coded appropriately while field notes from interviews were edited for clarity. Content analysis, was used to facilitate objective and systematically identification of specific characteristics of messages presented. The research questions and the objectives formulated at the beginning guided the study. The results have been analysed in relation to the research questions and recorded as frequencies and percentages and presented in various forms such as tables, pie charts and bar graphs.

4.2 Response Rate

Data were collected from three categories of respondents that is: lecturers, undergraduate journalism and mass media students, and editors. The study purposively sampled four universities from a total of nine universities in Kenya which train journalism related courses. Eighteen (18) (81.9%) lecturers were interviewed from the sampled universities and eighty six (86) (88.7%) students filled and submitted questionnaires.

Three media houses were purposively picked i.e. (Royal Media Services, The Standard Media Group and the Radio Africa Group) and all the sampled editors were interviewed. From the total sampled population of 22 lecturers, the researcher got a response rate of 18 (81.9%), while 86 (88.7%) students returned the questionnaires (Table 4.1).

Table 4.1: Response Rate

Category	**Sample**	**Response**	**Response Rate in %**
Lecturers	22	18	81.9
Students	97	86	88.7
Editors	12	12	100
Total	**131**	**116**	**88.6**

4.2.1 Distribution of Respondents

Of the 18 (100%) interviewed lecturers, 5 (27.8%) were from Moi University, 5 (27.8%) were from the University of Nairobi, 4 (22.2%) from Daystar University and 4 (22.2%) were from USIU University. Out of 86 (100%) student respondents, 25 (29.1%) were from University of Nairobi, 24 (27.9) were from Moi University, 18 (20.9%) were from Daystar University and 19 (22.1%) were from USIU. (Figure 4.1)

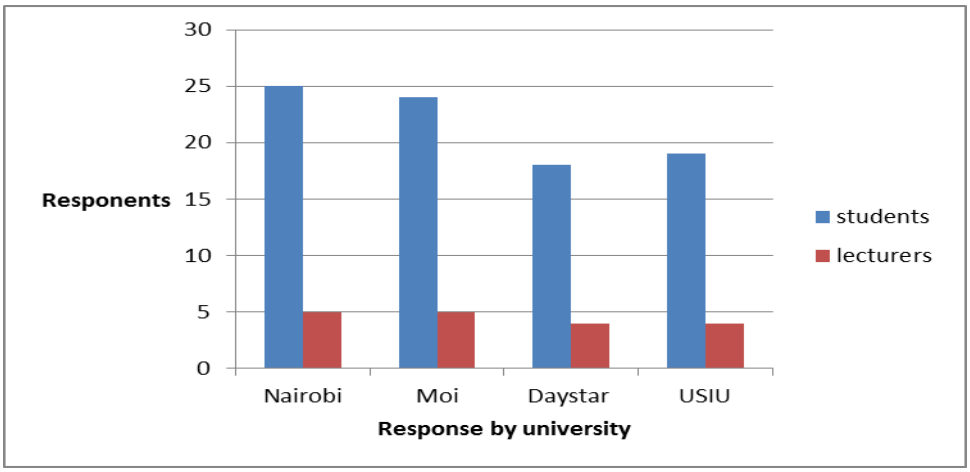

Figure 4.1: Distribution of Respondents

4.2.2 Respondents' Demographic and background information

Though the demographic perspective was not a critical element in this study, it was important to make a general note on the background information of the respondents. The respondent's demographics were restricted and analysed in terms of the following i.e. gender, age, name of the university, number of years worked, area of specialization and the highest qualification. (Tables 4.2, 4.3, 4.4 and 4.5)

4.2.2.1 Gender of the respondents

Table 4.2 shows that there are more men both working as lecturers and editors as compared to women. The male respondents in the category of lecturers were 12 (67%) and female 6 (33%) and the respondents that constituted editors were 7 (58%) males and 5 (42%) females. The findings indicate that there is a gender gap and men dominate in teaching digital media courses at the university and also there are few women working as editors in the media house. Among students respondents who participated in the study,

there 53 (62%) were female and 33 (38%) were male. These findings show that the student population is composed mainly of female students who are pursuing journalism education.

Table 4.2: Gender of the Respondents

Category	Male		Female	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Lecturers	12	67%	6	33%
Editors	7	58%	5	42%
Students	33	38%	53	62%

4.2.2.2 Age of the Respondents

Respondents' age was categorized into five years interval for lecturers and editors while two years' intervals for students (Table 4.3). Over 80% of both lecturers and editors were aged below 45 years, while majority of students were aged below 25 years. This means that relatively young lecturers were trainers in the universities and this could be attributed to the preference by young lecturers to teach digital related courses due to the relative ease and interaction with technology. Also in the category of editors, 92% were above 36 years old; this could be attributed to the in-house training conducted by the media houses to impart emerging skills to the editors. Most of the students who responded were aged between 22 and 25 years.

Table 4.3: Distribution of Respondents by Age

	Age	Frequency	Percentage
Lecturers	30 – 35	3	17%
	36 – 40	6	33%
	41 – 45	5	28%
	Above 46	4	22%
Editors	30 – 35	1	8%
	36 – 40	5	42%
	41 – 45	6	50%
	Above 46	-	-
Students	18-20	11	13%
	21-23	48	56%
	24 – 26	18	21%
	Above 26	9	10%

4.2.2.3 Distribution of Respondents by Experience

Duration in service was considered an important aspect because it directly contributes to the experience of the respondents with regards to training in digital media as well as the challenges and opportunities of training digital media in journalism. Experience among lecturers and editors are important as it shows the extent to which they are aware of the digital media training.

Five (28%) lecturers had experience of below five years, 11 (61%) had been lecturing for between six years and ten years, while 2 (11%) had served for more than eleven years. One (8%) had worked with the media for less than 5 years, 8 (67%) had worked for between six and ten years and 3 (25%) had a working experience of more than eleven years (Table 4.4).

Most respondents had experience of more than five years which was crucial for the study because the respondents with more than five years had witnessed various emerging technologies and were able to give appropriate response to the study.

Table 4.4: Experience

Category	Experience	Frequency	Percentage
Lecturers	Below 5 years	5	28%
	6 – 10 years	11	61%
	More than 11 years	2	11%
Editors	Below 5 years	1	8%
	6 – 10 years	8	67%
	More than 11 years	3	25%

4.2.2.4 Distribution of Respondents by the Level of Education

The researcher established that out of 18 lecturers sampled, 9 (50%) were graduates with master's degree, 5 (28%) were doctorate graduates, while 4 (22%) had earned professors title. On the other hand, 3 (25%) editors were diploma holders, 7 (58%) were graduates with bachelor's degree and 2 (17%) were masters graduates (Table 4.5).

Table 4.5: Respondents by the Level of Education

Category	Highest qualification/Title	Frequency	Percentage
Lecturers	Masters	9	50%
	Doctorate	5	28%
	Professor (Title)	4	22%
Editors	Diploma	3	25%
	Bachelors	7	58%
	Masters	2	17%

4.2.2.5 Background of the Lecturers

It was important to know the lecturers area of specialization; it was established that 50% of the lecturers had good teaching background in digital media, 33.3% had writing and editing background, while 22.2% had media production background. Additionally, it was noted that lecturers exposure to digital media technology was not uniform because it depended on factors such as age, computer skills and experience.

4.3 Status and Adequacy of Digital Media Training

The respondents gave their views on the status and adequacy of digital training.

4.3.1 Adequacy of Digital Media Training Equipment

Training equipment is critical to effective teaching of digital media as it facilitates hands on training especially with different types of media production. The study sought to establish the availability and the adequacy of digital media training equipment. The study

also sought to find out availability and adequacy of broadcasting equipment for radio and television as well as computer laboratories with media production suites.

Fifty nine (69%) student respondents stated that training equipment were inadequate, while 27 (31%) said that their university had adequate training resources (figure 4.2).

