INTEGRATION OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN NEWS PRODUCTION AND DISTRIBUTION: A MULTIPLE CASE STUDY OF TWO MAINSTREAM MEDIA HOUSES IN KENYA

BY

MERCY J. KANDIE

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTERS OF SCIENCE (MSc.) DEGREE IN COMMUNICATION IN THE DEPARTMENT OF PUBLISHING, JOURNALISM, AND COMMUNICATION STUDIES

SCHOOL OF INFORMATION SCIENCE,

MOI UNIVERSITY.

2025

DECLARATION

This Thesis is my original work and has not been presented for a degree in any other university. No part of this Thesis may be reproduced without the prior written permission of the author and/or Moi University.

Signature: ……. Date: …….

Kandie J Mercy -

SHRD/PGC/06/13

DECLARATION BY SUPERVISORS:

This Thesis has been submitted for examination with our approval as university supervisors

Signature: …… Date: ……

Prof. Abraham Mulwo
Department of Publishing, Journalism, and Communication Studies
School of Information Sciences
Moi University

Signature**…….** DAte**……**

Dr. Edwin Tallam
Department of Publishing, Journalism, and Communication Studies
School of Information Sciences
Moi University

DEDICATION

This thesis is dedicated to the memory of my late sister, Eunice Kandie. My parents and sisters who constantly encouraged me to pursue education to great heights.

ACKNOWLEDGEMENT

I want to express my heartfelt gratitude to my supervisors, Prof. Abraham Mulwo and Dr. Edwin Tallam, for their invaluable support. Thank you for your unwavering guidance throughout this journey. I truly appreciate your willingness to share your research experiences. You have instilled in me confidence and inspired me to read and do better. I have learned so much from your supervision and am deeply grateful for your timely advice. Your kindness and readiness to assist me whenever I faced challenges have been incredibly encouraging.

I am thankful to my colleagues, my classmates and all the friends whom in one way or another, I consulted during this process. To my lecturers who taught me my master's coursework with practical examples that have helped me to develop this document. I am deeply indebted. I am also grateful to my family members, my husband, my siblings and the entire family for their support and encouragement to pursue masters. Your moral support gave me the strength to complete this thesis.

Above all, I thank God for providing me with good health and energy that has kept me going this far.

ABSTRACT

Artificial Intelligence (AI) refers to algorithm-based computational systems capable of mimicking human cognitive functions, such as problem-solving, decision-making, language understanding, and pattern recognition. Its growing use in global media industries has enhanced newsroom efficiency by automating routine tasks, enabling real-time data processing, and supporting personalized content delivery. Despite these opportunities, AI also raises concerns related to editorial control, credibility, and ethical use. This study examined how AI technologies are being integrated into news production and distribution in two mainstream media houses in Kenya: Royal Media Services (RMS) and the Kenya Broadcasting Corporation (KBC). Guided by the Diffusion of Innovation Theory, Unified Theory of Acceptance and Use of Technology, and Technological Determinism Theory, the study explored three research questions: How has AI been integrated into news production processes in RMS and KBC? How has AI been integrated into news distribution processes in RMS and KBC? What challenges hinder the integration of AI technologies in RMS and KBC? Methodologically, the study employed the qualitative research approach and the case study research design, utilizing semi-structured interviews with 5 journalists and 1 data specialist from each of the two selected media houses, drawn from a population of 30 journalists and 4 data specialists in the selected media houses. Purposive and snowball sampling methods were used to identify respondents with experience on AI technologies. Data were thematically analyzed through systematic transcription, coding, theme development, and interpretive synthesis. Ethical principles, including informed consent, confidentiality, and voluntary participation, were observed throughout the study. Findings show that AI has been partly integrated into various processes of news production, particularly content creation, quality enhancement, content curation, and editorial efficiency. In distribution, AI supports audience segmentation, personalized content recommendations, cross-platform optimization, and automated content sharing. However, a full and seamless integration remains constrained by several challenges. These include credibility concerns arising from misinformation and "AI hallucinations," financial limitations that hinder access to advanced tools, limited AI literacy and training, regulatory uncertainty, data privacy concerns, ethical dilemmas around AI-generated content, and resistance from journalists worried about job displacement or loss of editorial autonomy. The study concludes that while AI use in Kenyan newsrooms is growing, it remains uneven and shaped by contextual, technical, and organizational limitations. Media houses should therefore expand AI training, strengthen editorial oversight, invest in cost-effective AI solutions, and develop clear editorial guidelines. National regulatory bodies should also provide policy direction to guide responsible and transparent AI adoption and integration in the media sector.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

DEFINITION OF OPERATIONAL TERMS

Artificial Intelligence (AI): Artificial Intelligence (AI) is the simulation of human intelligence processes by machines, particularly computer systems. These processes include learning, reasoning, and self-correction. AI can be categorized into narrow AI, which is designed for specific tasks, and general AI, which possesses the ability to perform any intellectual task that a human can do (Russell & Norvig, 2010).

AI journalism: AI journalism refers to the integration of artificial intelligence technologies into the field of journalism, enhancing various aspects of news production, reporting, and distribution. This approach leverages machine learning, natural language processing, and other AI techniques to improve efficiency, accuracy, and audience engagement.

Broadcasting: Broadcasting refers to the distribution of audio and visual content to a wide audience through various mediums. It encompasses traditional forms such as radio and television, as well as newer platforms like streaming services and online video. Broadcasting aims to reach many viewers or listeners simultaneously, making it a key component of mass communication.

Deep learning is a specialized area of machine learning within Artificial Intelligence that focuses on using neural networks with multiple layers to analyze and interpret complex data. This approach mimics the structure and function of the human brain, enabling machines to learn from vast amounts of data without explicit programming.

Deepfakes are a form of synthetic media created using Artificial Intelligence technologies, specifically deep learning techniques. They allow for the manipulation of audio and video content to produce hyper-realistic representations of people saying or doing things they never

actually did. The term "deepfake" is a portmanteau of "deep learning" and "fake," reflecting the technology's basis in deep learning algorithms.

Digital media refers to content that is created, stored, and distributed in digital formats, primarily through electronic devices such as computers, smartphones, and tablets. It encompasses a wide range of formats, including text, audio, video, and interactive content, and plays a significant role in how information is consumed and shared in the modern world.

Feature reporting is a style of journalism that focuses on in-depth storytelling and analysis, often exploring a specific topic, event, or individual in a narrative format. Unlike traditional news reporting, which prioritizes breaking news and factual reporting, feature stories emphasize context, emotion, and human interest, allowing for a more comprehensive understanding of the subject matter.

Generative AI (GenAI) refers to a class of artificial intelligence models designed to create new content, such as text, images, audio, or video, based on learned patterns from existing data. Unlike traditional AI, which primarily focuses on classification or prediction, generative AI emphasizes creativity and innovation by generating original outputs. Examples of common GenAI tools are ChatGPT by OpenAI and Gemini by Google.

Journalism is the profession and practice of gathering, assessing, creating, and presenting news and information to the public. It serves as a vital component of democracy by informing citizens about current events, issues, and affairs, thereby enabling them to make informed decisions.

Large Language Models (LLMs) are a type of artificial intelligence that uses deep learning techniques to understand and generate human language. They are trained on vast datasets

containing text from various sources, enabling them to perform a wide range of language-related tasks.

Machine Learning (ML) is a subset of Artificial Intelligence that focuses on the development of algorithms and statistical models that enable computers to learn from and make predictions or decisions based on data. Instead of being explicitly programmed for every task, ML algorithms identify patterns and insights from large datasets, allowing systems to improve their performance over time as they are exposed to more data.

New media refers to digital forms of communication that have emerged with the advent of the internet and digital technologies. It encompasses a wide range of platforms and formats that allow for interactive, instantaneous, and user-generated content. New media contrasts with traditional media, such as print newspapers, radio, and television, which typically involve one-way communication from producers to consumers.

Print media refers to traditional forms of communication that are published in physical formats, primarily newspapers and magazines. It plays a crucial role in journalism and information dissemination, providing audiences with news, features, and advertising in a tangible format.

ACRONYMS

AGI	Artificial General Intelligence
AI	Artificial Intelligence
AP	Associated Press
BBC	British Broadcasting Corporation
GenAI	Generative AI
GPT	Generative Pre-Trained Transformer
KBC	Kenya Broadcasting Corporation
LLM	Large Language Model
MCK	Media Council of Kenya
ML	Machine Learning
NLP	Natural Language Processing
RMS	Royal Media Services

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.0. Introduction

Artificial Intelligence (AI) is a branch of computer science focused on creating systems capable of performing tasks that typically require human intelligence. AI encompasses algorithm-based and computational models that can mimic cognitive functions such as problem-solving, decision-making, language understanding, and pattern recognition (Chaudhary et al., 2024; Jutel et al., 2024). Proponents often emphasize that AI technologies can perceive their environments, reason, learn, and act autonomously or semi-autonomously to achieve specific goals (Khaleel et al., 2024).

Research shows that AI technologies are gradually transforming traditional newsroom practices; from content creation and distribution to audience interaction, AI-powered tools are changing how journalists work, ushering in unmatched efficiency and innovation (Prakash & Sabharwal, 2024). Therefore, this study aimed to examine how artificial intelligence technologies have been integrated into news production and distribution processes in digital and broadcast media in Kenya. This chapter lays the foundation of the thesis, providing the background of the study with a brief history of AI's development and adoption globally, regionally (in Africa), and in Kenya's mainstream media, statement of the problem, research questions, scope of the study, justification, significance, limitations, and concludes with a summary of the key concepts underlying the study.

1.1. Background of the Study

The rapid growth of digital information, enabled by widespread access to computing devices, internet connectivity, and social media platforms, has intensified the demand for AI-driven solutions across industries (Kibria et al., 2018). In the media sector, this growth has been accompanied by increasing pressure on newsrooms to innovate, remain competitive, and respond to shifting audience needs. As a result, the availability of free, low-cost, and increasingly user-friendly AI tools has lowered the barriers to experimentation and adoption, prompting many news organizations to integrate AI into their production workflows (Chui & Fransisco, 2017). Scholars argue that AI technologies offer practical solutions to long-standing challenges in journalism, including the need to process large volumes of digital information, verify facts quickly, and customize content for diverse audiences (Abebe, 2018; Sančanin & Penjišević, 2022). This growing interest has positioned AI as a major driver of transformation in newsrooms globally.

This section of the thesis situates the study on how the mainstream media in Kenya has integrated AI technologies in news production and distribution within the broader landscape of journalism. It begins with a brief historical overview of AI's development and its links to journalism. It then examines empirical evidence on the adoption and integration of AI in newsrooms globally, across Africa, and in Kenya, highlighting specific examples, emerging trends, and persistent challenges.

1.1.1. The History of Artificial Intelligence and its Link to Journalism

The origins of AI can be traced to the mid-20th century, when early computer scientists began exploring whether machines could demonstrate forms of human-like intelligence.

Alan Turing's seminal 1950 paper, *Computing Machinery and Intelligence,* introduced the "imitation game," now widely known as the Turing Test, as a method for evaluating whether a machine's responses could be indistinguishable from those of a human (Turing, 1950). This foundational idea sparked decades of experimentation and theoretical development in computer science.

By late-20th century, notable breakthroughs demonstrated Ai's growing capabilities. IBM's *Deep Blue,* which defeated world chess champion Garry Kasparov in 1997, exemplified the ability of algorithms to perform complex cognitive tasks involving strategy and prediction (Kasparov, 2010; Pandolfini, 1997). However, the field experienced uneven progress, including periods known as "AI winters," during which inflated expectations and technological limitations slowed research and investment.

Renewed interest in the early 21st Century followed advances in machine learning, deep learning, and the availability of large datasets capable of training sophisticated models (Bengio et al., 2015). These advances supported the emergence of AI applications across multiple sectors, transportation, finance, education, entertainment, and healthcare, fueling debates about the technology's social, economic, legal, and ethical implications (Russell & Norvig, 2010). In journalism, these developments created new opportunities to automate routine tasks, analyze large datasets, verify information, and enhance editorial processes. The historical rise of AI thus provides the backdrop for understanding its increasing integration into contemporary newsrooms. Figure 1 below shows a more robust timeline of AI's development from Turin's test to date.

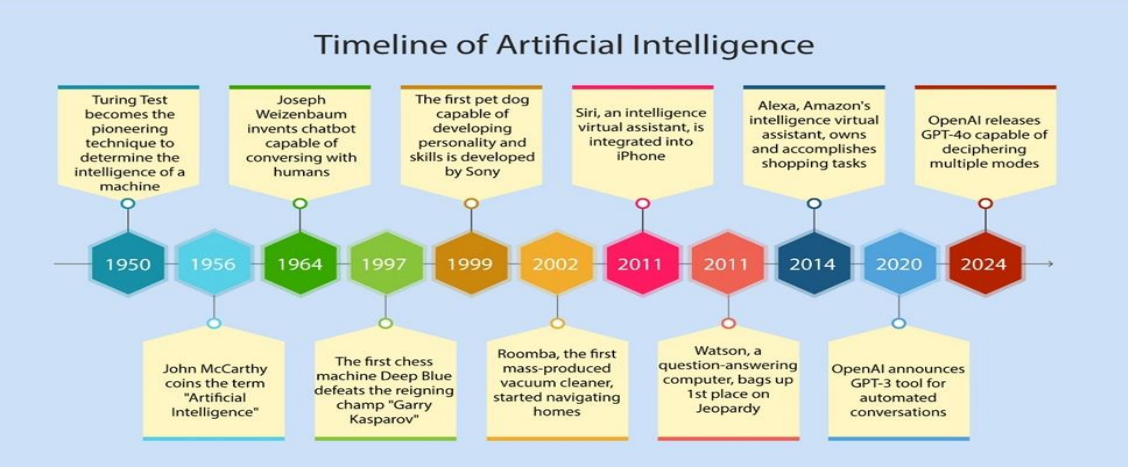

Figure 1: Timeline of Artificial Intelligence

Source:https://blog.sap-press.com/generative-ai-with-sap-from-symbolic-to-statistical.