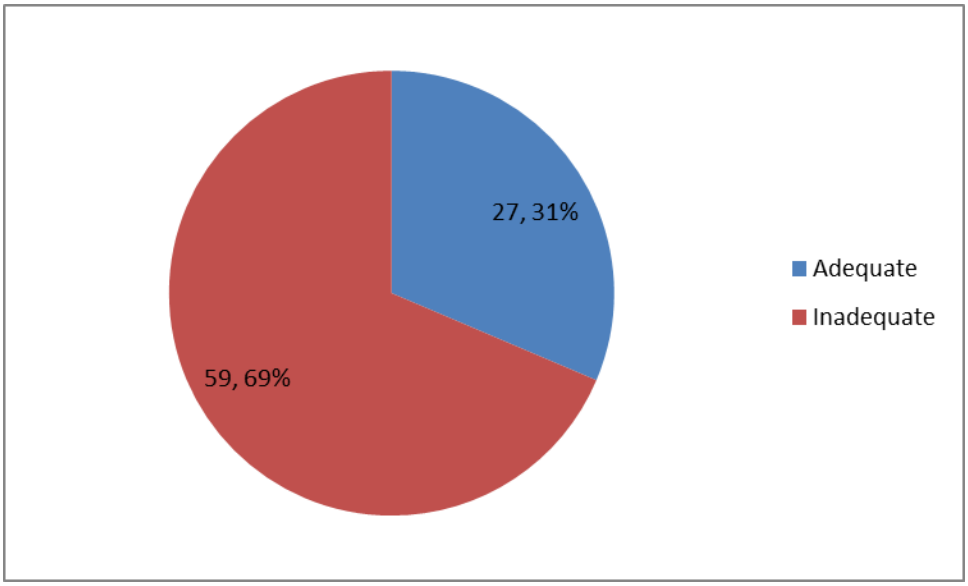

Figure 4.2: Adequacy of Training Resources

On the lecturers category, 72% said their departments have inadequate equipment needed in training digital media courses. They attributed the inadequacy to insufficient funds allocated by their universities to procure the equipment. On the other hand, 28% said their universities have adequate equipment though some of them were obsolete and required refurbishment or replacement.

4.3.1.1 Number and Capacity of Radio and Television Studio

Respondents were further requested to state the availability of television and radio studios in their respective universities. It was established that Moi University had a radio station

'MUFM 103.9' while Daystar University had '*Shine FM 103.1',* while USIU had '*USIU Radio 99.9FM'*. The study revealed that University of Nairobi neither had radio a station nor an offline radio production studio.

Relating to availability and adequacy of television production equipment, the study established that Moi University was the only university that had established live television station by the name '*KTS'* that was broadcasting countrywide. USIU and Daystar University on the other hand had established an offline television and video production suite that enabled students get hands on experience in television production.

Table 4.6: Students Response on the Availability of Radio and Television Studios

University	**Adequacy**							
	Radio studio				**Television studio**			
	Adequate		**Inadequate**		**Adequate**		**Inadequate**	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Moi University	22	25.6%	2	2.3%	21	24.4%	3	3.5%
University of Nairobi	4	4.7%	21	24.4%	3	3.5%	22	25.6%
Daystar University	15	17.4%	3	3.5%	6	7%	12	14%
USIU	14	16.3%	5	5.8%	8	9.3%	11	12.8%

The results from the student respondent indicated that Moi University had available radio (25.6%) and (24.4%) television production studios that were used by students to conduct their practical training. The study also revealed that 15 (17.4%) and another 6 (7%) of respondents from Daystar University said the studios were available and adequate for practical learning. Only 3 (3.5%) and 12 (14%) of the respondents said the radio studio and TV studio respectively at Daystar University were inadequate. Fourteen (16.3%) and 11 (12.8%) respondents from USIU said that both the radio and TV studios were adequate and were providing them with hands on experience. Five (5.8%) stated that radio studio at USIU was inadequate, while another 11 (12.8%) stated that TV studio was inadequate.

4.3.1.1 Types of Available Digital Media Equipment

Respondents were further requested to indicate the type of digital media equipment that were available in their departments. University of Nairobi had 3 digital video cameras, seven still digital cameras and one digital audio recorder (Figure 4.3). Moi University on the other hand had five digital video cameras, four still digital cameras, three audio recorders and two mixing consoles at the studio. The findings from Daystar University revealed that the department had six digital video cameras, three still digital cameras and five audio recorders. The department also had one teleprompter and one mixing console. USIU had nine digital video cameras, eight digital still cameras and one teleprompter. There were also two mixing console and three digital audio recorders. Most of the student respondent said that most of the digital equipment especially the cameras were not working due to poor handling by students and also due to obsolence.

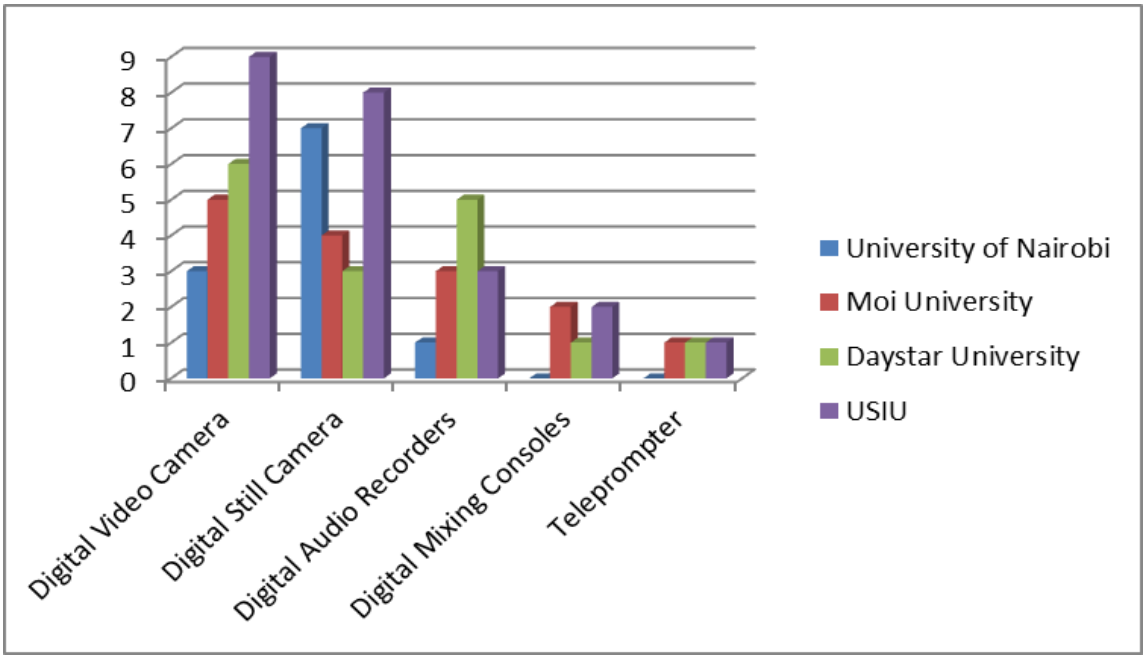

Figure 4.3 Types of Digital Media Equipment Available

4.3.1.2 Availability of Computer Lab

The study also sought to find out the availability of computer laboratories, the number of computers and the software applications installed on those computers. Respondents were also requested to provide their views on computer network.

It was found out that all the departments under study had computer laboratories with all the computers networked. University of Nairobi had one lab for undergraduate students equipped with 22 stand-alone computers running windows based operating system. Moi University had three computer labs for undergraduate students with 38 computers which is shared with students pursuing Informatics and Information Sciences. One lab with 13 Macintosh computers dedicated to journalism students. Daystar University had one

departmental computer laboratory equipped with 19 computers, while USIU had 26 computers installed.

When the respondents were asked the availability of software installed if it facilitated digital learning, 31% agreed that some software such as desktop publishing, audio and video editing applications had been installed. Majority (69%) of the respondent disagreed saying relevant digital media applications had been installed.

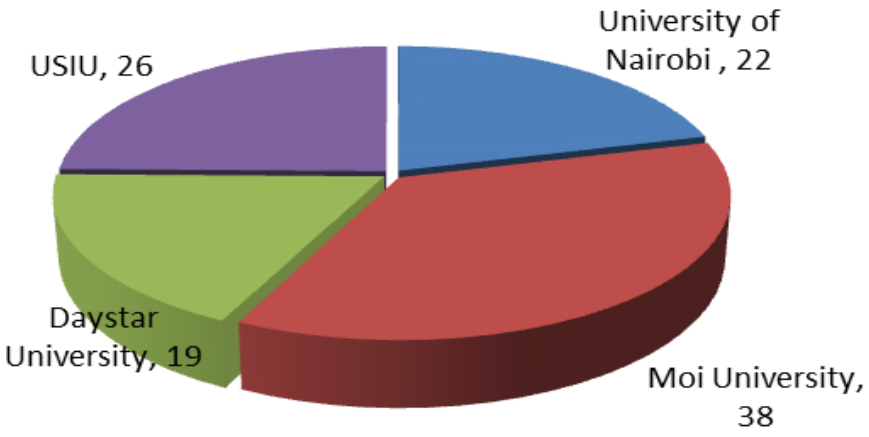

Figure 4.4: Number of Computers in Journalism Departments

4.3.1.3 Reliability of Internet Connection

The study revealed that all the computer laboratories in the sampled universities had internet connection through existing university computer networks. Most of the respondents 62 (72%) indicated that internet connection was not reliable, while 24 (28%) said internet connection in their departmental computer laboratory was reliable. Some

students said they had their own laptop computers and tablets and it was a challenge to access the internet using the department network.

4.3.2 Mode of Teaching Digital Media Courses

Teaching and learning of digital media requires a balance between theoretical and practical training.

Regarding practical training, most student respondents (76.7%) said practical lessons are inadequate, while 23.3% said practical training of digital media was adequate (Figure 4.5). They added that because of the complexities surrounding digital media, some of the concepts were very abstract and need to be demonstrated practically.

On the other hand, most (61.1%) lecturers said delivery of the courses is majorly theoretical (figure 4.5). The respondents said that despite the fact that their departments have some practical's teaching resources such as computer labs, TV and radio production studios among other resources, most students could not access them. Additionally, some specialized computers for media production were obsolete.

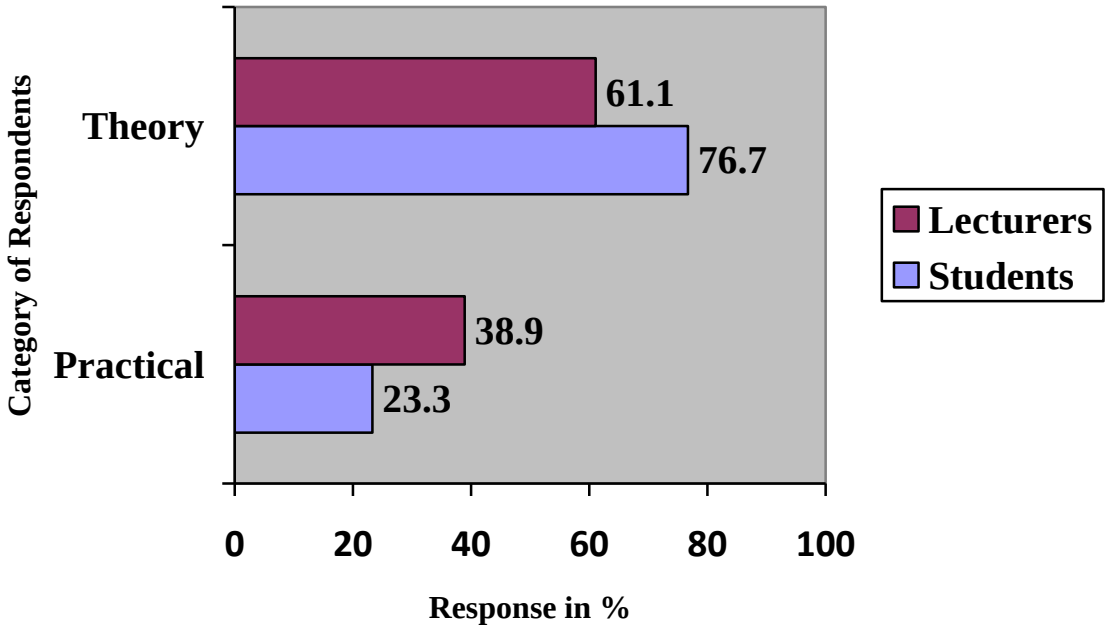

Figure 4.5: Mode of Teaching Digital Media Courses

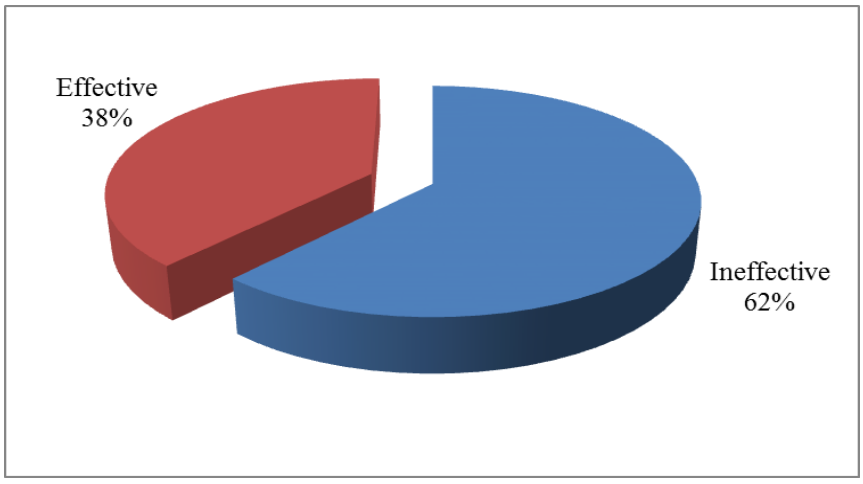

Figure 4.6: Student's Perception of Lecturer's Effectiveness in Digital Media Course Delivery

Most student respondents (61.6%) said lecturers had inadequate experience in teaching and delivering digital media courses while 38.4% said their lecturers had appropriate and adequate capacity and experience to provide effective training (Figure 4.6).

Some lecturers (33.3%) attributed inefficiency in teaching digital media to inadequate computer resources and laboratories with insufficient equipment, while 38.8% said that frequent breakdown and rapid obsolesces of the equipment contributed to the inefficiencies. Another 27.7% attributed the challenges to lack of systems administrators who could give support to staff and students on software and hardware.

4.4 Content Analysis on Digital Media Courses

Content analysis was based on examination of journalism syllabi, course outlines, and brochures among other documents from the sampled universities. Data was obtained from journalism departments and the content analysis on the findings revealed that most digital media courses are segregated across the four years but most of the courses are offered in the first and second years.

4.4.1 Curriculum

The analysis revealed that most journalism curricula in the sampled universities had few digital media related courses; for example, in an academic year journalism students would only do two courses that are related to ICT. Apart from the number of courses being insufficient, the course content were also inadequate and were inclined into general information technology which is difficult to apply the skills in the area of journalism. It is important for journalism departments to align these courses to the skills needed in gathering, processing and disseminating information. Some of the courses in the curricula

require reviewing, for example, the law and ethics course offered in all the universities do not cover the arising legal and ethical dilemmas brought by the digital media such as plagiarism. It is important for the relevant authorities to address the gaps by updating and aligning the courses to a specific ICT skill-base needed for modern journalism.

Furthermore, most of the courses were either an elective or common course where students pursuing journalism had to be taught with students from other schools or departments who could either be majoring in computer science, informatics or information technology. When instructing such classes where students are combined, the ratio between students to lecturer is high and thus the interaction between the lecturer and the student becomes challenging. The instruction of the few digital media courses in the curricula are largely theoretical. In the four sampled universities, the number of contact hours was an average of three hours per week.

It is evident that the theoretical instruction coupled with few contact hours between a lecturer and students is inadequate to enable journalism students to use the dynamic digital media tools effectively in the job market. On the other hand, the study revealed that in all the universities there were no specialization that was biased toward digital/new media. The reference materials and reading list in the course outlines of the media courses revealed that most of the sources referenced were obsolete and some of the literature materials such as text books were unavailable in the university library.