1.1.2. Artificial Intelligence in Newsrooms Globally, Across Africa), and in Kenya

Newsrooms around the world are increasingly adopting AI to enhance efficiency, automate repetitive tasks, and deepen audience engagement. Early adopters demonstrated how AI could support high-volume, data-intensive reporting. *Bloomberg* used an AI model called *Cyborg* to analyze financial reports and instantly write news stories with all relevant facts and figures (Quinonez & Meij, 2024). The *Washington Post* used *Heliograf* to cover the 2016 Rio Olympic Games and congressional elections (Serdouk & Bessam, 2023). *Los Angeles Times* pioneered *QuakeBot*, which generated immediate reports during seismic events, becoming the first newsroom to break an earthquake story using AI (Firat, 2019). The Associated Press dramatically expanded automated journalism, increasing quarterly corporate earnings stories from 300 to 3,700 and now producing up to 40,000 AI-assisted stories annually (Diakopoulos, 2019; Rantanen & Kelly, 2021).

Beyond these examples, empirical evidence shows the growing presence of AI across global newsrooms. Beckett's (2020) international survey, for instance, shows that AI supports tasks such as content personalization, recommendation engines, social listening, audience analytics, translation, and data-driven investigations. A meta-analysis by Fedaa Mohamed (2025), synthesizing over 60 studies, further reports that while AI adoption is widespread globally, there are stark disparities in infrastructure, training, regulatory, and governance frameworks across countries. These differences shape newsroom readiness and influence how AI tools are deployed.

In the United States (U.S.), Simon (2024) highlights how AI is reshaping human resource in newsrooms, editorial processes, and the political economy of journalism, while raising concerns about dependence on large technology platforms for AI infrastructure. Wahida (2025) examines U.S. news managers' perceptions and finds that AI adoption intersects with concerns about professional jurisdiction, authority, and control over editorial tasks. In Europe, Ceide et al. (2024) reveal that Spanish newspapers primarily adopt AI as an assistant to optimize production processes, while Cherepakhin (2024) emphasizes the need for strong ethical frameworks to guide responsible AI use. Studies in Greece by Matsiola and Pilitsidou (2024) indicate that journalists balance perceptions of increased efficiency with uncertainty about job security and editorial autonomy. In Asia and the Middle East, Harb and Arafat (2024) report uneven uptake across Arab newsrooms due to language complexities, resource disparities, and cultural sensitivities. Studies from South Asia show similar patterns: Ahmed (2023) discusses the ethical debates surrounding AI in Bangladesh, while Mahajan (2024) documents India's rapid adoption of AI news anchors and automated storytelling tools. These

studies illustrate a global trend toward integrating AI into journalism, though the depth and sophistication of adoption vary significantly across contexts.

Across Africa, AI adoption in newsrooms is growing but remains uneven and largely exploratory. Analyses of research across the continent show that adoption of AI in journalism is still emerging and there is limited evidence base compared to Western regions (Kothari & Cruikshank, 2022). Ogola's (2023) report for *International Media Support* (IMS) finds that AI tools are increasingly used for fact-checking, verification, data visualization, translation, and sentiment analysis, although adoption varies widely across countries due to infrastructural and economic constraints.

Country-level empirical evidence shows a similar pattern. In Ghana, Adefioye (2023) and Adjin-Tettey et al. (2023) report that AI adoption is characterized by informal, individualized use, with journalists employing transcription tools, search algorithms, and AI-assisted research systems on a personal basis rather than through formal newsroom strategies. In South Africa, Ngobeni (2021) and Solomons & Ndlovu (2023) show that AI adoption is budding, with journalists using AI for content analysis, story ideation, and workflow optimization, though systemic inequalities limit full-scale integration. Despite broad awareness among journalists, studies in Nigeria highlight structural challenges like poor internet connectivity, high costs of AI tools, unstable electricity supply, and limited training, which negatively affect adoption levels, (Kalu, 2022; Umeora, 2023; Zakariyyah et al., 2023). Research from East Africa, including Uganda, Tanzania, Rwanda, and Ethiopia, shows gradual experimentation with AI, but barriers persist around managerial attitudes, resource constraints, and the need for culturally relevant AI applications (Dralega, 2023). In

Zimbabwe, Mugadzaweta (2022) finds that newsrooms are using AI for research, content drafting, translation, and personalization, though adoption remains at an early stage.

These African studies highlight a recurring pattern: journalists are continuing to adopt AI for efficiency and productivity, but systemic, infrastructural, and organizational constraints limit more advanced integration. Ethical concerns, such as algorithmic bias, misinformation, and potential job displacement, further shape newsroom attitudes and adoption trajectories across the continent.

Meanwhile, Kenya is emerging as one of Africa's leading technology hubs, supported by a vibrant digital innovation ecosystem, expanding AI research capacity, and increasing investments in data-driven technologies (Adu, 2024; Kiaka & Kimana, 2024). In sectors such as agriculture, finance, and logistics, various Kenyan firms already use AI to optimize operations and improve decision-making. Universities and training institutions are also introducing programs in AI and data science, reflecting national interest in building a future-ready workforce (Chepchirchir, 2024).

Within the media sector, evidence shows that Kenyan newsrooms are in the early but growing stages of AI adoption. Kioko (2022) finds that AI supports tasks such as audience engagement on social media, data visualization, and newsgathering, particularly in tracking user-generated content during breaking news. Mbaabu (2023) documents AI use in digital newsrooms for translation, voice-to-text conversion, and social listening to monitor audience conversations. Kerongo (2025) highlights the adoption of AI tools at *Nation Media Group* for metadata tagging, content classification, and improving content management system efficiency. Studies by Muya (2024) and reports from the *Media Council of Kenya* (2023)

further show that news organizations in Kenya are experimenting with various AI technologies to enhance accuracy, streamline workflows, and tailor content to changing audience needs. Examples from *BBC Africa* and *Radio Africa Group* illustrate how AI-assisted tools support storytelling, audience analysis, and digital distribution.

Despite these advancements, Kenyan media houses face challenges similar to those identified across Africa. These include: limited infrastructure, inadequate datasets for AI training, financial constraints, evolving regulatory and ethical concerns, and uncertainty about AI's long-term implications for newsroom roles and democracy (Arakpogun et al., 2021). These contextual factors suggest that while Kenya demonstrates significant potential for AI integration, adoption remains inconsistent and dependent on organizational priorities, resources, and strategic leadership.

The literature presented in this section shows that although AI adoption in journalism is expanding globally, the nature and depth of integration vary widely across contexts. Research in Western countries is more advanced, with documented AI strategies, governance frameworks, and detailed analyses of newsroom transformation (Simon, 2024; Wahida, 2025; Ceide et al., 2024). In contrast, African scholarship is still emerging, with studies often descriptive and reflecting early-stage experimentation and systemic constraints (Kothari & Cruikshank, 2022; Ogola, 2023).

In Kenya, adoption is growing yet remains uneven, and there is limited empirical evidence explaining how AI is integrated into production and distribution workflows or how contextual factors influence this integration. Questions persist regarding how AI is being

integrated into various the news production and distribution processes, considering Kenya's unique contextual factors, including resource constraints. These gaps justified the need for this study, which aimed to examine how AI technologies are being integrated into news production and distribution in Kenya's mainstream digital and broadcast media, and what factors shape this integration.

1.2. Statement of the Problem

Artificial intelligence is reshaping journalism globally, with newsrooms in North America, Europe, Asia, and parts of the Middle East increasingly integrating AI into news processes. These developments are well documented in international research, which highlights advanced applications, formal integration strategies, and established governance frameworks guiding AI use in editorial processes. In contrast, scholarship in Africa remains limited but growing. Existing studies show that African newsrooms are experimenting with AI tools, though adoption is often informal, uneven, and constrained by infrastructural, financial, and organizational challenges. This emerging evidence suggests a widening gap between the sophistication of AI integration in Western contexts and the early, exploratory stages observed across many African countries.

In Kenya, available research indicates that newsrooms have begun using AI for tasks such as transcription, translation, social listening, data visualization, and audience engagement. However, adoption remains at an early stage, and a description of how AI is integrated into core production and distribution workflows is still unclear. Most Kenyan studies focus on describing AI tools being used, identifying ethical concerns, or assessing policy gaps, rather than examining how AI is being embedded into editorial routines, decision-making

processes, and newsroom structures. As a result, little is known about the practical realities surrounding AI integration in Kenyan media: how journalists interact with these tools, how organizational and contextual factors shape their use, and what this integration means for editorial quality, efficiency, and professional practice.

These gaps are significant because Kenya's media landscape is characterized by resource constraints, varying levels of technical capacity, and evolving digital business models (Arakpogun et al., 2021; Kerongo, 2025; Kioko, 2022). Such contextual factors may influence AI integration in ways that differ markedly from trends observed in well-resourced Western newsrooms. Without empirical evidence on how AI is being integrated into Kenyan journalism, stakeholders, including policymakers, newsroom managers, and industry practitioners, would continue to lack the information required to design appropriate strategies, guidelines, or capacity-building initiatives.

Therefore, this study addresses the problem of limited empirical understanding of how AI technologies are being integrated into news production and distribution processes in Kenya's mainstream broadcast and digital media, and what contextual, organizational, and technological factors shape this integration. By examining these dynamics, the study responds to the broader knowledge gap on AI adoption and integration in African journalism and contributes to ongoing debates on the future of news in non-western study settings where contextual factors such as technical knowhow and financial constraints uniquely shape news production and distribution.

1.3. The Aim of the Study

This research study aimed to examine how Artificial Intelligence (AI) technologies have been integrated into news production and distribution processes in digital and broadcast media in Kenya.

1.4. Research Questions

This research sought to answer the following questions:

1. How have selected mainstream media houses in Kenya integrated AI into their news production processes?
2. How have selected mainstream media houses in Kenya integrated AI into their news distribution processes?
3. What challenges hinder the integration of AI technologies in selected mainstream media houses in Kenya?

1.5. Scope of the Study

This study focused on examining how AI technologies are integrated into news production and distribution processes within Kenya's mainstream broadcast and digital media. The geographic scope of the study was limited to Nairobi, where the selected media houses representing the state media and digital news platforms are headquartered and where editorial and technological decisions are primarily made. Institutionally, the study covered two leading media organizations, the *Kenya Broadcasting Corporation* (KBC), and *Royal Media Services* (RMS), which were selected for their national reach, structured newsroom operations, and reported interest in digital innovation (Kioko et al., 2022; Momanyi, 2017; Wamunyu, 2017; Wamunyu & Wahutu, 2019).

Empirically, the study was restricted to AI-driven activities that directly support the production and distribution of news. These included the use of AI tools for newsgathering, content creation and editing, verification, metadata tagging, social listening, and audience engagement analytics. The study did not examine AI use in advertising, marketing, or non-editorial corporate functions.

Methodologically, the study was limited to qualitative methods, including in-depth interviews. The perspectives analyzed were those of journalists, including reporters, news anchors, and editors, digital content producers, and technical staff, such as data analysts, who engage with AI-assisted workflows or participate in decisions about their implementation. The study did not attempt to measure audience perceptions, quantify AI impacts, or assess newsroom performance metrics.

Overall, the study examined the practical realities and challenges shaping AI integration within Kenyan newsroom, without seeking to generalize beyond the selected cases or to evaluate the long-term impacts of AI on journalism, due to the temporal nature of technological innovations.

1.6. Significance of the Study

This study is relevant for practicing Kenyan journalists as it provides insights into how AI is transforming news production and distribution processes. Given the increasing adoption of AI across various sectors, including healthcare, agriculture, education, security, legal processes, and sports, journalists need to understand how AI can enhance newsroom efficiency while maintaining editorial integrity. As news production and distribution become

more technologically driven, this study helps assess how Kenyan media houses are integrating AI and the challenges they face.

Beyond journalists, the study is valuable to journalism training institutions, as it highlights emerging AI-driven newsroom practices that should be incorporated into media education. Government policymakers responsible for media regulation and digital transformation can use the findings to inform policies that support ethical AI use in journalism. For instance, the Media Council of Kenya (MCK), which recently established a task force on Data and AI Guidelines to ensure ethical AI integration in journalism can benefit from this study (MCK Media Center, 2023).

Civil society groups advocating for press freedom, media ethics, and digital rights may also find the study useful in shaping discussions on AI and responsible journalism. Additionally, the public as news consumers will benefit from a better understanding of how AI influences the news they receive, raising awareness about potential risks such as misinformation and AI bias. Therefore, this study contributes to a more informed, ethical, and technology-driven media landscape in Kenya.

1.7. Limitations of the Study

Several limitations shaped the design and interpretation of this study. First, the rapid evolution of AI technologies posed a substantive challenge. New AI tools, updates, and use cases emerged continuously during the study period, meaning that some innovations became available only after data collection had concluded. This affected the temporal completeness of the findings. To manage this limitation, the study focused on examining processes of

integration, how newsrooms adopt and embed AI into production and distribution workflows, rather than detailing every tool in use.

Second, access to proprietary information and internal editorial systems was limited. Some media houses were reluctant to disclose details about AI-assisted workflows, citing confidentiality, competitive concerns, and uncertainty about policy guidelines. This restricted the level of visibility into certain technical or organizational processes. To mitigate this limitation, the study discusses the primary findings from the interview data using similar empirical work to build a more comprehensive understanding of newsroom practices in the context of AI in Kenya and elsewhere.

Third, the study was limited by the availability and workload of participants. Journalists and editors in busy newsroom environments often had constrained schedules, which affected the duration and depth of some interviews. To address this, the study employed flexible interview scheduling and conducted follow-up clarifications phone calls to supplement shorter interviews.