4.4.2 Infrastructure

The state of infrastructure like teaching space and computer lab were limited. The departments lacked relevant up-to-date library resources like textbooks and other reading

and teaching materials, like newspapers, magazines, journals, among others. Some of the existing literature was mostly externally produced while locally-produced books were completely lacking.

The researcher found out that part of the challenges emanate from the lack of coordination between university administration and the journalism department, the administration do not allocate adequate resources and administrative support to enable the smooth running of the journalism programs.

4.5 Perception of Digital Learning and Training

The second objective of the study (see page 7) sought to examine the perception of students and lecturers on digital media training.

4.5.1 Student Perception on Digital Media Training

Digital media continues to evolve at a rapid pace with potential benefits to journalism students. Most students (80.2%) said there were very few digital media textbooks related to digital media in the university library. Furthermore, some of the books that were in the library were irrelevant or complicated. However, a minority (19.8%) of students said the libraries in their universities as well as their departments had enough book materials.

The students respondents also reported that even though their universities had internet connectivity, 48.8% said internet connection is unreliable while 51.2% reported that internet connectivity was available and reliable (Table 4.7). A reliable internet access is critical to students learning and doing their own research on the emerging technologies in the market. Furthermore, most digital media content are transmitted through the internet platform and therefore journalism departments should have a reliable internet connection.

Table 4.7: Editors' Perception of Graduates' Perception on Digital Media Skills

Factors	**Yes**		**No**	
Lack of relevant digital media books	59	68.6%	27	31.4%
Insufficient access to internet	42	48.8%	44	51.2%
Insufficient preparation and guidance by lecturers	45	52.3%	41	47.7%
Lack of practical assessment	80	93%	6	7%

Most student respondents 93% reported that lecturers do not give them practical assessment examinations, while 7% reported that they are at times required to do practical project assignments, especially in some courses which require students to freely express their ideas in innovative ways by utilizing digital media technologies. Although most students (52.3%) commented positively toward lecturer's preparation and guidance on the use of technologies, 47.7% of them said lecturers were prepared and well versed in using some of the digital media technologies. Most students said practical lessons were insufficient. In addition, most students said they had experience in using social media, but expressed inadequacy in their ability to use the technology in a professional capacity and as a medium for producing news. One student respondent remarked:

> Despite the fact that some of us are conversant with technical skills on operation of some software and other digital media applications we still require some instruction on using web-based platforms. We require technical skills in the classroom in order to enhance our chances of meeting the demands of the industry which is currently changing and requires technologically savvy graduates who possess an array of multimedia skills. (Student respondent, Daystar University, 16/09/2015)

Additionally, 68.6% of student respondents said they use some of the digital media tools such as computers, phones, camcorders, internet in a limited way, while 18 (20.9%) agreed that access to such equipment is satisfactory and believed that it will prepare them to keep adapting to the changing media platform. The respondents stated that they preferred using digital media to present their products rather than old technologies and practises.

4.5.2 Lecturers Perception on Digital Media Training

Most respondents (77%) said digital media courses are instructed theoretical as per the course syllabi. Only 23% of the respondents reported that they had been teaching practical digital media courses. The respondents argued that journalism lecturers should focus on teaching theoretical and conceptual knowledge rather than focusing on technical skills.

> It is no longer necessary to teach software to students born in the millennial generation who enter college with engrained technical knowledge. Journalism production courses are facing the challenge of teaching technical skills to classes composed of a wide range of abilities and backgrounds using digital tools. In order to overcome the learning curve issues, lecturers can offer optional out-of-class workshops. (Lecturer Respondent, University of Nairobi, 18/09/2015)

Respondents argued that developing competency in specific digital media applications should not be the ultimate goal in effective learning because such skills would be obsolete as soon as the application is replaced or upgraded.

Most lecturers (72.2%) said teaching should focus on fundamental principles as a way of preparing the students to use any tools or techniques which may emerge in the future. Some 27.8% lecturers said that students should be exposed to training on specific applications.

4.5.3 Editors Perception on Graduate's Competence in Digital Media

Editors were sampled because they are the immediate managers in a media house who can assess a graduate's competence while working on assignments. In this connection, 17% of the respondents reported that journalism graduates have good digital media skills on various online media platforms. Another 33% of the respondents said most fresh graduates have good skills in the digital media, while 50% reported that fresh journalism graduates have inadequate skills for working on digital media (Figure 4.7). From the interviews, one editor said that:

> Most of the fresh graduates entering the job market lack essential digital media competencies, knowledge and skills that make them to work efficiently in the current media work places and also their future career development. (Editor, Royal Media Service, 25/09/2015)

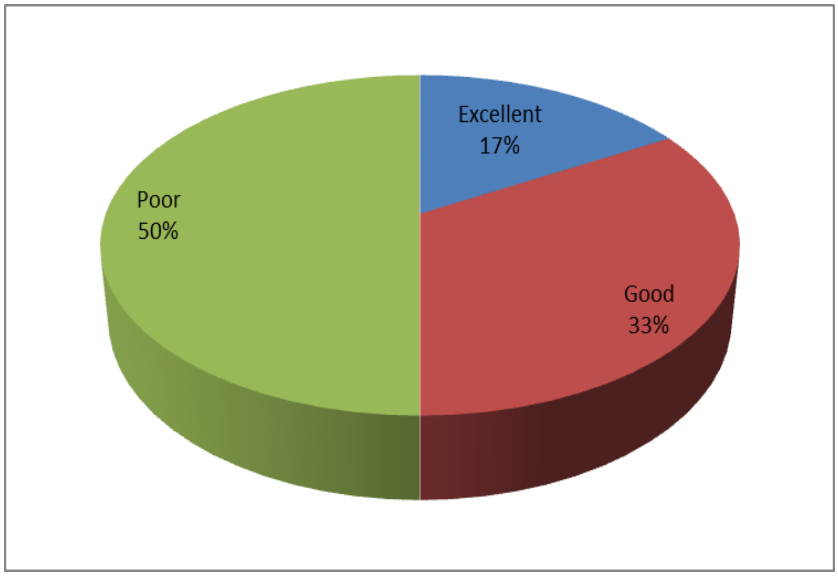

Figure 4.7: Effectiveness of Digital Media Skills among Journalism Graduates

4.5.3.1 Importance of Digital Media Competence

The respondents made various observations on the importance of digital media training in relation to competence at work. Ten (83.3%) respondents said good digital media skills empower graduates to work with different media platforms. Good competencies in digital media enable journalists to work easily on any medium and consequently a media house would not invest on training journalist on working with various platforms. Two (16.7%) editors said digital media skills do not add much value to successful execution of work because most of the media houses are still having traditional means of collecting and disseminating news.

Most editors (58.3%) reported that mastery of digital media skills enhances effectiveness and efficiency in the gathering of news, processing and packaging of information into different media, while 41.7% said graduates who have good training on traditional journalism are good and could be trained in the future on digital media. One respondent said:

> Despite the fact that we recognize the importance of digital media skills, we still prefer to employ journalists with good skills on 'traditional media' and then we can train digital skills on our media lab tailored to expose journalist on new technologies, rather than the other way around. (The Standard Media Group Editor, 23/09/2015)

4.5.3.2 Essential Digital Media skills required in the market

Respondents were further asked to comment on digital media competencies which are vital for journalists in the current labour market. Five (42%) respondents said that good skills in convergence and digital media such as multimedia, social media, hypermedia and internet are very important in working in the current media environment.

The respondents agreed that good skills in digital media enable journalists to search for information needed to develop stories quickly. Research and news gathering could be done through search engines, bulletin boards, discussion fora, Facebook, or blogs. On the other hand, five (42%) other respondents said good skills in research, gathering and effective writing skills are prerequisite for successful and effective delivery of functions in the media industry.