Fourth, the institutional scope of the study involved only two mainstream media houses. While these organizations represent influential actors in Kenya's broadcast and digital media landscape, the findings cannot be generalized to all Kenyan newsrooms or to smaller, resource-limited outlets. This limitation was addressed by situating the study findings within broader national, regional, and global literature and by clearly defining the study's scope as exploratory and context-specific.

Lastly, the study relied on self-reported data, which may be influenced by personal perceptions, professional interests, or limited awareness of backend AI processes within newsrooms. To manage this, participants were drawn from multiple roles, including reporters, editors, and technical staff to ensure diverse perspectives and reduce the risk of bias arising from a single group.

1.8. Chapter Summary

This chapter introduced the research study on AI integration in news production and distribution in two mainstream media houses in Kenya. It began by defining AI as a branch of computer science focused on creating systems capable of performing tasks that typically require human intelligence, including problem-solving, decision-making, language understanding, and pattern recognition. The chapter then highlighted the transformative potential of AI in journalism, noting how AI-powered tools are reshaping traditional newsroom practices by improving efficiency, automating routine tasks, and enhancing audience engagement. It also provided a brief history of AI development and an overview of the global, regional, and local perspectives on AI adoption in journalism, citing examples from leading media organizations like *Bloomberg*, *the Washington Post*, and the *Los Angeles Times* that have incorporated AI into their news production processes.

The statement of the problem established the need for this study by highlighting the empirical gap associated with AI adoption in newsrooms in Africa where contextual factors such as resource constraints uniquely influence AI integration. The chapter then articulated the aim of the study, research questions, scope, significance, and limitations. It underscored the importance of understanding how AI is transforming news production and distribution in

Kenya, providing valuable insights for journalists, media managers, policymakers, journalism training institutions, and civil society groups. This foundational chapter set the stage for the theoretical framework, methodological choices and analytical approaches discussed in subsequent chapters, which frame the study within the context of technological advancements affecting the news media sector.

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction

This chapter strengthens the thesis by exploring published scholarly work on the topic of AI integration in news production and distribution in Kenya, regionally (in Africa) and around the globe. It begins with a broader definition of the key constructs of the study, provides a detailed look at the main theories upon which this study was grounded, and reviews recent relevant literature on the subject from which the rationale of the study is drawn. The chapter then provides the rationale of the study following the empirical review and concludes with a summary of the key issues highlighted in the literature review, organized on the basis of the study's research questions

.

2.1. Broader Definitions of Key Constructs

This section presents the connection between AI and journalism, underscoring why the study is both timely and necessary for understanding the future of journalism in Kenya. It begins by examining journalism's role in society and how the industry has evolved in response to technological change. It then discusses news production and distribution as core processes through which journalism fulfills its mandate. Finally, it reviews foundational concepts about AI, focusing on the present technologies, such as generative (Gen) AI, large language models (LLMs), deep learning, and natural language processing (NLPs), that increasingly influence newsroom practices.

2.1.1. Journalism and its Evolving Role in Society

Journalism has long served as an essential pillar of democratic society by informing the public, facilitating debate, and holding power to account. As Kovach and Rosenstiel (2014) emphasize, journalism is fundamentally about producing verified information that citizens require to make meaningful decisions. It involves gathering, verifying, and presenting facts using principles of accuracy, independence, and fairness (Niblock, 2012). While the core ideals remain stable, the practice of journalism continuously adapts to changes in technology, audience habits, and the broader communication environment.

The digital era has profoundly altered how journalism is produced, distributed, and consumed. O'Sullivan (2020) notes that journalists now work in accelerated news cycles driven by online platforms that demand constant updates. At the same time, news organizations must uphold professional norms in an increasingly competitive landscape where user-generated content, influencers, and real-time social media challenge traditional authority. Perez-Seijo and Silva-Rodriguez (2024) argue that audience participation has grown significantly, creating more interactive but less predictable news ecosystems. The rise of algorithmically curated platforms has further complicated the information environment by shaping what users see based on behavioral patterns rather than editorial judgment.

Media transformation has also expanded journalistic storytelling forms. Traditional media such as radio, print, and television typically relied on linear narratives and one-way communication. Contemporary journalism increasingly embraces multimedia formats, videos, podcasts, data visualizations, interactive features, that allow deeper exploration of topics and more personalized audience engagement (Quionez & Meij, 2024; Rantanen &

Kelly, 2021). These shifts illustrate a profession grappling with technological innovation while seeking to preserve its foundational role in society. Figure 2 illustrates the two contemporary media categories.

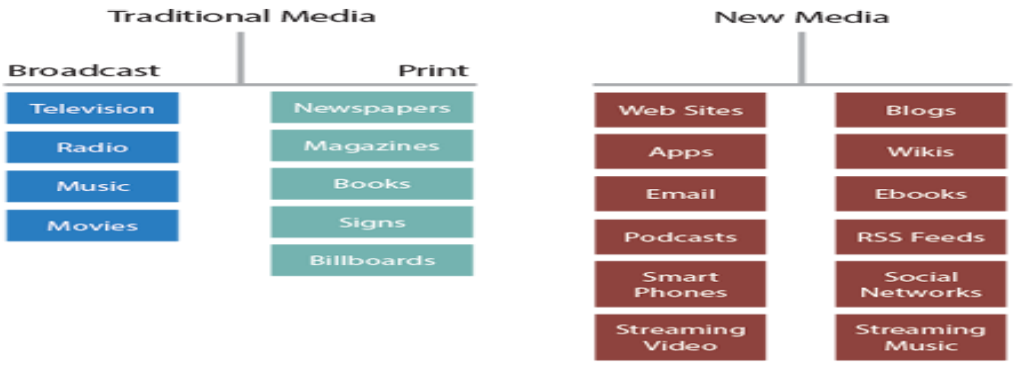

Figure 2: Types of Media

Source: https://globalmarketingprofessor.com/global-media-decisions/

2.1.2. Evolution of Media: from Analog to AI-driven content

Media evolution mirrors broader technological change. The analog era was characterized by mass-circulation newspapers, the rise of radio, and the transformative introduction of television in the mid-20th century, which combined audio and visuals into a powerful mass communication tool (Georgii, 2022). The 1990s ushered in the internet era, radically reshaping how audiences accessed news. Digital platforms increased speed, interactivity, and audience reach, while social media democratized information production and blurred the boundaries between professional journalists and ordinary users (Tallam et al., 2014; Ndlela & Mulwo, 2017).

As Jenkins (2006) observes, digital environments introduced participatory cultures in which consumers also became creators. Mobile technologies expanded this shift, enabling real-time reporting and feedback loops that redefined the relationship between producers and audiences. However, these advancements also raised challenges relating to misinformation, authenticity, and the fragmentation of public discourse.

By the 2010s, AI emerged as a new force reshaping media. AI-driven tools began supporting automated journalism, personalized content delivery, predictive analytics, and real-time content moderation (Mabweazara & Mare, 2021). The risks also became evident: deepfakes, algorithmic manipulation, and synthetic media introduced new forms of misinformation, as demonstrated during the 2024 U.S. elections, when misleading AI-generated content circulated widely (Al Jazeera, 2024). This evolution marks the transition into an era where newsrooms increasingly integrate AI tools across the editorial workflow. The Evolution of mass media is summarized in figure 3 below.

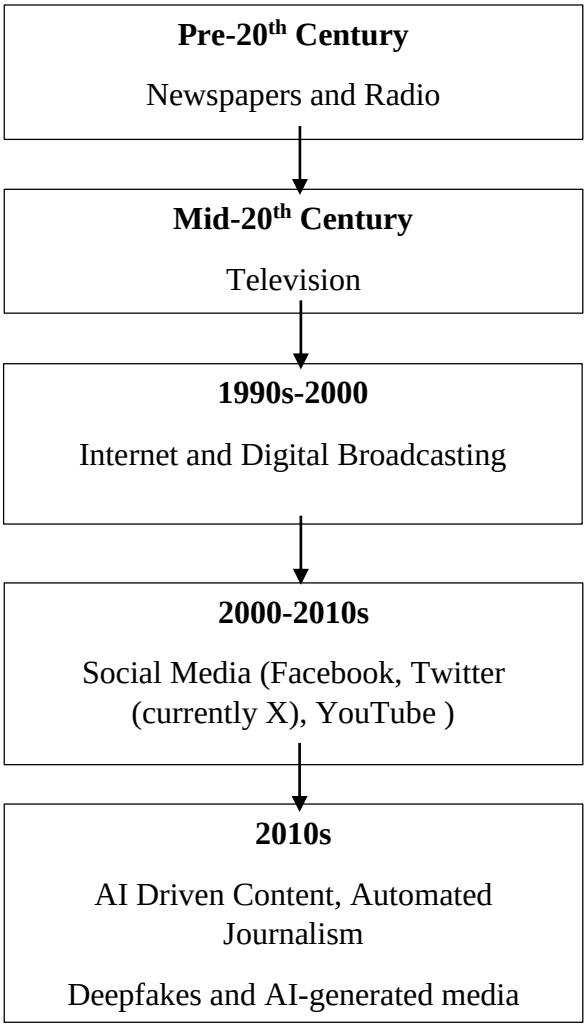

Figure 3: The evolution of media

Source: *Author*

2.1.3. Media Production and Distribution

News production and distribution are central to journalism's public-interest mission. The production process begins when journalists identify a newsworthy event through various sources, alerts, social media, press releases, and ongoing beats (Kovach & Rosenstiel, 2014). Verification remains essential; journalists must establish accuracy through background research before gathering primary accounts.

News production also involves news gathering. This involves collecting information through interviews, observations, and documentation (Niblock, 2012). Journalists must assess witness credibility, cross-check claims, and consult experts when needed (Kim, 2019). This process shapes the factual basis of the story and ensures that the final product meets professional standards.

Once relevant material for the news is gathered, writing or scripting begins. It involves translating gathered information into a narrative tailored for specific platforms, television, radio, online, or multimedia (Boczkowski & Mitchelstein, 2018). Increasingly, multimedia formats incorporate graphics, animations, and hyperlinks to enhance engagement.

Editing, then, ensures clarity, accuracy, and coherence of the narration. Editors refine story structure, verify details, ensure ethical compliance, and align the narrative with newsroom standards (Kim, 2019). In broadcast settings, editors also review visuals and audio, removing graphic or sensitive material, especially when children or victims are involved.

Distribution determines how audiences access news. Traditional platforms, print, radio, and television, have been complemented by websites, apps, and social media feeds that allow instant updates and direct audience interaction (Cohen, 2021). Algorithms play a major role in online distribution, shaping visibility and influencing audience exposure to specific stories. This requires journalists and editors to navigate both editorial values and platform logics.

It is important to note, however, that modern newsrooms face intense deadlines, resource constraints, and high editorial workloads. Processes such as verification, fact-checking, and

legal review, such as the BBC's policy checks, can be time-consuming but essential for credibility. In fast-paced environments, such as Kenya's *Citizen TV,* editors sometimes review content under tight time pressures, making consistency difficult. Newsrooms must also respond to changing technologies, shifting audience expectations, and persistent threats of misinformation. These pressures set the stage for AI's introduction as a potential support system across the production cycle. Figure 4 below presents a pictorial view of the news production and distribution processes.

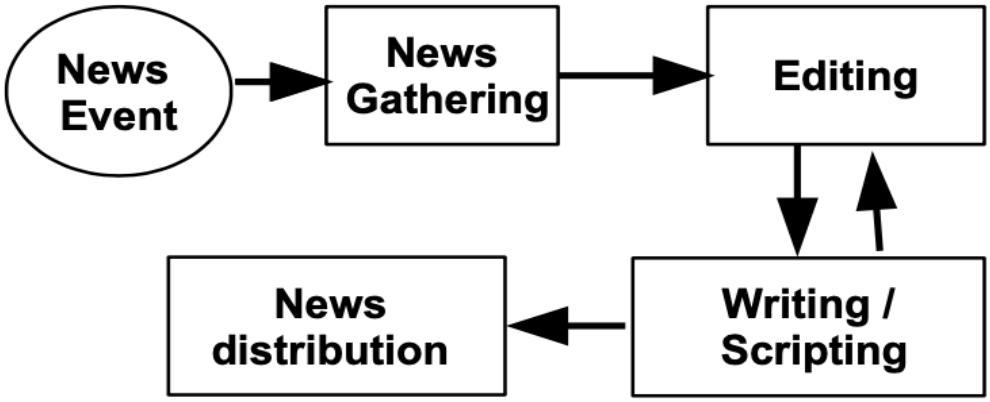

Figure 4: News Production Steps

Source- Author

2.1.4. Artificial Intelligence Technologies

Artificial intelligence broadly refers to computer systems capable of performing tasks that typically require human intelligence. From early symbolic systems to modern data-driven approaches, AI now spans a wide range of applications across sectors. The modern AI resurgence accelerated with deep learning breakthroughs and the founding of OpenAI in 2015, whose mission focuses on developing beneficial artificial general intelligence (OpenAI Charter, 2024). Importantly, OpenAI remains an independent organization, though Microsoft holds a minority stake.

Contemporary AI relevant to journalism falls into several categories: generative (Gen) AI and large language models (LLMs), natural language processing (NLP), and deep learning. These technologies increasingly support content creation, pattern detection, data analysis, and automated workflows in newsrooms.

Generative AI produces text, images, audio, and video based on user prompts. As a subset of LLMs, GenAI is trained on vast datasets, enabling it to generate content that appears human-like. It is currently among the most widely deployed forms of AI in organizations (Gartner, 2024). Tools such as *ChatGPT*, *Claude*, *Gemini*, *DeepSeek*, and *Microsoft Copilot* are becoming central to professional workflows due to their accessibility and conversational interfaces. Figure 5 below illustrates some of the currently popular GenAI tools.

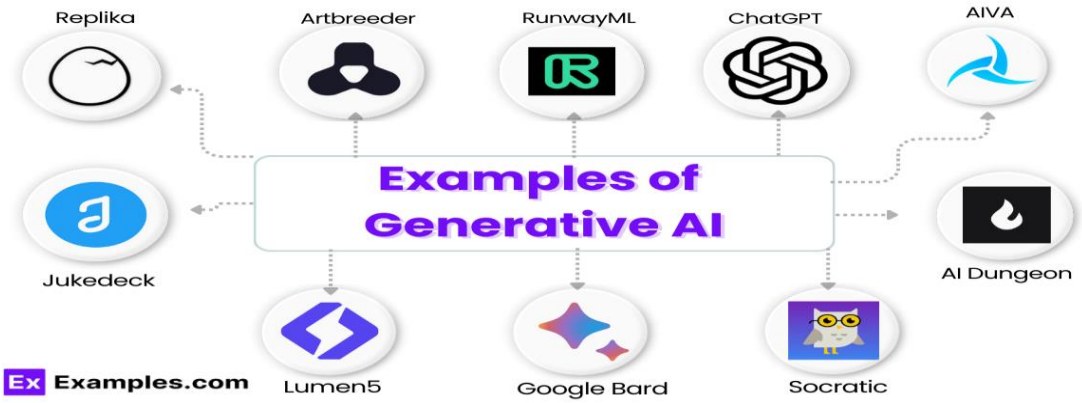

Figure 5: Examples of Generative AI

Source: Examples.com

In journalism, GenAI supports tasks including: writing article drafts and summaries, generating interview notes and meeting minutes, analyzing audience feedback, editing scripts, transcribing audio and video, and personalizing news alerts.

The following example demonstrates the capabilities of GenAI. On December 3, 2024, ChatGPT version 4.0 was prompted with: "*Generate a 20-word news report from the education sector in Kenya today*." ChatGPT responded: "*Kenya launches nationwide digital learning initiative, providing e-learning tools to schools in remote areas, improving access to education*."

Natural Language processing enables computers to understand and generate human language. It covers techniques such as tokenization, part-of-speech tagging, sentiment analysis, named entity recognition, and text summarization (Gunkel, 2020). NLP applications relevant to journalism include: machine translation (e.g., Google Translate), voice assistants (e.g., Siri, Google Assistant, Safaricom's Zuri), sentiment analysis for audience reactions, and predictive text and spell checking. In newsrooms, NLP assists in transcription, multilingual reporting, comment moderation, dataset analysis, and automated headline generation.

Deep learning mimics the human brain's structure through artificial neural networks. These systems learn from data by adjusting internal weights to recognize patterns (Muller et al., 2012). Neural networks underpin applications such as autonomous driving, facial recognition, image tagging, language translation, and personalized recommendation systems. An illustration of biological and artificial neurons I shown in figure 6.

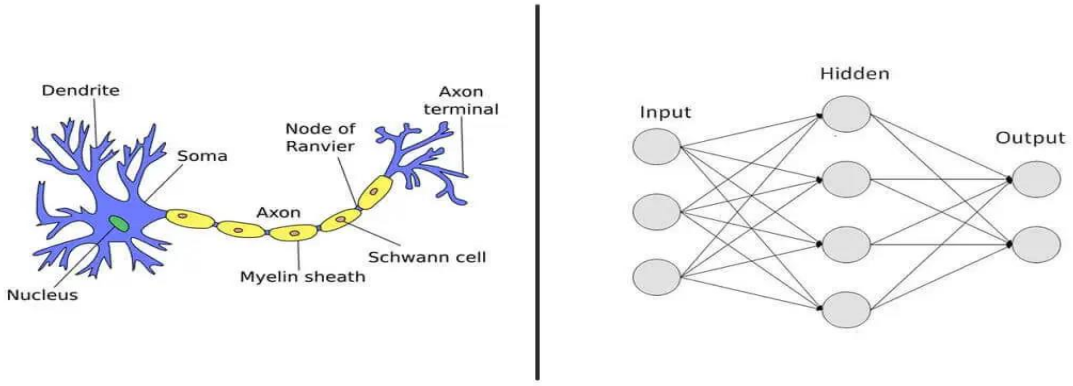

Figure 6: Illustration of Biological neuron (left) and Artificial Neuron (right)

In journalism, deep learning supports tasks such as: video analysis and tagging, image classification for content management, automated highlight extraction, and deepfake detection (Archana, 2024; Prakash, 2025; Saini et al., 2023). These capabilities enable more efficient content processing and verification.

2.1.5. Case Example: The BBC AI Production Project

The BBC's 2017 AI Production Project illustrates early newsroom experimentation with AI. The initiative explored how machine learning could streamline production, allowing automatic selection and cutting of footage for simple events (BBC, 2017). The system could generate broadcast-ready edits for events that were otherwise too costly to cover with full human crews. By automating repetitive tasks such as sorting footage, the project freed editors to focus on more creative decisions.

This example demonstrates the potential of AI to support newsrooms under increasing operational pressures. Despite growing global literature on AI in journalism, research from African contexts remains limited. The Kenyan experience, in particular, requires deeper exploration, given the country's active media landscape and emerging technological

ecosystem. Understanding how AI is being integrated into news production and distribution therefore provides valuable insights for media practitioners, policymakers, and educators.

2.2. Theoretical Framework

The researcher noted several theories that promised valuable insights vital to understanding and explaining the study. However, the Diffusion of Innovations Theory (DIT), Unified Theory of Acceptance and Use of Technology (UTAUT), and Technological Determinism Theory presented a compelling combination for grounding the study. The selected combination is rich with theoretical perspectives that illuminate the factors influencing individual acceptance of AI and the broader technological forces reshaping the practice of journalism. The researcher believes that together, these theories offered the right lens for understanding the study findings in relation to the research questions.

Specifically, the three theories provided a strong foundation for interpreting and understanding how innovations spread within organizations, how individuals decide whether to adopt them, and the structural influence of emerging technologies such as artificial intelligence in directing or reshaping newsroom processes and media output. Overall, integrating these theories provided a multidimensional perspective on understanding the patterns, motivations, and constraints that shape the integration of AI technologies in newsrooms within Kenya and beyond.

2.2.1. Diffusion of Innovations Theory

Diffusion of Innovations Theory posits that the adoption of new ideas does not occur simultaneously, but rather progresses through distinct adopter categories, including innovators, early adopters, early majority, late majority, and laggards (Rogers, 2003). The

theory argues that new ideas, technologies, or practices spread through a population over time through communication, often following a predictable pattern (El Malouf & Bahemia, 2025). The concept of diffusion of innovations first emerged in 1903 through the work of the French sociologist Gabriel Tarde (Kinnunen, 1996), who argued that the adoption of innovation follows an S-shaped diffusion curve.

Ryan and Gross (1943) furthered this work by introducing the adopter categories that became the core components of the current theory of Diffusion of Innovations, popularized by Everett Rogers (Kaminski, 2011). According to Rogers (2003), the technological adoption process often involves an initial few who are open to the new idea, hence adopting its use. These early innovators often "spread the word," leading to more and more people becoming open to the innovation, resulting in the emergence of a critical mass. Over time, the innovation becomes diffused amongst the population until it reaches its saturation point.

While the theory initially emerged from sociology and communication research, scholars have since applied its explanatory power widely across many disciplines, including media studies, information systems, and organizational behavior. Roger's (2003) work is one of the most influential frameworks for understanding how new technologies, practices, or ideas spread across organizations and society at large.

Proponents of the theory believe that five perceived attributes shape the adoption of a new idea, product, practice, or philosophy. These attributes include relative advantage, compatibility, complexity, trialability, and observability (Call & Herber, 2022). Due to these attributes of adoption, some innovations get embraced quickly while others face resistance. Rogers (2003) argues that people are more likely to adopt innovations that they consider

offering clear benefits, easy to understand, open to experimentation, aligned with existing norms, and give visible results.

Another significant contribution of the theory is its emphasis on communication channels. Rogers (2003) argues that interpersonal communication, especially from opinion leaders, plays a critical role in shaping people's attitudes toward innovation or new ideas. In organizational settings such as newsrooms, opinion leaders and shapers typically include senior editors and technically skilled journalists whose early adoption influences others to follow suit. This way, the internal dynamics of communication become central to understanding how and why innovations diffuse within media institutions.

Despite its key contributions, Diffusion of Innovations Theory has its share of limitations. While it significantly emphasizes the inherent qualities of innovation, the theory pays little regard to the role of contextual factors such as disparities in resources, power relations, and institutional constraints (Greenhalgh et al., 2004). Additionally, the discrete adopter categories in the theory may oversimplify complex decision-making processes associated with such things as the uptake of new technologies, especially in non-voluntary cases where managerial directives or other forms of pressure influence such decisions (Çakıroğlu et al., 2022). Some critics have also pointed out the assumption of a linear diffusion process as a limitation, since real-world technology adoption may often be more complex and non-linear (Lund, 2025). Empirical studies have supported this criticism, showing that actual adoption patterns tend to deviate from the model provided in the theory (Çakıroğlu et al., 2022; Kauffman & Techatassanasoontorn, 2009; Lund, 2025).

Its limitations notwithstanding, the Diffusion of Innovations theory is highly relevant to this study. The integration of artificial intelligence technologies into Kenyan media houses mirrors many of the dynamics that Rogers describes in the theory of Innovation Diffusion. For instance, the perception of AI's relative advantage can significantly shape adoption decisions among journalists and their managers. Similarly, compatibility becomes a relevant issue when artificial intelligence tools must align with existing ethical standards, journalistic norms, and the overall newsroom culture. Furthermore, staff who perceive new AI technologies as difficult to use may find that complexity to be a reason to resist the innovation altogether.

Trialability and observability are other aspects that are particularly relevant to the Kenyan media context, where piloting AI tools in specific departments is a common practice in organizations.

By applying the Theory of Innovation Diffusion, this study situates the adoption of artificial intelligence technologies within a broader understanding of how innovations spread, why different people or groups adopt such innovations at different rates, and how organizational communication shapes perceptions of the value of new technologies and ideas. This makes the Diffusion of Innovations Theory a key pillar in this study's theoretical framework.

2.2.2. Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) offers a comprehensive explanation of why people decide to adopt or reject new technologies. With Venkatesh, Morris, Davis, and Davis (2003) as the key proponents, the theory consolidates eight earlier models of technology acceptance into one more effective framework (Dwivedi

et al., 2017; Venkatesh et al., 2003). It combines elements from the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), the Motivational Model, the Innovation Diffusion Theory, the Social Cognitive Theory, the Theory of Reasoned Action (TRA), the Model of PC Utilization (MPCU), and the combined TAM and TPB model (C-TAM-TPB) (Venkatesh et al., 2003). By consolidating several earlier models into one, Venkatesh (2003) recognizes that multiple, overlapping, cognitive, social, and contextual factors work to shape technology acceptance. It also reflects the author's recognition that earlier frameworks often explained adoption only partially or in isolated contexts (Korkmaz et al., 2021).

Venkatesh et al. (2003), in their UTAUT model, propose four core factors that determine an individual's behavioral intention to use any technology. These determinants, as highlighted by Chao (2019), include performance expectancy, effort expectancy, social influence, and facilitating conditions. Performance expectancy, identified as the strongest determinant, refers to the extent to which an individual believes that using the technology will enhance their work performance (Venkatesh et al, 2003). Effort expectancy underscores the perceived ease of use. Individuals are more likely to adopt a technology if they perceive it as intuitive or require minimal learning as opposed to one with a steep learning curve.

While these four factors predict behavioral intention towards the acceptance of information technology, they do not operate in isolation, as age, gender, experience, and voluntariness moderate their effects. Performance expectancy, for instance, is often a more influential factor among younger users, while effort expectancy plays a more significant role among older users (Magsamen-Conrad et al., 2015).

Like many theories that explain phenomena, UTAUT has some limitations. Its heavy reliance on intention as a factor of behavior overlooks factors such as environmental constraints that may prevent the use of technology, even in cases where the intention is high. The theory may also come across as overly complex and difficult to generalize due to the moderating variables. This is particularly so in organizational settings where technology use may be compulsory (Bagozzi, 2007). Furthermore, the Unified Theory of Acceptance and Use of Technology pays limited attention to cultural and contextual factors likely to shape people's perception of usefulness and ease of use.

Despite its inherent limitations, UTAUT remains one of the most widely applied frameworks in technology adoption research, especially due to its clear constructs that are measurable and adaptable to organizational contexts.

The theory is particularly relevant to this study as it offers a robust foundation for examining the individual-level factors that influence media practitioners' acceptance and use of artificial intelligence technologies. UTAUT's proposed determinants of behavioral intention to use technologies are especially applicable to the study of AI adoption in news production and distribution. Performance expectancy directly applies to how media staff may evaluate artificial intelligence tools based on their ability to enhance the creation of news stories, improve accuracy, and accelerate the distribution of news content. Journalists can also evaluate AI tools based on their ability to expand audience engagement, where they may be more inclined to adopt tools that promise these positive outcomes as opposed to tools that do not offer clear enhancements. Effort expectancy is another pertinent factor, particularly in relation to complex AI systems that require new skills or more. For staff with limited digital

training, AI tools involving or data-driven audience analytics may appear intimidating, leading to a high likelihood of resistance. This dynamic is highly relevant to Kenyan newsrooms characterized by limited resources for continuous upskilling.

By integrating the UTAUT framework, this study gains a valuable analytical lens for effectively interpreting the third research question on the challenges hindering AI adoption and integration in the Kenyan mainstream media houses.

2.2.3. Technological Determinism Theory

Technological Determinism Theory posits that technology is the primary force that influences the structures, behaviors, and processes of society. The theory asserts that advancements in technology lead to changes in how societies function (Ungravsky, 2024). For example, the rise of the internet has transformed communication, information dissemination, and even social interactions. Essentially, once a technological tool is introduced, it initiates shifts in workflows, communication practices, and social structures that send ripples across organizations (Ungravsky, 2024).