Two (16%) respondents reported that critical thinking and time management skills are important in the current media environment and are valued by editors because journalists can express their thinking in different media. One participant said:

> "It is evident that in the newsroom today, we are dealing with more content that is multimedia in nature which necessitates new skills in web content management, different platform adaptability and publishing processes to accommodate new storytelling options such as video, audio, and animation. There is need for journalism schools in the universities to improve their curricula and training in order to prepare students with the latest digital skills which are important in the media industry." (The Standard Media Group Editor, 28/09/2015)

Other themes emerging from the qualitative data that further seem to support the essential digital media skills required in the market include the need to review journalism curricula in order to address developments in technology and the new media by offering courses that will not only equip students with knowledge and skills on how the digital media is used in their journalistic assignment but also how the new technology is affecting the profession.

4.6 Essential Digital Media Knowledge and Skills

Since the emergence of the internet and other new media technologies there has been concern on the need to incorporate digital media courses in journalism training programmes.

About half of the lecturers (44.4%) reported that ethical issues in digital media, writing and reporting skills for the online media were important. They were also of the view that online journalists need to be able to write a news story with a non-linear and layered structure such as linking text, pictures and publishing stories on different portals such as social media and the media house website. Furthermore, journalists are required to use multimedia tools and software packages to post content into internet platforms which are multimodal in nature and offer users opportunities to access news stories in various media forms such as texts, graphics, sound, voice, images, and movies.

A third of the lecturers said multimedia and hypermedia knowledge and skills are crucial in digital media training, because the job market expect graduates to report and write content for the web. Five (27.7%), lecturers said web design, computer assisted reporting and data journalism are very important skills for journalists to deliver while executing their duties.

4.7 Challenges Facing Digital Media Training

The last two objectives of the study were to establish the challenges that face digital media training and propose strategies for addressing them. The study sought from respondents the challenges deemed to be affecting the digital media training (Table 4.8) and strategies for addressing them with a view to improving digital media training.

Table 4.8: Students Response on the Challenges Facing Digital Media Training

Factors	**Yes**		**No**	
Inadequate digital media content in curriculum	66	76.7%	20	23.3%
Inadequate computer laboratories	74	86.1%	12	13.9%
Obsolete and insufficient digital media equipment	55	63.9%	31	36.1%
Inadequate software packages	44	51.2%	42	48.8%

From the study, 76.7% of the respondents said that a major challenge hindering digital media training is inadequate digital media content in journalism curricula; 86.1% said inadequate computer laboratories was a challenge and 63.9% of the students said insufficient digital media equipment and some obsolete equipment were serious challenge. In terms of the suitability of the computer software programmes, 51.2% of the respondent said the software programmes were irrelevant and outdated.

The study established that despite the widespread use of digital and social media sites such as Facebook among students and instructors, there is an absence of research on the use of these platforms as teaching tools. Perhaps as a result of the continuous rapid emergence of new digital technologies and digital media platforms, little has been done to research and address pedagogical approaches to integrating social media reporting into the journalism curricula. Consequentially, educators are left to experiment with different instructional approaches that yield varying levels of success.

Furthermore, lecturers reported that despite journalism departments having reserved extensive financial resources for nurturing students' technical knowhow, there is still shortage of well trained instructors with relevant expertise in digital media. The respondents said the challenges include designing assignments and courses that have potential to effectively prepare students for successful careers in digital newsrooms.

4.8 Strategies for Improving Digital Media Training in the Universities

Two thirds of the respondents interviewed agreed that lecturers should improve their efforts to prepare students for digital media jobs by helping them understand how new media can be utilized as a newsgathering and dissemination tool. Knowledge of digital media and convergence reporting skills would give journalists opportunities to enhance their competencies by giving them the tools to convey news in the most appropriate medium while also making them more marketable.

It was reported by students that there is need to incorporate digital reporting and media convergence courses into the journalism curricula; however, there is a noticeable absence of literature that evaluates instructional approaches and related learning outcomes. As emphasized in the literature review, pedagogical theory, educational practices must respond to and remain sufficiently flexible to the changing needs and ideas that emerge in an inevitably evolving society. It was reported that literature that explicitly addresses digital media training in universities is lacking. Lecturers recommend that digital skills such as blogging could be integrated into some courses as skills acquired would allow students to reflect on their writing and to understand how to improve the quality of their works to meet professional standards.

4.9 Summary

The chapter has presented and analyzed data gathered regarding digital media training. The status of digital media training has been identified as still being adopted by journalism schools in the universities in the country. As agents of change, journalism schools and departments in the universities must play a crucial role in the education and training of undergraduate students by ensuring that the students are well versed with diversity of digital media knowledge, competencies and skills ideal in the modern media landscape.

The rapid evolution of digital media has greatly influenced the education and training of media professionals. This has occasioned the need to review journalism programmes in relation to the requirements of the labour market. Introducing digital media and related programmes in the curricula and practical lessons can improve the skills and the chances of adapting to changes in the market. The chapter also delved into the challenges of training digital media courses in universities and make recommendations for addressing the challenges.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The chapter presents a summary of the findings, conclusions and recommendations based on the findings in the preceding chapter. The discussion is based on the research objectives, research questions and assumptions of the study. The objectives of this study were to establish the status and adequacy of digital media training in selected universities; examine the perception of students and lecturers on digital media training in universities; assess the digital media knowledge, competencies and skills that are crucial in the labour market and essential for training of journalism students; identify challenges that journalism schools face in training digital media; and propose strategies for addressing the challenges.

This chapter discusses the various findings of the study, based on the data presented, analysed and interpreted as already highlighted in Chapter Four.

5.1 Summary of the Study

5.1.1 Status and Adequacy of Digital Media Training

The era of digital communication requires journalism schools to review their programmes with a view to developing appropriate teaching models and providing appropriate facilities.

The respondents reported that the digital media training needs and requirements for undergraduate journalism courses were characterized by inadequacy or unavailability of

digital media equipment in the journalism schools, inadequacy of digital media courses in the curricula, the delivery of practical lessons and the qualifications and experiences of lecturers in teaching digital media courses. These characteristics are important requirements for effective teaching of digital media in the modern digital environment.

Availability of resources normally influences the nature of teaching and learning. The findings clearly demonstrate the need to provide facilities for training digital media courses. Additionally, trainings can be successful if they have sufficient practical components; are supported by adequate equipment such as digital cameras, computers and software; employ qualified teaching staff; and re-evaluation of digital media curricula. Graduates of the programme should have the knowledge and skills which would enable them use current digital devices and software applications to execute their duties efficiently and effectively.

Most student respondents were of the view that availability of digital media equipment in their schools is still a problem and therefore access is inadequate for learning purposes. The findings is in agreement with Skjerdal and Ngugi (2007) who observed that most of the journalism departments in the country have inadequate facilities and equipment such as digital recording, computers, cameras and editing suits.

There is need to update the curricula so as to include emerging areas in the digital and new media aspects. Teaching should incorporate practical aspect of digital media, which require appropriate qualifications and experience of teaching staff.

Respondents from the lecturer's category indicated that the status of digital media training is still not adequately adopted and delivered because the current curricula and the status of equipment in the universities are inadequate. Furthermore, the courses are majorly delivered theoretically and some of the digital courses being taught are not well aligned with the rapid transformation in the media.

These findings are in line with the views of the media editors who suggest that there is need to adopt and embrace digital media courses in journalism programmes, in order to train and empower undergraduate students with knowledge, competencies and skills to use and apply modern ICT in the work environment (Babu et al. 2007; Kavulya, 2007; Hjorland, 2002; Juznic & Badovinac, 2005) since the current curricula in most universities offer limited content on digital media.

5.1.2 Perception of Digital Media Training

With respect to the importance of digital media training in relation to competence in journalism profession, the study established that digital media training is essential in giving hands on training to graduates and empowers them with adequate competencies and skills that they can use in the market such as in collecting, processing and packaging information appropriately. In the current digital media environment, there is need for journalism training to emphasize competence in digital media programmes.