In media studies, this theory has been particularly influential. One of its main proponents, Marshall McLuhan, captured its spirit in his famous maxim, “We shape our tools, and they, in turn, shape us” (Jan et al., 2020, p. 135). McLuhan (1964) famously argued that “the medium is the message,” meaning that the real impact of a medium comes not from its content but from the way it changes scale, pattern, and pace in human affairs (McLuhan, 1964). In other words, the form itself through which information is conveyed (such as television, the internet, or print media) has a significant impact on society, often more so than the content itself or the specific information it carries.

There are two main variants of technology determinism theory, namely hard and soft determinism. Hard determinism holds that technology develops independently of social influences and determines the direction of social change. The soft determinism acknowledges that while technology influences society, human agency and social contexts also play crucial roles in shaping how technologies are adopted and utilized (Dafoe, 2015; De la Cruz Paragas & Lin, 2016; Hauer, 2017).

Despite its influence, this theory has been subject to some criticism. The fact that it is reductionist is a popular argument that is hard to contest. The theory oversimplifies complex social phenomena by attributing social change solely to technological development (TheCommSpot, 2025). Daniel Chandler (1995) argues that technological determinism mistakenly assumes that technology is the primary driver of social change, a perspective that overlooks the roles of human agency, cultural context, and institutional factors. Chandler particularly challenges the theory's treatment of technology as having intentions and autonomy (Chandler, 1995).

Regardless of its limitations, Technological Determinism Theory is particularly relevant in research assessing the impact of new technologies, such as artificial intelligence and social media, on various aspects of life, including journalism, education, and public discourse. It suggests that artificial intelligence technologies such as automated content generation, data analytics, and more are not just tools that media houses adopt, but forces that reshape newsroom practices. As these tools become embedded, they can change how journalists research, create, and distribute news, as well as how audiences consume it. The theory raises critical questions about agency and control within the media landscape. As media

organizations increasingly adopt AI tools for efficiency and personalization, concerns about bias, transparency, and ethical implications emerge.

The potential for AI to reinforce existing societal biases or create filters challenges the foundational journalistic principle of serving the public interest (O'Sullivan, 2020). This interplay between AI technologies and media practices illustrates the dual nature of technological determinism: while AI can enhance media capabilities, it also poses risks that require careful consideration and regulation to ensure that the media remains a platform for diverse voices and informed public discourse.

This perspective aids in understanding how the implementation of AI technology in the media industry has transformed content creation, distribution, advertising, and the dynamics of the workforce. It acknowledges that AI is not merely a passive tool; rather, it actively shapes and reconfigures the media landscape (Dafoe, 2015).

2.3. Empirical Review

Several studies have explored how media organizations are adopting forms of AI technologies in their practice, including AI-driven tools, automated newsroom processes, and other forms of AI-powered technologies. As AI continues to influence and reshape journalistic practice, how its integration occurs varies significantly across regions and from one media organization to another. This section of the thesis provides a detailed review of existing scholarly work on the integration of artificial intelligence technologies in news production and distribution globally, regionally (in Africa), and locally in Kenya, with a view to situating the present study within the broader academic discourse on the topic of study.

2.3.1. How AI Has Been Integrated into News Production Processes

Several scholars have studied the integration of AI technologies into news production over the past decade as media organizations experiment with various forms of AI-driven functionalities and tools. One of the most consistent trends globally is the potential of AI technologies to transform news production through automated workflows and data-driven output. However, these technologies also raise ethical concerns and face structural constraints that affect their adoption.

Danzon-Chambaud's (2021) systematic review of existing empirical research on automated journalism, also referred to as robot journalism, determined that it has been implemented widely in areas with readily available structured datasets. These areas include finance, sports, weather, and real-time updates, mainly because these domains allow for predictable automation. The analysis of findings from 33 empirical studies conducted primarily across Europe and North America further showed that the majority of global research has focused on technological capabilities and text-generation models, with comparatively fewer studies examining the journalists' perspectives or the organizational challenges surrounding integration (Danzon-Chambaud, 2021). Fanta's (2027) comparative investigation into automated journalism in more than a dozen news agencies provides further evidence that European news agencies have adopted automation extensively in areas with structured data feeds already forming part of editorial routines, such as financial reporting and sports coverage.

Thurman et al. (2017), drawing on hands-on workshops with professional journalists from organizations such as the CNN, BBC, and Reuters, found that journalists generally perceive

automated writing tools as useful for producing routine, data-driven stories, but remain skeptical about their ability to replicate human news judgment or contextual sensitivity. This study effectively highlights the continuing importance of editorial expertise and human oversight in journalistic practice, even while acknowledging the efficiency gains that automated systems offer.

Sonni et al. (2024) echo these perspectives. After analyzing 127 studies on AI journalism, the researchers found that the growing use of AI to automate news writing, data processing, and content personalization comes with editorial accountability concerns and fears that such automation may erode the nuance of news reporting, further highlighting the need to retain some human input.

Integration of AI in editorial processes has also been conceptualized through more specialized frameworks, with De-Lima-Santos and Ceron's (2021) work exemplifying this take. The scholars argue that newsrooms have primarily utilized machine learning, natural language processing, computer vision, and optimization tools in their journalistic work.

In South Africa, which is often cited as one of the continent's more technologically advanced media markets, journalists are increasingly experimenting with AI tools for transcription, information retrieval, and data analysis. Through thematic analysis of qualitative data from interviews with South African journalists, Solomons (2024) found that journalists recognize AI's potential to enhance efficiency, but remain cautious about overreliance on such automations. Many South African journalists from print, broadcast, and digital media outlets fear that artificial intelligence tools could propagate misinformation, erode core journalistic values, and even threaten their job security.

Similar concerns emerged in Adjin-Tettey's (2024) study of the use of AI tools among Ghanaian and South African journalists. While the interviewed journalists lauded these technologies for their impact on productivity, they equally raised concerns about ethical risks, adding lack of training and resource challenges to the list of concerns when it comes to AI use in newsrooms in Africa.

Whereas Sonni et al. (2024) corroborate these findings by identifying limited technical capacity, inadequate infrastructure, and ethical concerns as some of the unique constraints that newsrooms in Africa face, they go a step further to propose a possible solution. The scholars identify capacity building tailored to African contexts as a possible panacea to the unique AI adoption constraints in the African media landscape.

As the use of generative AI tools such as ChatGPT for routine newsroom tasks such as story drafting, brainstorming of headlines, translation, and data research is already widespread across Sub-Saharan Africa, the use remains largely informal and unregulated (Gondwe, 2023).

Journalists point out inaccuracies in AI output, possible biases, and ethical dilemmas around disclosure and plagiarism as some of the risks and concerns facing adoption. As the study notes that newsrooms in Africa urgently need clear guidelines for generative AI use, it explicitly identifies a possible enabler (clear guidelines) necessary to overcome the hindrances to AI adoption identified in the study and several others like it.

Larraz (2023) further notes that full automation remains unattainable due to structural challenges, including limited local-language AI models and poor data availability. By

stressing the importance of combining human expertise with AI tools in African fact-checking, this study echoes Thurman et al. (2017) and Sonni et al.'s (2024) calls to retain human oversight and input while using artificial intelligence technologies.

The integration of AI technologies in Kenyan newsrooms is not unique from the African contexts. Like journalists in Southern and Western African countries, media practitioners in Kenya primarily use AI tools for editing, transcription, and workflow organization, newsroom analytics, and data processing, among other routine tasks, with interest in automation growing, but marked with concerns (Kioko et al., 2022; Muya, 2024; Solomons, 2024). While ethical concerns and limited technical expertise remain similar, AI adoption challenges in Kenya as in other African countries, Kioko et al. (2022) further add unpredictability of the technology's impact and high costs to the list of factors driving the lack of adoption of AI technologies in Kenyan newsrooms. In a bold conclusion, this study proposed that human and automated journalism will become closely integrated in the future, urging Kenyan newsrooms to prepare for the integration of AI by laying the groundwork for its implementation. Kioko et al. (2022) further urged schools to update their curricula to adequately prepare learners to work with emerging technologies, including AI.

Anyango (2025) echoes Kioko's (2022) call for structured training as one of the key approaches for addressing the challenges of AI adoption. This widespread mention of training in scholarly work on AI integration in newsrooms underscores the vital role of education and capacity building in AI adoption and use (Anyango, 2025; Kioko, 2022; Waguda, 2025).

After studying how journalists in Kenya, South Africa, Ghana, and Nigeria perceive and utilize AI tools in news production, Umejei et al. (2025) concluded that African journalists perceive the utilization of AI tools in news production through a "framework of optimism, pessimism, and pragmatism," reinforcing the notion that AI adoption in news production in Africa, and specifically Kenya, remains uneven but growing.

Beyond newsroom practice research in journalism education indicates a parallel movement toward strengthening AI literacy. Waguda (2025), while examining journalism training at Rongo University, found that AI-related content is slowly being incorporated into media curricula, though limited institutional resources, inadequate faculty proficiency in AI, informal collaborations across departments, fragmented curriculum integration of AI, and the absence of a formal AI policy hinder progress. This gradual integration of AI into formal media education suggests that Kenya is beginning to prepare future journalists for technologically advanced media practice.

Together, the existing body of knowledge on AI integration in news production reveals a landscape where AI is beginning to influence newsroom processes but has yet to be deeply integrated into core editorial functions and organizational policies. Nonetheless, sufficient evidence points to structured and strategic adoption of AI technologies in news production in the near future.

2.3.2. How AI Has Been Integrated into News Distribution Processes

The integration of various forms of AI into news distribution processes has transformed how audiences encounter and consume news and other media content. News recommender systems, personalized news feeds, and algorithm-based ranking mechanisms are some of the

AI technologies that media organizations are increasingly incorporating in their content distribution processes, even though full adoption is yet to be realized across the globe. Literature shows that while AI technologies enhance efficiency, they also raise various concerns among users.

In an analysis of the evolution of news recommender systems and the technical demands associated with delivering real-time, personalized, content, Karimi and Jannach (2018) delivered one of the most comprehensive examinations of AI-mediated news distribution. Their study highlights that news differs from other recommendation domains because of the need for freshness, diversity, and exposure to a wide range of viewpoints. While AI-driven personalization enhances engagement by tailoring news to specific target audiences based on their preferences, it also risks narrowing exposure.

Raza and Ding (2022) take the research on news recommender systems (NRS) a step further by reviewing state-of-the-art developments in NRS powered by deep learning technology, providing a valuable lens into recent advances in AI-driven news distribution. The study finds that recent advances in deep learning have addressed many of the limitations of traditional recommendation methods, improving the ability to model complex user-news interactions and dynamic content.

Wu et al. (2023) extend this conversation by offering an in-depth review of personalized news recommendation methods and the problems and challenges associated with their deployment. Some of the problems identified in the study include those related to privacy and misinformation detection, effectively highlighting the need for ongoing oversight from developers and news organizations in AI-driven news distribution.

The integration of AI into news distribution has been particularly consequential for public service media, which face pressure to maintain the universality of access, reach, and content. Sehl & Eder (2023), examining European public service broadcasters, found that organizations such as the BBC, ARD, and NRK explore personalized content recommendation systems with caution due to concerns about fragmenting audiences. Thus, public service media tend to design recommender systems that prioritize elements like diversity and transparency, unlike commercial outlets that optimize their algorithms for engagement (Sehl & Eder, 2023).

Evidence suggests that AI has restructured gatekeeping process in news distribution. Platforms such as *Facebook*, *Google*, and *YouTube* are now dominant news distributors, displacing the traditional editorial role of journalists. Through their algorithms, platforms determine which stories gain visibility and which ones do not. They decide how each content ranks, and how audiences encounter them (Napoli, 2029). Salonen et al. (2023) echo these findings in what they term "post-publication gatekeeping," where social media algorithms, user interactions, and platforms shape content visibility, thereby sharing the gatekeeping power with news workers.

Many African newsrooms are increasingly following global trends in AI use in news distribution. This is likely because African media houses, like their Western counterparts, rely heavily on global digital platforms like *Facebook*, *Google*, *TikTok*, *YouTube*, and *X* for distribution of news content. Multiple studies show that AI-driven technologies such as algorithmic ranking, personalization systems, automated verification workflows, and

audience analytics are playing an increasingly influential role in shaping what news reaches different segments of the public.

Daramola & Etim (2022) provide one of the clearest regional assessments of how platform affordances determine news visibility in Sub-Saharan Africa. Evidence from South Africa, Nigeria, and Kenya reveals that social media algorithms significantly influence the circulation of news. The technology prioritizes content that aligns with engagement-driven metrics, often favoring sensational or emotionally charged material over public-interest reporting. The study argues that this dynamic effectively shifts gatekeeping power from newsrooms to platform algorithms.

As a result, African Media often adapt their distribution to the logic of these platforms rather than base it on their editorial considerations. Anyanwu et al. (2024) further illustrate how audiences experience algorithmically mediated news distribution. The study notes that Nigerian audiences increasingly encounter news through algorithmically curated feeds, trending lists, and recommendation systems. However, due to concerns about misinformation, many audiences turn back to traditional media platforms to verify online content (Anyanwu et al., 2024).

Audience analytics are increasingly influencing news distribution strategies in African newsrooms. In Nigeria, online newsrooms rely on predictive analytics, click-through rates data, and engagement information from analytics dashboards to guide distribution decisions. These data inform editorial priorities, including which stories they amplify through social media promotions and priority placements (Adeniran, 2024). Similar reliance on AI-supported analytics is evident in studies in Kenya. Kioko (2022), while examining BBC

Africa's Nairobi Bureau and Radio Africa Group's newsroom adoption of AI technologies, highlighted the growing use of AI-supported analytics for audience segmentation, content performance monitoring, and distribution planning. Journalists interviewed in the study reported using AI-powered dashboards to understand audience behavior and to decide when and how to distribute stories across digital channels.

Muya (2024) provides further evidence of AI use in news distribution, with a focus on Kenya's broadcast media. According to the study, Kenya's broadcast media practitioners, such as editors and producers, rely heavily on human judgment. However, AI-enabled tools are increasingly used to optimize distribution on platforms such as *YouTube* and *Facebook*, in addition to being used to edit social media scripts and enhance metadata for video content (Muya, 2024).

Case-specific evidence from major Kenyan media houses confirms these patterns. Kerongo's (2025) study on the *Nation Media Group* documents how the organization has incorporated AI-supported systems into their content management and distribution pipeline. These include automated scheduling, A/B testing of headlines, and social media optimization (Kerongo, 2025).

Therefore, the evidence from different studies across different regions paints a picture of gradual but meaningful integration of AI into news distribution, driven primarily by the demands of digital audiences and the logic of platform algorithms.

2.3.3. Challenges Hindering the Integration of AI Technologies

Artificial intelligence technologies hold promise for enhancing efficiency and offer several other benefits to news organizations that increasingly rely on these technologies. However, significant challenges accompany this integration. Studies highlight several obstacles, one of the most recurrent being ethical and transparency concerns. In Europe and North America, journalists and editors remain uneasy about the lack of algorithmic transparency, data biases, privacy issues, and the risk of AI "hallucinations," all of which threaten journalistic accuracy and public trust (Gutierrez-Caneda, 2024). These ethical concerns are compounded by the fear that AI systems may reproduce or amplify existing societal biases. Systematic reviews further note that major news organizations lack robust mechanisms for auditing AI systems or ensuring the algorithms remain accountable. This situation often leads to cautious and often fragmented integration of AI systems into news production and distribution (Sonni et al., 2024). Such ethical uncertainties have slowed AI integration globally, especially in media houses that prioritize editorial integrity.

Beyond ethical risks, evidence shows that organizational and skills-based limitations significantly hinder AI integration. Most journalists lack the technical expertise required to understand or manage AI-driven workflows, which creates unwanted dependencies and reduced internal control over editorial processes (Trang, 2024). Limited training budgets common in various media organizations, as well as newsroom cultures that remain rooted in traditional reporting norms, further exacerbate the skills gap. As a result, AI systems are usually restricted to low-risk tasks such as transcription, while editorial functions requiring nuanced judgment remain human-driven. Research also highlights institutional resistance, where journalists express concerns about job displacement and reduced autonomy, especially

in newsrooms undergoing rapid technological transformation (Lewis et al., 2025; Gutierrez-Caneda, 2024).

Audience trust and business model considerations directly influence the use of artificial intelligence in news distribution. Audiences are generally less trusting of news generated by AI compared to human-authored material, especially on sensitive topics like crime and politics (Nanz et al., 2025). Such skepticism limits the willingness of media organizations to automate news distribution or rely on AI-generated summaries. Global industry analyses also warn that AI systems deployed by external platforms may divert traffic away from the original publishers, undermining their business models (Lewis et al., 2025).

Technical and infrastructural challenges further constrain the integration of AI technologies in editorial processes across the globe. Reviews indicate that many newsrooms struggle with fragmented technological ecosystems, where legacy content management systems are incompatible with newer AI tools (Sonni et al., 2024). Integrating systems such as automated text generators, recommendation engines, and data analysis platforms requires substantial investment in digital infrastructure, which many media organizations are unable to afford. Even in technologically advanced regions, integrating AI into fast-paced news production cycles presents workflow disruptions that reduce efficiency in the short run.

In Africa, the integration of AI technologies into news production and distribution remains comparatively limited and uneven. A mix of structural, socio-technical, and institutional constraints causes this situation. African newsrooms face substantial infrastructural limitations that impede the use of advanced AI technologies. In Tanzania, for instance, Ishengoma and Magolanga (2025) found that weak digital infrastructure, unreliable internet

connectivity, and outdated newsroom equipment significantly restrict experimentation with AI tools. These infrastructural challenges are compounded by the absence of AI systems tailored to African linguistic and cultural contexts, for example, tools that can process local languages with adequate accuracy. Similar issues emerge in continent-wide analyses, showing that Africa lacks the robust data ecosystems and language-specific datasets necessary for training effective AI models (Tapo et al., 2024).

Skills, capacity, and organizational readiness form the second major category of challenges facing newsrooms across African countries. Multiple studies highlight a pervasive gap in AI literacy among journalists, editors, managers, and technical staff across the continent. Umejei et al. (2025), in a comprehensive study of four African countries, revealed that many journalists lack even basic familiarity with automation tools, leading to fears of being replaced by machines and skepticism about the role of artificial intelligence in editorial decision-making. This aligns with findings by International Media Support (2023), which reported that most African media organizations have no structural training programs, in-house experts, or long-term strategies for digital transformation.

In Kenya, AI integration into news production and distribution remains at a formative stage, shaped by a unique combination of institutional, infrastructural, and cultural constraints. Although major media houses such as Nation Media Group, Standard Group, KBC, and emerging digital-first organizations have begun experimenting with artificial intelligence, significant structural challenges limit adoption. In particular, the shortage of technical expertise and the lack of sustained capacity-building programs remain glaring problems. Across multiple newsroom case studies, journalists and other media practitioners report

limited understanding of AI tools, insufficient training opportunities, and an overreliance on basic digital applications rather than advanced automation (Kioko, 2022; Ngugi, 2024). These skills-based constraints restrict AI use to preliminary tasks like transcription, headline suggestions, or metadata tagging, while more sophisticated applications like automated story generation or personalized content generation remain largely undeveloped.

The absence of formalized AI governance frameworks in Kenya significantly limits integration within newsrooms. While national bodies such as the Media Council of Kenya (MCK) have begun issuing guidelines for responsible AI use, these frameworks remain largely advisory and lack statutory enforcement mechanisms (Media Council of Kenya, 2025). As a result, news organizations operate without standardized policies in algorithmic transparency, disclosure of AI-assisted content, verification procedures for AI-generated material, o ethical guidelines for automation. According to Kioko (2022), this policy vacuum creates uncertainty regarding liability, accuracy, copyright, and data protection. These concerns discourage editors from integrating AI tools into high-stakes editorial environments.

Ethical and editorial challenges also feature prominently in Kenyan AI discourse. Journalists and editors express concern that AI-generated content may compromise credibility, particularly due to risks of factual inaccuracies or AI “hallucinations” that Kenyan audiences may interpret as deliberate misinformation (Anyango, 2025). This is a critical concern given the highly competitive and particularly charged nature of Kenya’s media landscape, where misinformation can easily influence public discourse. Journalists also fear job displacement

and the erosion of editorial judgment, reinforcing resistance to automation within newsrooms (Kioko et al., 2022).

Collectively, these studies demonstrate that the challenges hindering AI integration in the Kenyan mainstream media are multidimensional and interlinked. They encompass skills deficits, inadequate data ecosystems, governance gaps, financial limitations, technological constraints, and cultural resistance rooted in longstanding editorial practices. Understanding these local dynamics is essential for analyzing how Kenyan media houses negotiate the complexities of AI adoption and for identifying the conditions that would make AI integration both feasible and ethically sound within the county's evolving media environment.

2.4. Rationale of the study

The empirical review reveals that while artificial intelligence is reshaping journalism globally, particularly in North America, Europe, and parts of Asia, the evidence from African contexts remains comparatively thin, fragmented, and uneven. Existing global research documents advanced forms of AI integration such as automated news writing, audience analytics, personalization systems, and structured governance frameworks guiding newsroom adoption. In contrast, African studies consistently highlight experimentation rather than full integration, noting that AI use remains informal, skills-dependent, and largely restricted to low-risk or routine tasks. Several studies from South Africa, Ghana, Nigeria, and Kenya identify promising uses of AI for transcription, translation, fact-checking, and data analysis, yet they also underscore persistent constraints including infrastructural

limitations, high costs, limited training opportunities, ethical concerns, and the absence of institutional strategies for responsible AI adoption.

In Kenya, the literature shows a similarly emerging but underdeveloped pattern. Studies indicate that journalists increasingly use AI for editing, analytics, workflow support, and social listening; however, there is limited empirical evidence explaining *how* these tools are embedded in everyday newsroom routines, editorial decision-making, and distribution systems. Most existing Kenyan research focuses on cataloguing AI tools, highlighting ethical concerns, or discussing readiness gaps, without examining the actual processes through which AI is integrated into production and distribution practices. Consequently, several critical questions remain insufficiently addressed in the literature: How do journalists and data specialists engage with AI tools in real newsroom environments? What organizational, technological, and contextual dynamics shape these interactions? And how does AI integration influence newsroom efficiency, content quality, and distribution strategies?

These gaps are notable given Kenya's rapidly evolving media environment, characterized by shifting digital business models, resource constraints, and varying levels of technical capacity. Understanding the practical realities of AI integration within this context is essential for developing newsroom strategies, informing policy guidelines, and strengthening journalism training. Without empirical insights into how AI is being integrated into production and distribution processes, media stakeholders will continue to rely on assumptions or external models that may not reflect Kenya's unique media ecology.

For these reasons, this study provides much-needed empirical evidence on the integration of AI technologies in Kenyan broadcast and digital newsrooms. By examining how AI is used

in content creation, quality enhancement, content curation, audience targeting, and distribution workflows, and by identifying the challenges that shape this integration, the study directly addresses the knowledge gaps identified in the literature and contributes to broader debates on the future of journalism in non-Western contexts. The rationale therefore supports the study's overarching aim: to understand how AI technologies are being integrated into news production and distribution within Kenya's mainstream media and the factors that influence this integration.

2.5. Chapter Summary

This chapter reviewed recent literature relevant to understanding how AI is being integrated into news production and distribution within Kenya's mainstream media. It began by defining the key constructs of the study, including news production and distribution and AI technologies, showing how technological change continues to reshape journalism and newsroom practices globally and locally. The chapter then examined the theoretical foundations guiding the study, drawing on the Diffusion of Innovations Theory, Unified Theory of Acceptance and Use of Technology, and Technological Determinism to explain how journalists and media organizations interact with emerging technologies such as AI.

The empirical review explored global, regional, and Kenyan scholarship on AI use in newsrooms, identifying how AI supports tasks such as automated writing, analytics, transcription, personalization, and distribution. It also highlighted persistent challenges, including infrastructural gaps, limited AI literacy, ethical concerns, insufficient governance frameworks, and organizational resistance. These insights revealed that while AI is widely

used in in African and Kenyan newsrooms, its integration remains exploratory, uneven, and shaped by contextual constraints.

The chapter concluded by outlining the rationale for the study, emphasizing the need for empirical evidence on how Kenyan journalists interact with AI tools, how these technologies are embedded in newsroom routines, and how contextual factors shape integration. The gap in knowledge identified justified this study and directly linked back to the study aim of examining AI integration in news production and distribution processes within mainstream media in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

2.0. Introduction

This chapter details the methodology employed in this study. It begins by outlining the chosen research approach and its underlying paradigm, followed by a description of the specific research design. The research setting, target population, and sample are then defined. Subsequent sections give the data collection instruments and measures taken to ensure trustworthiness, focusing on the four core components of credibility, transferability, dependability, and confirmability. Finally, the chapter explains the pilot study procedures and the ethical considerations that guided the research.

2.1. Research Paradigm

The interpretive-constructivist research paradigm used in this study is based on the idea that human interaction and understanding co-create knowledge. According to this paradigm, reality is a social construct influenced by people's perceptions and behaviors within a particular context rather than an objective, isolated entity (Guba & Lincoln, 1994). According to Hua (2015), knowledge in this paradigm may be investigated through observation and descriptive accounts and is found in the specifics, meanings, behaviors, and connections that result from these interactions. According to Patterson (1990), participants are reflective actors who actively interpret and shape their reality.

Guided by this paradigm, the data collection process was approached with an open mind, prioritizing meaningful interactions with participants to gain in-depth understanding of their experiences and perspectives related to the research topic. Specifically, the study aimed to evaluate the difficulties associated with integrating AI technologies into Kenyan news

production and distribution media outlets, as well as to comprehend how AI has been incorporated into news production and distribution in Kenya. The study's commitment to the interpretive-constructivist paradigm, articulated by Guba & Lincoln (1994) and Hua (2015), is evident in the participants' in-depth accounts of their professional experiences using AI tools and how they affected their work.

2.2. Research Approach

The study adopted the qualitative research approach. According to Lim (2024) and Nasaji (2020), qualitative research is an approach to inquiry that emphasizes a naturalistic search for relativity in meaning, multiplicity of interpretations, particularity, detail, and flexibility in studying a phenomenon or the aspect(s) of it that a researcher chooses to focus on at a given time. It seeks to generate various possible meanings of a subject. This approach allows researchers to explore participants' perspectives and generate insights that quantitative methods may overlook. It enables the researcher to gain new insights into a topic where little research has been done (Ahmed, 2024). Artificial Intelligence is generally a new field that needs new insights from industry experts and practitioners, making it ideal for qualitative inquiry. This approach allows the researcher to capture the lived experiences of journalists, uncover context-specific challenges, and explore the nuanced ways in which AI is integrated into newsroom practices. It also provides a flexible framework for understanding the complex interactions between technology and journalism, where quantitative methods might miss critical insights into editorial decision-making and organizational dynamics.

2.3. Research Design

Research design is the plan and structure of investigation used to obtain evidence and answer research objectives (Mugenda, 1999). This study adopted a descriptive research design,

deemed well-suited for exploring the integration of AI technologies in news production and distribution. Descriptive designs are particularly effective in studies seeking to capture detailed information about current practices, perceptions, and challenges without manipulating the study environment (Babbie, 2020). In this context, the descriptive approach allowed the researcher to systematically document how AI is being integrated into newsrooms, including specific tools, workflows, and decision-making processes. It provided a structured framework for gathering qualitative data from journalists and media practitioners, enabling the study to describe the extent of AI adoption, its impact on editorial efficiency, and the challenges faced by media houses. This design also facilitated the identification of context-specific factors influencing AI use, making it particularly relevant for understanding the complex and evolving nature of TV and digital journalism in Kenya.