Learners need adequate digital media and ICT knowledge, competencies and skills in order to function effectively in collecting, processing and disseminating information. Fresh journalism graduates require adequate orientation in digital technological solutions in order to work effectively and efficiently. The students should be articulate regarding a

host of intensive digital media issues. Students must be well oriented and prepared not merely in terms of access to technology or to the technical skills, but also to cultural forms of expression and communication. This implies that students need to be educated and trained in new emerging areas of the digital media.

The study established that digital media training is crucial in imparting relevant competencies and skills essential in job performance. The current media convergence and digital environment is very challenging such that undergraduate journalism students need to be equipped with quality training on these emerging areas.

The study findings are in agreement with those of Frechette (2002) who proposed that today's graduates in the market are required to work across a range of multiple platforms and need to have the necessary skills in order to produce output specifically tailored to each of the different digital platforms. The levels of skills needed are beyond that of being a user of technology, but of someone who can work with the technology. This is because the digital media platforms will keep on changing and the key skill will be that of being able to adapt to new changes. Journalists will have to be ready and able to absorb each change.

The study revealed that journalism programs are too conceptual and give little time to practical journalistic training such as online reporting, computer applications, digital editing among other courses. Time spent on theory classes especially in teaching practical oriented courses is not adequate for the daily lives of journalists. The finding is in line with the recommendations of (Boroff, 2005; Corrigan, 2003; Medsger, 1996) who proposed that journalism training should respond to the needs of the profession. Corrigan

(2003), states that: “Until journalism professors use their intellectual talents and research efforts to address industry needs better and to prepare future practitioners better, they will continue to endure charges of ‘ineptitude’ and ‘irrelevance’”. The study revealed that many courses including those meant to be practical are taught theoretically due to limited resources in the journalism departments. Some department lack the relevant equipment to facilitate the teaching of practical courses, while some universities have more students compared to the available resources.

5.1.3 Essential Digital Media Courses

The study established a number of digital media courses that are essential in the training of journalism undergraduate students in the current digital environment. Digital media training programmes needs to be retailored and integrated with modern technology oriented courses that are quite critical in the modern journalism environment. New emerging communication trends and new media technologies such as advanced multimedia, online and based, web 2.0 technologies, social media, emerging application softwares, networking systems and different digital media hardware have developed in the journalism profession. Digital medium, ICT and new media courses are very important in offering increased job opportunities. Competencies and skills in new media lead to better management and handling of information services.

Journalism has been affected by rapid technological developments and universities have to respond to the needs and demands of the changing society. The study established measures to address impact of technological development on the information profession. In particular, the curricula must give consideration to issues affecting journalism and training of undergraduate students in relation to globalization and labour market needs.

The study suggest that for journalism students to acquire the required digital media knowledge and skills, then the journalism curricula must provide relevant digital/new media courses.

5.1.4 Challenges Facing Digital Media Training

Media and journalism training programmes in Kenyan universities have been facing different challenges such as inadequate digital media curricula that is affecting the training of undergraduate students. Most of the students are forced to seek additionally training from other fields of study that are technologically-reliant and compliant, especially in the departments of information technology and computer science.

Other challenges affecting effective delivery of digital media training include the inadequate computer laboratories in the media departments, few and insufficient digital media equipment, obsolete equipment, inadequate software packages, inadequate digital media courses, inadequacy of qualified teaching staff, inadequate teaching of digital media courses, digital media courses that are not in line with market needs, and inadequate infrastructure.

Respondents highlighted the inadequacy of computer laboratories, inadequacy of digital media equipment and inadequate software packages as the major contributing challenges to digital media training. There are some other challenges to digital media training as indicated in literature review.

The challenges to digital media training can also be addressed through continuous professional development programmes. Teaching departments in the universities must embrace change so as to cope with the emerging trends in the field of media and

journalism. In addition, schools, lecturers, journalists and other stakeholders in the media profession must be proactive in bringing change in training of journalism.

5.1.5 Suggested Measures to Improve Digital Media Training in the Universities

The rapid changes in the media and journalism landscape necessitate the need to reevaluate and update the undergraduate journalism curricula to match the needs and requirements of the modern media environment as well as enable students acquire the new media knowledge, competencies and skills that is essential in gathering and disseminating news stories.

The media departments should endeavor to provide professional development programmes to address the market needs. This will enable the students to acquire knowledge and competencies on emerging digital media technologies. In addition, the departments should continuously carry out a needs assessment to facilitate review of curricula and curricula achieving strategies and approaches.

There is need to continuously review undergraduate journalism programmes with a view to align them to emerging technologies and market needs. Change in technology has been influenced by the internet, World Wide Web, web technologies and social media. The review would enable its graduates learn and acquaint knowledge and skills to work efficiently and effectively in the media environment and career development.

5.2 Recommendation

One of the objectives of the study was to propose strategies for addressing identified challenges. In this respect, the following proposals have been made.

a. There is need for universities to review the current journalism curricula to align them to emerging technologies. It is imperative for media and journalism teaching departments in the universities to put in place facilities and human resources needed to enable students acquire knowledge and competencies skills required by the media industry.

b. The media curricula should be reviewed with a view to incorporating necessary but adequate digital media courses in relation to career opportunities, job market and performance requirements. While designing the curricula, universities should give consideration to content and digital communication requirements. The curricula should address imbalances that have always affected media training with a view to bridging the knowledge gap. The issue of alignment of the curricula may require the concerted efforts of lecturers, media professionals and employers.

c. The media/ journalism departments should address the issues of resources that hinder quality education and training of digital media courses. Universities should invest in digital equipment and ICT resources and other emerging technologies and social media applications.

d. It is necessary to continually consider integration of relevant ICT courses into journalism programmes.

e. There is need to continually assess media and journalism training programmes with a view to identifying gaps in the profession and enhancing adequacy of media training programmes in order to address market requirements.

5.3 Conclusion

This section presents a conclusion based on the study findings. The study empirically indicates that digital media training in Kenyan universities face a number of challenges. First, journalism departments in the universities have not ensured that their students are well versed with the rapid evolution of digital media, and thus necessary knowledge and skills/competencies are imparted.

Secondly, digital media training are often not in tandem with media industry needs which favours graduates with technological competencies and skills.

Third, complete diffusion of digital media into journalism departments has not been fully achieved because the media departments are facing challenges that some are largely above their control. Inadequate resources and other conditions in the universities hinder digital media training for undergraduate journalism students. The magnitude of these challenges being faced by journalism departments vary between institutions, presumably due to management related issues.

In conclusions the study attained the objectives and all the research questions were addressed. The theoretical framework used for this study i.e. the Cognitive Constructivism and Diffusion of Innovations Theory by Rogers, provided a fairly appropriate framework for addressing the digital media training in the selected universities. However, the theory had limitation in providing adequate basis for predicting outcomes as well as providing guidance as to how to accelerate the rate of adoption of digital media in the universities. Nevertheless, the broad framework of

Cognitive Constructivism and Diffusion of Innovations Theory provided a good platform for investigating the training of digital media in selected universities in Kenya.

5.4 Suggestions for Further Research

The study suggests further research to be undertaken on the following areas

a. Assess most efficient and effective training strategies that meet the media house needs.

b. A study on consensus among experts on critical and essential new media knowledge, competencies and skills in journalism curricula in Kenya which leads to universities offering different new media courses to the undergraduate students.

c. Investigate challenges affecting adoption of digital media training and the implications of digital media training curricula on the digital media environment.

d. Assess existing teaching gaps in journalism training programmes with regard to digital media knowledge and skills demanded by the market.

REFERENCES

Abuhmaid, A. (2008). *An analysis of ICT Integration within Jordanian Education System*. Unpublished Doctoral Thesis. University of Technology, Sydney.

Agba, P. C. (2001). *Electronic Reporting: Heart of the new communication age*. Enugu: Snaap Press Ltd.

Al-Mobaideen, H. O. (2009). *ICT Diffusion in Jordanian Universities. European and Mediterranean Conference on Information Systems, Leeds Metropolitan University*. United Kingdom.

Amaratunga, D. (2002). *Quantitative and Qualitative Research in the Built Environment: Application of Mixed Research Approach*. Work Study, 5(1.1):17-31.

Banya, K., (2001). *Are private universities the solution to the higher education crisis in sub-Saharan Africa?* International Association of Universities.

Bell, M. and Bell, W. (2005). *It's Installed … Now Get on With It! Looking Beyond the Software to the Cultural Change.* British Journal of Educational Technology, 36:643-656.

Bhuiyan, S. (2010) *Teaching media convergence and its challenges,* Asia Pacific Media Educator.

Boroff, D. (2005). *What ails the journalism schools*. Harper's Magazine

Bolter, J. D. & Grusin, R. (1999) *Remediation: Understanding New Media.* Cambridge,Mass.: MIT Press.

Burgh, H. (2003). *Skills are not enough: The case for journalism as an academic discipline*. Journalism, *4*(1), 95–112.

Byrne, M. (2001). *Interviewing as a Data Collection Method*. AORN Journal, 1-3.

Carpenter, D. (2010) *An Application of the Theory of Expertise*. Wenger and Owens

Castaeda, L. (2003) *"Teaching convergence"* USC Annenberg Online Journalism *Review* Retrieved October 18, 2015 from http://www.ojr.org/ojr/education/1046983385.php

Chowdhury, U. (2014) *Convergence in Media: What? Why? How?* Association of Business Communicators of India – ABCI. Retrieved October 25, 2015, from http://abci.in/article-convergence-media.htm

CIMA, (2007). *University Journalism Education: A Global Challenge* report published by the Centre for International Media Assistance Retrieved October 29, 2015 from http://cima.ned.org/publications/university-journalism-education

Clarke, R. (1999). *A Primer in Diffusion of Innovations Theory*. Retrieved September 12 2015, from http://www.anu.edu.au/people/Roger.Clarke/SOS/InnDiff.html.

Cooper, P. A. (1993). Paradigm Shifts in Designed Instruction: From Behaviorism to Cognitivism to Constructivism. *Educational technology*, 33(5), 12-19.

Corrigan, D. (2003). *Journalism academia out of touch*. Editor and Publisher

Dawson, C. (2009). *Introduction to Research Methods: A practical guide for anyone undertaking a research project*. How to Books Ltd, 3 Newtec Place, United Kingdom.

Deuze, M. (2002) *"National News Cultures: towards a profile of journalists using cross-national survey findings",* Journalism Quarterly 79(1), pp. 134–49.

Ertmer, P. A., & Newby, T. J. (1993). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective. *Performance improvement quarterly*, 6(4), 50-72.

Eshiwani, G (2009). *University Expansion in Eastern Africa: Challenges and Options in Higher Education.* Inter-University Council for East Africa (IUCEA). Newsletter Vol. 39 pp 17-22.

Frechette, J. (2002) *Developing media literacy in cyberspace: pedagogy and critical learning for the twenty-first-century* (Westport, CT, Greenwood).

Guo, S. (2009). Difference, deficiency, and devaluation: Tracing the roots of non/recognition of foreign credentials for immigrant professionals in Canada. *Canadian Journal for the Study of Adult Education*, 22(1), 37–52.

Hart, C. (2006) *Doing a literature review: releasing the social science research imagination*, Sage, London

Hermida A (2010) *Twittering the news, the emergence of ambient journalism*. Journalism Practice 4(3): 297–308.

Houston, B. (2010). *Training Journalists to Use Technological Tools in Reporting* Nieman Reports Retrieved October 25, 2015, from http://niemanreports.org/articles/training-journalists-to-use-technological-tools-in-reporting/

Huesca, R. (2000). *Reinventing journalism curricula for the electronic environment*. Journalism and Mass Communication Educator, *55*(2), 4–15.

Jenkins, H. (2001). *Convergence? I diverge. Technology Review,* Massachussets.

Komba, W.L., & Nkumbi, E. (2008). Teacher professional development in Tanzania: Perceptions and Practices. J. Int. Cooperat. Educ., 11: 67-83.

Kothari, C.R. (2007). *Research methods: Methods and techniques* (2nded.). New Delhi: New Age Publishers.

Kumar, R. (2005). *Methodology: A Step by Step Guide for Beginners* (2nd edition ed.).Australia: Addison Wesley Longman Pty Ltd.

Kvale, S. (1996). *Interviews: An Introduction to Qualitative Research Interviewing*. Thousand Oaks, CA: Sage.

Kwanya T (2014) *Effectiveness of ICT Education in Schools of Journalism in Kenya*. J Mass Communication Journalism 4: 221 doi:10.4172/2165-7912.1000221

Maddux, C. and Cummings, R. (2004). *Educational Computing: Learning with Tomorrow's Technologies*. 3rd Ed. Boston: Allan and Bacon.

MCK Annual Report, (2008) www.mck.org.ke accessed on November 25. 2015

Medsger, B. (1996). *Winds of change: Challenges confronting journalism education*. Arlington, VA: Freedom Forum.

Minishi-Majanja, M. K. and Kiplang'at, J. (2004). *The Diffusion of Innovations Theory as a Theoretical framework in Library and Information Science Research.* SAJnl Lib and Infor Sci, 71(3).

McNamara, C. (1999). *General Guidelines for Conducting Interviews*. Minnesota.

Mugenda, O. & Mugenda, A. . (2003). *Research Methods: Qualitative and Quantitative Approaches.* Nairobi: Acts Press

Negroponte, N. (1995). *A vida digital*. São Paulo, Companhia das Letras.

Neuman, W. L. (2000). *Social Research Methods: qualitative and quantitative approaches,* 4th edition. Boston: Allyn & Bacon.

Nyabuga G. and Booker N. (2013). *Mapping Digital Media: Kenya,* Open Society Foundation

Pavlik, J.; Mcintosh, S. (2005). *Convergence and its consequences*. In: BUCY, Erik P. B.

Polit, D., & Beck, C. (2003). *Nursing Research: Principles & Methods*, 7th Edition, Lippincott, Williams & Wilkins, United States of America.

Powell, R. R. (1991). *Basic research methods for librarians*. 2nd ed. Norwood-New Jersey: Ablex Publishing Corporation.

Ugangu W. (2012) *Normative Media Theory and the Rethinking of the Role of the Kenyan Media in a Changing Social Economic Context.* Unpublished Doctoral Thesis, University of South Africa.

UNESCO (2004), *Changing teaching practices. Using curriculum differentiation to respond to students' diversity*. www.ibe.unesco.org/en/themes/curricularthemes/.../tools.html Retrieved on November 26, 2015

UNESCO (2007), *Quality Journalism Training Institutions and Identifying Potential Centres of Excellence in Journalism Training in Africa*

Rogers, E. M. (2003). *Diffusion of Innovations*. 4th Ed. New York: Free Press.

Tatnall, A. and Davey, B. (2003). *Information Systems Curriculum Development as an Ecological Process* In Cohen, E. (Ed) *IT Education: Challenges for the 21st century*, Hershey, PA: Idea Group Publishing.

Voakes, P.S., Beam, R.A., & Ogan, C. (2003). *The impact of technological change on journalism, education: A survey of faculty and administrators*. Journalism and Mass Communication Educator, *57*(4), 318–334.

Roth G. (2011), *Teaching Social Media Skills to Journalism Students,* in Charles Wankel (ed.) *Teaching Arts and Science with the New Social Media (Cutting-edge Technologies in Higher Education, Volume 3)* Emerald Group Publishing Limited, pp.127 – 140

Skjerdal, T., Ngugi, C. (2007). *Challenges facing journalism education in Eastern Africa* Ecquid Novi: African Journalism Studies

APPENDIX I

LETTER OF INTRODUCTION

April 15, 2015.

Dear Sir/Madam,

I am a master's student at Moi University carrying out a study on **'AN INVESTIGATION OF THE STATUS OF DIGITAL MEDIA TRAINING IN FOUR SELECTED UNIVERSITIES IN KENYA'**.

The purpose of this letter is to kindly request you to assist me in terms of providing and sharing your knowledge, ideas, opinions, thoughts and any other relevant information useful to the study. Your contributions and participation will go a long way in creating better understanding of the subject in the journalism profession.