2.4. Research Area

This study was conducted within two mainstream media houses, located in Nairobi. Nairobi was selected because it hosts the headquarters of major broadcast and digital media organizations, where editorial, technological, and strategic decisions regarding news production and distribution are primarily made. The two media houses included one public broadcaster (KBC) and one private multimedia group (RMS), allowing the study to capture experiences from organizations with differing newsroom cultures and levels of digital investment. These organizations were also among the few that had publicly documented efforts to experiment with digital innovation, including AI-assisted workflows, and they provided formal access for research engagement (Kioko et al., 2022).

The selection of only two media houses reflects the study's case-study design, which prioritizes depth over breadth. Unlike broader sectoral surveys, this approach enabled an in-depth exploration of how AI technologies are integrated into specific editorial routines, production processes, and distribution workflows. While other major media houses such as *Nation Media Group* and *Standard Group* have also demonstrated interest in technological innovation, access limitations and the need to maintain a manageable scope meant that the study focused on two cases that were both information-rich and practically feasible to study within the available time and resources.

The study does not seek to generalize findings to all Kenyan newsrooms. Instead, it provides contextual insights into the integration of AI in selected broadcast and digital environments. These insights are intended to contribute to a growing evidence base on AI adoption in Kenyan journalism and to inform future comparative studies across a wider range of news organizations.

2.5. Study Population

A study population refers to the complete set of individuals sharing specific characteristics from which a sample can be drawn for research purposes (Ahmad et al., 2023). The population for this study comprised editorial personnel and data specialists working within the two selected mainstream media houses in Nairobi. This population included reporters, news anchors, editors, digital content producers, and data specialists who were directly supported news production and distribution processes through data-driven tasks. These categories of staff were appropriate for the study because the research focused specifically

on how AI technologies are integrated into editorial activities, rather than on the technical installation or back-end management of AI systems.

Within the two selected media houses, the accessible population included approximately 34 journalists who routinely engage in content creation and distribution tasks, as well as four data specialists who support content management, metadata tagging, analytics, and automation processes. Editors were particularly important to the study population because they hold dual roles: they participate in the day-to-day editorial workflows and contribute to managerial decision-making regarding the adoption and integration of new technologies, including AI. Their perspectives provided insight into both operational and organizational aspects of AI integration.

Other personnel, like information, communication, and technology (ICT) officers and corporate managers, although relevant for studies involving AI integrations in media, were not included in the study population because their roles were considered to be primarily technical or administrative hence falling outside the study's editorial focus. The aim of the research was to examine how AI technologies shape newsroom routines, editorial judgment, and content workflows, making reporters, news anchors, editors, and data specialists the most relevant informants for this inquiry.

2.6. Sampling Strategy

This study employed a combination of purposive and snowball sampling to select participants who were best positioned to provide insights into the integration of AI technologies within editorial processes. As explained by Creswell (2014), purposive sampling allows the researcher to intentionally select individuals who possess specific

knowledge or experience relevant to the phenomenon under investigation. This approach was suitable for the present study because only a subset of reporters, news anchors, editors, digital content producers, and data specialists within the two selected media houses actively interacted with AI-assisted tools such as transcription software, translation and automation systems, and social listening platforms in their day-to-day practice.

2.6.1. Purposive Sampling

From an accessible population of 34 editorial staff and four data specialists across the two media houses, the study purposively selected 5 journalists and one data specialist from each organization, resulting in a total of twelve participants. The decision to work with this number of participants was guided by qualitative research principles, which emphasize depth of insight rather than statistical representativeness (Patton, 2015). Data saturation was reached when additional interviews did not generate new information regarding how AI tools were being integrated into news production and distribution processes. At that point, the sample size was considered sufficient to meet the study's analytical requirements within the constraints of time and access. Table 3.1 summarizes this sampling strategy, shows the study population and the selected sample.

Table 3.1: Population and Sample Size

	KBC		RMS	
	Population	Sample	Population	Sample
Journalists (i.e. editorial staff)	22	5	12	5
Data Specialists	2	1	2	1

Selection of the study participants commenced by pinpointing key roles within the editorial departments that most likely engage with AI tools, specifically the reporters, news anchors,

editors, digital content managers, and data specialists. Subsequently, the following inclusion criteria were applied to refine the sample: (1) Accreditation status: Participants were required to be accredited by the MCK, ensuring adherence to professional and ethical journalistic standards. (2) Experience with AI technologies: Preference was given to individuals who have actively used AI tools in their work processes, including content creation, editing, or audience analytics. (3) For data specialists, the participants were required to be directly engaged in content-related activities such as metadata tagging, automation, or digital news production support. To capture diverse perspectives, the researcher also considered years of industry experience, whereby eligible participants also needed to have varying levels of experience, ranging from early-career journalists to seasoned editors with over two decades of practice, and gender opposite to those who had already been interviewed.

The following individuals were excluded from the study sample. (1) Staff whose work did not involve editorial or content-related AI tasks (e.g., administrative officers, finance personnel), ICT technicians and engineers, because the study did not focus on technical deployment of AI systems but on their editorial integration, senior managers or corporate executives whose perspectives relate to organizational strategy rather than day-to-day editorial workflows, and interns, temporary staff, or individuals without sufficient newsroom experience. This deliberate effort ensured that participants were representative and knowledgeable about AI integration in editorial processes.

3.6.2. Snowball Sampling

Snowball sampling was used to complement purposive selection of the study participants. Initial participants identified colleagues who also qualified to participate in the study as

posited by Bernard and Ryan (2016). The process began by contacting an initial participant who satisfied the specified sampling inclusion criteria, under the purposive sampling technique. This initial participant was then asked to recommend another staff member who also met these criteria. To promote diversity, participants were encouraged to suggest colleagues of different genders and with varying levels of newsroom experience, thereby ensuring a comprehensive collection of insights. Each newly recruited participant subsequently recommended another colleague, and this referral process continued until a sufficient number of participants was reached. The point at which new referrals were unlikely to yield additional information (i.e. data saturation), signaled the conclusion of the sampling process. This strategy helped ensure that the final sample included staff with relevant experience that may not have been visible through formal organizational structures.

The process began by contacting an initial participant who satisfied the specified sampling inclusion criteria, under the purposive sampling technique. This initial participant was then asked to recommend another journalist who also met these criteria. To promote diversity, participants were encouraged to suggest colleagues of different genders and with varying levels of newsroom experience, thereby ensuring a comprehensive collection of insights. Each newly recruited participant subsequently recommended another colleague, and this referral process continued until a sufficient number of participants was reached. The point at which new referrals were unlikely to yield additional information (i.e. data saturation), signaled the conclusion of the sampling process.

The combined sampling strategy aligned with the study's qualitative case study design, which required information-rich participants rather than broad representation. It also fit

within the practical limitations of newsroom availability, access constraints, and the study's focus on editorial integration of AI technologies, rather than the technical or strategic dimensions of their adoption. By grounding participant selection in clear inclusion and exclusion criteria and evidence of saturation, the study ensured empirical rigor while remaining feasible and contextually applicable.

3.7. Data Collection

This study relied on semi-structured interviews as the primary data collection method. Semi-structured interviews were appropriate for this qualitative inquiry because they allow for in-depth exploration of participants' experiences, interpretations, and professional practices while providing enough flexibility to probe emerging issues during the conversation (Kvale & Brinkmann, 2015). This method was particularly suitable given the study's focus on understanding how AI technologies are integrated into editorial processes within mainstream media in Kenya.

The interview guides consisted of open-ended questions for (1) editorial staff and (2) data specialists, organized around key thematic areas aligned with the study aim and research questions. These included the participants' daily activities and challenges experienced in the course of work; awareness and professional application of AI tools; AI tools identified and used and the specific ways in which they are used, and the systemic, structural, personal, and or regulatory factors shaping the integration of AI technologies in news production and distribution processes, alongside personal reflections on the future of AI in journalism. The structure of the guides ensured consistency in administration across interviews while

allowing for flexibility to explore additional insights raised by participants, as recommended by Creswell (2014) for qualitative data collection.

To strengthen the content validity of the data collection tool, the guides underwent expert review prior to data collection. The researcher's academic supervisors and two practitioners with experience in digital innovation and AI-supported journalism reviewed the questions to assess their clarity, relevance, and alignment with the study aim and research questions. Their feedback through review comments informed refinements to the wording, sequencing, and thematic flow of the guides, ensuring they adequately captured the scope of AI integration relevant to the study.

The interview guides were further refined through a pilot study conducted with two journalists from a small digital newsroom in Nairobi that was not part of the main study. The pilot helped identify ambiguous questions, assess the estimated duration of the interview sessions, and evaluate the instruments' ability to elicit detailed responses on AI-related processes. Based on these pilot study findings, minor adjustments were made to clarify certain questions and strengthen prompts that helped differentiate between AI adoption and integration in the context of news production and distribution processes. These refinements enhanced the reliability and usability of the interview guides in the main study, consistent with qualitative standards of trustworthiness.

3.8 Data Analysis

The study employed thematic analysis to interpret the qualitative data generated through semi-structured interviews. Thematic analysis is a flexible yet rigorous approach that allows the researcher to identify, organize, and interpret patterns within non-numeric data (Braun &

Clarke, 2021). This method was appropriate for the study because the research sought to understand newsroom practices, journalists' perspectives, and contextual factors shaping the integration of AI technologies within news production and distribution processes. The approach aligns with qualitative inquiries that aim to explore realities within specific social contexts (Christou, 2022).

The data analysis followed Braun and Clarke's (2021) structured six-phase framework, which provides a transparent pathway from raw data to well-supported thematic insights. The process began with familiarization, during which the researcher transcribed the interviews, read and re-read the transcripts, and noted initial ideas related to AI use, newsroom processes, integration challenges, and perceptions of technological change. This stage enabled the researcher to immerse fully in the data and gain a foundational understanding of emerging issues.

The second phase involved generating initial codes. The researcher systematically reviewed each transcript and assigned labels to meaningful segments of text that captured ideas relevant to the research questions. These codes reflected, among other issues, the types of AI tools used, how they supported news production and distribution, the challenges associated with integration, and the organizational practices that influenced adoption. Coding began with a sample of transcripts from which a preliminary codebook was developed. The codebook was then refined iteratively as it was applied to subsequent transcripts, ensuring consistency and responsiveness to new insights.

In the third phase, codes were organized into broader themes that captured patterned meaning across the dataset. This process was informed by axial coding principles described by Williams and Moser (2019), which helped to organize relationships between codes and refine the conceptual categories emerging from the data. Themes at this stage reflected major areas of inquiry such as newsroom drivers of AI integration, editorial uses of AI, perceived benefits, operational constraints, institutional, and socio-technical factors shaping AI integration in editorial processes.

The fourth phase involved reviewing and refining themes. The researcher assessed each theme for coherence, distinctiveness, alignment with the coded segments and the broader data set. Themes that overlapped, lacked sufficient supporting data, or did not contribute meaningfully to research questions were revised, merged with others, or removed. This ensured thematic depth and clarity.

In the fifth phase, the themes were defined and named to capture their essence clearly. This step involved articulating the underlying meaning of each theme, identifying subthemes where necessary, and ensuring that each theme contributed to answering the research aim and questions on how AI technologies are integrated into news production and distribution processes.

Finally, the themes were interpreted in relation to the research questions and existing literature. This interpretive stage generated insights on how AI is shaping newsroom practices in Kenya, the opportunities emerging within digital and broadcast media, and the contextual factors, organizational, technological, ethical, and socio-technical, that influence integration. The interpretation process involved revisiting the conceptual framework,

comparing findings with previous studies, and drawing conclusions grounded in the empirical data and scholarly discourse.

Data analysis was supported by the use of NVivo, a qualitative analysis software. NVivo facilitated systematic organization of transcripts, efficient coding, and retrieval of illustrative quotations. The software, thus, enhanced the transparency of the analysis process and strengthened the dependability of the findings by enabling consistent application of the codebook across all transcripts.

3.9.1. Trustworthiness

Trustworthiness in qualitative research ensures the rigor and veracity of the research process, lending credibility to the study's findings (Johnson et al., 2019). This study addressed trustworthiness through four criteria: credibility, transferability, dependability, and confirmability.

3.9.2 Credibility

Credibility is the extent to which the study investigates what it claims to investigate and reports what occurred in the field (Noble & Smith, 2015). This study addressed credibility by coming up with clear definitions of operational terms for consistency, involving peers in the media industry, academic supervisors and AI experts in reviewing key concepts and their meaning. AI being a highly evolving field, the research corroborated information given at different times with time stamps and actual dates to validate the information given by the study at a particular time.

3.9.3 Transferability

Transferability refers to the extent to which research findings can be applied to other contexts and populations beyond the specific study sample (Drisko, 2024). Given the increasing prevalence of AI in media houses and the broadly similar nature of content production and distribution processes across newsrooms, the findings of this study have potential relevance for practicing journalists not only in Kenya but also across Africa and globally, particularly for those seeking academic resources on AI adoption in newsrooms. While not all findings may be directly transferable, aspects of this research can contribute to the broader understanding and implementation of AI in newsroom environments.

3.9.4 Dependability

The consistency and stability of the research process over time, ensuring that the study is conducted and reported with enough detail and clarity for others to understand, evaluate, and potentially replicate the work (Ahmed, 2024; Korstjens & Moser, 2017). The interviews conducted must be factual and conducted through journalists accredited by the MCK and who work for the said media houses. Having several sources or interviewees who are trained media practitioners and media experts ensured dependability of the study.

3.9.5 Confirmability

Confirmability in qualitative research refers to the degree to which research findings are shaped by the participants and the data, rather than by researcher or participant biases, motivations, or perspectives. It is a key criterion for ensuring the trustworthiness and objectivity of qualitative studies (Lim, 2024; Ahmed, 2024). To ensure confirmability in this study, the researcher tried to be reflexive. For instance, all interviews were recorded,

providing a documented and accurate record of the data. Participants were then encouraged to share their experiences freely, without interruption, and were assured of anonymity to facilitate candid responses (Korstjens & Moser, 2017).