The information you provide will only be used for the purpose of the study and will be treated with strict confidence. Please do feel free to provide any other information that you think it is important with regard to the area of study. Thank you.

Silahs Chemwaina Rugut

Moi University

Mobile: 0722143610

E-mail: chemwaina@gmail.com

APPENDIX II

INTERVIEW GUIDE FOR JOURNALISM LECTURERS

BACKGROUND INFORMATION OF LECTURERS

1. Age bracket

   30 – 35 ☐ 36 – 40 ☐ 41 – 45 ☐ above 46 ☐

2. Kindly name your university ……

3. For how long have you been teaching journalism courses?

   Below 5 years ☐ 6 – 10 years ☐ More than 11 years ☐

4. What is your highest level of qualification?

   Masters ☐ Doctorate ☐ Professor ☐

5. What is your area of specialization ……...

DIGITAL MEDIA TRAINING NEEDS AND REQUIREMENTS FOR UNDERGRADUATE STUDENTS

6. What are the key new media courses in your department?

_____

_____

_____

7. In your view, is the training of undergraduate students in digital media adequate? YES/NO Please explain your answer.

_____

_____

_____

DIGITAL MEDIA TRAINING IN THE FACE OF MEDIA CONVERGENCE

8. How relevant are the current digital media courses to the undergraduate journalism students in relation to competence in journalism environment?

_____

_____

_____

_____

9. In your view is digital media training offering new opportunities to undergraduate journalism students in the job market? YES/NO Explain your answer please.

_____

_____

_____

_____

CRITICAL DIGITAL MEDIA COMPETENCIES AND SKILLS ESSENTIAL FOR CAREER OPPORTUNITIES, JOB MARKET AND PERFORMANCE REQUIREMENTS

10. In your views, which digital media courses do you think are essential for undergraduate journalism training? Please list them and briefly explain why you think so.

_____

_____

_____

11. What critical digital media competencies and skills are essential for undergraduate journalism students in the labour market and performance requirements in the current digital media environment? Kindly state them.

_____

_____

_____

_____

_____

CHALLENGES AND MEASURES TO IMPROVE DIGITAL MEDIA TRAINING

12. State the challenges that affect digital media training for undergraduate journalism students in universities?

_____

_____

_____`_____

_____

_____

13. In your view as a lecturer in the area of journalism, what measures should be undertaken to improve digital media training of journalism students nationwide?

_____

_____

_____

14. What other comments can you add that you find relevant in improving digital media training for undergraduate journalism students in Kenyan universities kindly list them?

_____

_____

_____

_____

END

Thank you for your time, participation and contribution.

APPENDIX III

QUESTIONNAIRES FOR FOURTH YEAR UNDERGRADUATE JOURNALISM STUDENTS

GENERAL INSTRUCTION

Kindly feel free to give any information that you find relevant to the study.

Tick in the box ☐ the items that describes you best as a journalism scholar

BACKGROUND INFORMATION

1. Gender Male ☐ Female ☐

2. Name of your university:

Moi University ☐ University of Nairobi ☐

Daystar University ☐ USIU ☐

3. Age bracket 19-20 ☐ 21-23 ☐ above 24 ☐ .

4. Your programme of study. _____

DIGITAL MEDIA TRAINING NEEDS AND REQUIREMENTS FOR JOURNALISM UNDERGRADUATE STUDENTS

5. How would you describe digital media training in your university? Please tick below:

Adequate ☐ Inadequate ☐

	Inadequate	**Adequate**
Computers and teaching/learning resources		
Courses on ICT and digital media		
Practical lessons on digital media		
Lecturers experience in ICT/ digital media		

6. Are you satisfied with the teaching and learning of digital media courses both theoretically and practically? Yes [ ] no [ ] Please explain.

_____

_____

_____

_____

_____

DIGITAL MEDIA TRAINING IN THE MODERN MEDIA ENVIRONMENT

7. Are the current digital media courses offered relevant for your journalism training practice? Yes or No. Please explain

_____

_____

_____

_____

_____

8. Highlight the role of digital media training in career opportunities, job market and performance requirements for undergraduate journalism studies.

_____

_____

_____

_____

CRITICAL DIGITAL MEDIA SKILLS ESSENTIAL FOR CAREER OPPORTUNITIES, JOB MARKET AND PERFORMANCE REQUIREMENTS

9. List the digital media courses you deem essential for journalism undergraduate training.

_____

_____

_____

10. What critical digital media skills are essential for undergraduate journalism students in the labour market and performance requirements in the current digital journalism environment?

_____

_____

_____

_____

_____

CHALLENGES AND MEASURES TO IMPROVE DIGITAL MEDIA TRAINING

11. In your view, what are some of the challenges facing digital media training of undergraduate journalism students in Kenyan universities?

_____

_____

_____

_____

12. What measures would you personally suggest to improve digital media training for journalism undergraduate training?

_____

_____

_____

_____

_____

13. Please feel free to add any valuable suggestions that you find relevant in improving digital media training of journalism undergraduate students in Kenyan universities?

_____

_____

_____

_____

END

Thank you for your time, participation and contribution.

APPENDIX IV

INTERVIEW GUIDE FOR EDITORS

GENERAL INSTRUCTION

Kindly feel free to give any information that you find relevant to the study.

Background Information

2. Name of the media house. _____

3. For how long have you been working in the media?

0 - 5 years [ ] 6 – 10 years [ ] More than 11 years [ ]

4. What is your highest level of qualification?

Diploma ☐ Bachelors ☐ Masters ☐ Doctorate ☐

4. What is the nature of your work?

_____

_____

_____

_____

5. What is your highest qualification in the journalism profession?

_____

_____

_____

_____

Digital Media Training Needs and Requirements for Undergraduate Students

5. Highlight the key digital media training needs and requirements for undergraduate journalism students.

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Digital Media Training in the Modern Journalism Environment

6. How useful are the current digital media courses for undergraduate journalism training in relation to competence in journalism environment?

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7. Describe the role of digital media training in career opportunities, job market and performance expectations for undergraduate journalism students.

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CRITICAL DIGITAL MEDIA COMPETENCIES AND SKILLS ESSENTIAL FOR CAREER OPPORTUNITIES, JOB MARKET AND PERFORMANCE REQUIREMENTS

8. Which digital media courses do you think are essential for undergraduate journalism training?

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9. What critical digital media competencies and skills are essential for journalism undergraduate students in the labour market and performance requirements in the current digital environment?

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CHALLENGES AND MEASURES TO IMPROVE ICT EDUCATION AND TRAINING

10. What are some of the measures that need to be undertaken to enhance effective training of digital media in universities?

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11. What other comments do you find relevant in improving digital media training for undergraduate journalism students in Kenyan universities?

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_____

END

Thank you for your time, participation and contribution.

APPENDIX V
RESEARCH AUTHORIZATION LETTER

NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
Fax:+254-20-318245,318249
Email:dg@nacosti.go.ke
Website: www.nacosti.go.ke
when replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

NACOSTI/P/15/74206/11152

Date:

1st August, 2015

Silahs Chemwaina Rugut
Moi University
P.O. Box 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Use and training of digital media in selected journalism schools in Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Nairobi and Uasin Gishu Counties** for the period ending **30th July, 2016.**

You are advised to report to **the County Commissioners and the County Directors of Education, Nairobi and Uasin Gishu Counties** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:
The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.

The County Commissioner
Uasin Gishu County.

The County Director of Education
Uasin Gishu County.

APPENDIX VI

RESEARCH PERMIT

THIS IS TO CERTIFY THAT:
MR. SILAHS CHEMWAINA RUGUT
of MOI UNIVERSITY, 0-30100 Eldoret,has
been permitted to conduct research in
Nairobi, Uasin-Gishu Counties

on the topic: *USE AND TRAINING OF DIGITAL MEDIA IN SELECTED JOURNALISM SCHOOLS IN KENYA*

for the period ending:
30th July,2017

Permit No : NACOSTI/P/15/74206/11152
Date Of Issue : 1st August,2015
Fee Recieved :Ksh 1000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 10359

CONDITIONS: see back page