3.10 Ethical Considerations

This study prioritized the ethical considerations of participant privacy and confidentiality. Adhering to ethical research practices, as emphasized by Jwan and Ong'ondo (2011), all participants were given the option to decline to answer any question that made them uncomfortable. Informed consent was obtained from each participant prior to data collection, and their anonymity and confidentiality were maintained throughout the study. Prior to commencing data collection, research authorization was obtained from the Ministry of Higher Education at the National Council of Science and Technology and a fieldwork approval letter from Moi University.

3.11 Chapter Summary

This chapter outlined the methodological approach used to examine how AI technologies are integrated into news production and distribution processes within two mainstream media houses in Kenya. The study adopted a qualitative approach, grounded in the understanding that journalists' experiences, interpretations, and practices offer valuable insights into how AI is shaping editorial processes. A descriptive research design guided the inquiry, enabling the researcher to document current practices and decision-making processes without altering the natural newsroom setting.

The study population consisted of 34 editorial staff and four data specialists working within the selected media houses. Using purposive and snowball sampling techniques, the researcher selected 12 participants, 10 journalists and two data specialists, based on their direct involvement with AI-supported editorial tasks. This sampling strategy ensured the inclusion of individuals with relevant expertise while allowing additional experienced staff to be engaged through professional networks.

Data was collected using in-depth, semi-structured interviews. The interview guides were reviewed by experts and refined through a pilot study conducted with journalists outside the main study sites, which enhanced the clarity, relevance, and reliability of the instruments. Thematic analysis, following Braun and Clarke's (2021) framework, was employed to analyze the data. This process involved familiarization with the transcripts, coding, theme development, refinement, and interpretation, supported by NVivo software to enhance organization and analytic rigor.

Measures to ensure trustworthiness, including credibility, dependability, transferability, and confirmability, were applied throughout the research process. Additionally, ethical considerations such as informed consent, confidentiality, and voluntary participation guided interactions with the study participants and the handling of data during and after the data collection exercise in the field.

CHAPTER FOUR

FINDINGS

4.0. Introduction

This study explored how journalists in Kenya's digital and broadcast media have integrated AI into news production and distribution, as well as the challenges they encounter in this process. The findings are structured around three key research questions. The first research question examined AI integration in news production. The second research question investigated AI integration in news distribution. The third research question sought to highlight the challenges journalists and media houses face in integrating AI in news production and distribution. This chapter presents the study findings beginning with a description of the demographics details of the study participants.

4.1. Participants' Characteristics

The study involved interviews with journalists working in digital and broadcast media in Kenya, representing both private and state-owned media houses. Participants held various roles, including digital editors, news anchors, reporters, and multimedia journalists, with varying levels of experience in the newsroom. The selection of participants aimed to capture diverse perspectives on AI integration in news production and distribution. While some participants had extensive experience exceeding a decade, others expressed emerging trends in digital newsrooms. The table below summarizes key demographics and professional characteristics of the study participants.

Table 4.1: Study Participants' Demographics and Professional Characteristics

Participant No.	Sex	Designation	Experience
IDI01	Female	Digital Editor	15
IDI02	Male	Digital Editor	20
IDI03	Male	News Anchor/Reporter	13
IDI04	Male	Digital Manager	14
IDI05	Male	Producer, Presenter, Reporter	5
IDI06	Male	News Anchor/Reporter	13
IDI07	Male	Multimedia Journalist	14
IDI08	Male	Research Lead/Data Protection Officer	4
IDI09	Male	Reporter	7
IDI10	Male	News Producer	28
IDI11	Female	News Anchor/Reporter	13
IDI12	Male	Data Expert	10

4.2. AI Integration in News Production

The study found that the integration of AI in news production has transformed how journalists in Kenya gather, refine, and tailor news content. Generally, AI plays a critical role in content creation, quality improvement, and content curation. It assists journalists in brainstorming story ideas, researching relevant information, editing news pieces to improve quality, and aligning content with audience preferences. Additionally, AI enhances editorial efficiency. However, journalists emphasize the need for human oversight to maintain news credibility and journalistic integrity.

4.2.1. Content Creation

Journalists in digital and broadcast media in Kenya have integrated AI in various aspects of content creation, primarily to enhance efficiency in brainstorming story ideas, conducting informational research, formulating interview questions, summarizing relevant content, transcribing and translating material, generating news scripts, and creating graphic content.

Although many participants observed that AI has not yet achieved widespread adoption within Kenyan digital and broadcast newsrooms, they concurrently acknowledged the increasing use of AI tools among their colleagues. These tools are perceived as valuable assets in streamlining workflows, minimizing the time dedicated to routine tasks, and ultimately enhancing the quality of news output. Nonetheless, some participants raised concerns that the growing reliance on AI could potentially lessen the human element in news stories, making them less relatable and authentic to the audience.

> AI has not necessarily been incorporated into the newsroom in terms of news writing or content creation. We are still dependent on journalists to themselves make sure the content is alive and legit, because at the end of the day there's how a news story should read. AI can try to give you the same feel but you can always pick out some things.

he study participants further indicated that AI plays a crucial role in brainstorming story ideas by helping them identify trending topics, areas of interest, and coverage gaps, which they go on to ask as follow up questions when gathering relevant information for news through desk and field interviews. One participant expressed a common scenario where some journalists go to the field without an idea about what to follow up on following an interview, indicating how AI tools help.

> You can go to the field and wait for the whole event to do interviews and sometimes you don't have the questions. You just tell AI to give you the questions, then your job is just to ask them.

In conducting informational research, AI-powered tools assist journalists in quickly retrieving relevant background information, analyzing large datasets, and identifying key insights from multiple sources. Some journalists use AI search capabilities to cross-reference historical data and analyze complex subjects such as economic and legal documents. Despite these advantages, journalists remain cautious about over-reliance on AI-generated information, particularly given concerns about factual accuracy, bias, and the risk of misinformation. Many study participants emphasized the need for human oversight to ensure that AI-generated research aligns with verified, credible sources. The following excerpts give evidence of AI use for informational research.

> There are situations where I have used AI, like *ChatGPT*, to research on something. For example, when I have a topic that is a bit confusing or academic, I ask a question to the system and it does give me some information.
>
> *ChatGPT*, for example, is an archive, which helps in doing research, to get some content, which some colleagues do. I equally use it in day-to-day production, when I need some clarity or additional information on a topic.

AI also assists journalists in summarizing large volumes of information, transcribing audio and video interviews, and translating content to English from other languages, such as French, Spanish, Chinese, German, and Arabic. AI-assisted translation tools enable journalists to produce multilingual content, ensuring broader audience reach. However, journalists highlight challenges such as inaccuracies in transcription, particularly for non-standard accents or mixed-language conversations, as well as the risk of losing contextual meaning in automated translations. The following excerpts indicate the participants use of AI tools for text summaries and transcription.

> I have also used AI to transcribe voice recordings. There's an app I use, provided the recording is in English. I have also used it to translate one language to another, just to get a gist of it if the script is in a foreign language, one that I don't understand.

> I hear also there are opportunities for people to, say, summarize a voluminous document, by uploading it to *ChatGPT*. I haven't used that, because I don't trust it as yet. For transcription, I use a free AI tool. It is called Live Transcribe.

The use of AI in generating news scripts remains a contentious issue among journalists. While many reject the notion of AI-generated scripts, citing concerns over originality, credibility, and the risk of outdated information, others acknowledge that some colleagues use AI to draft news scripts either in part or entirely. Journalists who use AI in writing parts of their news pieces do so to generate suitable leads and headlines. However, many assert that AI-generated scripts often lack the depth and contextual sensitivity required in news writing, reinforcing the need for human editorial oversight. The following quotes show the dynamics of AI use for scriptwriting in newsrooms.

> There are those who will give a description of the kind of a story that they are doing and they get a script done using AI.
>
> We frown upon AI use for story writing, because we still want our stories to have the usual five ‘W’s and a H. We also want our stories to be raw… that human aspect of story writing.

Additionally, AI plays a crucial role in generating relevant graphic content, particularly for journalists covering sensitive stories. Some newsrooms use AI-generated images and graphics to illustrate stories without exposing real individuals to potential harm. However, concerns over AI-generated imagery, including the potential for deep-fakes and visual distortions remain, highlighting the need for strict editorial guidelines and verification protocols in AI-assisted content creation. The use of AI in newsrooms seems influenced by popular culture in Kenya, as it has been adopted by various corporate organizations. The following excerpts illustrate these study findings.

> When it comes to creating images for stories, we’ve done that. We’ve even seen corporates like (name omitted) exclusively using AI on their billboards and adds, even

> some schools like (name omitted). Hawkers around Nairobi also walk around selling AI art.
>
> We've used AI to generate images many times. If let's say you are doing a sensitive story and you don't want to use someone's actual image, so you can go to, for example, *Dalle.ai* to help you come up with an image with no copyright issue.

4.2.2. Quality Improvement

Once journalists have gathered the necessary information and drafted their news pieces, the next crucial step is refining content specially to enhance clarity and accuracy. AI has increasingly become a key tool in this phase, assisting journalists in editing, proofreading, fact verification, stylistic refinement, and incorporating visual enhancements such as infographics. These tools help streamline the revision process, ensuring that news content is polished, grammatically sound, contextually accurate, and visually appealing. AI-driven editing and proofreading tools have become standard in many newsrooms, allowing journalists to refine their drafts efficiently. Applications, such as Grammarly, Quillbot, and Hemingway Editor, help journalists identify and correct grammatical errors, improve sentence structure, and enhance readability. These tools also provide stylistic suggestions to ensure that news content maintains a professional and§ journalistic tone while remaining accessible to a broad audience. While journalists emphasize that AI is an invaluable assistant in editing, they remain cautious about relying entirely on automated suggestions, as AI may occasionally misinterpret context or fail to capture the nuances of journalistic writing. The following quote from an editor indicates use of AI for text-based editing:

> Whenever I get a story from a journalist, from the reporter in the field, it is supposed to be edited. It goes through the editing process and you check detail by detail, but now with the ChatGPT, it has made my work easier. I just paste it there but you must be very keen because sometimes it can distort information and now I have the Grammarly

> that just checked the grammar, which is easier for me because sometimes I don't even need to keep consulting.

Tools that can paraphrase otherwise wordy content or summarize long ones include QuillBot and Chatly. Both reporters and editors use AI to improve news quality. Journalists in broadcast media, in particular, use these tools to achieve the recommended word count by eliminating unnecessary words, making the story more precise, and allowing it to run within the located time frame.

> For instance, if the duration of a news item, like right now, it is 11 a.m., we have headlines that are supposed to be 40 seconds each, for four stories. So, AI can actually help with the word count, like truncating unnecessary words in order to make sure that the story is more precise, understandable, and can runs up to the appropriate length, that it doesn't go beyond the duration it's required.
>
> There are those reporters who have even put their scripts on an AI tool and the script is edited. We also use AI tools like *Grammarly*, which does not help to write, but can help you make your writing better and concise.
>
> AI can also give you a different tone to make your story sound and read better. We also have paraphraser tools like *QuillBot* and text summary tools like *AI Summarizer*, which I think is largely off of *YouTube*, where if you pick a video, which is maybe two hours long, it can summarize in about 30 seconds.

Beyond grammatical refinement, journalists also use AI tools to verify facts and cross-check details before publication. Fact-checking remains a fundamental pillar of journalism, and AI-powered verification tools assist in quickly identifying inconsistencies, tracing sources, and detecting potential misinformation. Some journalists use AI to conduct reverse image searches, assess the credibility of online sources, and compare statements against official records. However, journalists underscore that while AI can expedite fact-checking, it does not replace human judgment. Many insist that AI-generated verification must always be corroborated with traditional journalistic methods, including consulting primary sources and conducting follow-up interviews.

> I rarely use AI for work but one time I used it for research on the state of the economy, to verify certain facts, now that I am a business journalist and I also use it for comparison really whereby after I'm done with the script, I ask AI to also write one for me and then I compare the two.
>
> We also use AI to pick out stuff, things you are not sure about, like reverse image searches to see if a trending image is correct.

In addition to textual refinement, AI is also enhancing the visual presentation of news content. Infographics, data visualizations, and AI-generated graphics help journalists present complex information in a more digestible and engaging manner. AI tools such as data visualization software and automated infographic generators assist journalists in transforming raw statistics into visually appealing charts, graphs, and interactive visuals. This is particularly useful for business and political reporting, where conveying trends and patterns effectively is essential for audience comprehension. While these tools enhance storytelling, journalists remain mindful of maintaining accuracy and ensuring that AI-generated visuals do not misrepresent data or oversimplify nuanced issues.

> We have, for instance, for graphics, where we use generative AI tools like *Canva*, *Designs.Ai*, or *Midjourney*, for images, for making graphics, to enrich our stories and to enhance our work.

Journalists who are concerned about audiences raising quality concerns about their stories, written with the help of AI, run them on AI use detectors such as GPTZero.

> You can also check if a story has been written by AI. They can help do that. You can also use AI detection tools like GPTZero.

4.2.3. Content Curation

The next challenge for journalists, after gathering enough information for their stories and refining them to their preferred quality standards, is to optimize and personalize the content to align with audience interests. AI tools play a crucial role in assisting journalists with this

process, enabling them to analyze audience feedback, track user behavior, and monitor social media engagement. These tools help journalists tailor their news content to resonate with their target demographics, ensuring relevance, engagement, and broader reach. Here are some of the study participants' comments, showing use of AI applications for news personalization with regard to content curation.

> You sometimes need AI to tailor news content to individual readers, based on their preferences. AI has the algorithm capability to do that.
>
> Open source tools have been integrated for personalized news generation to enhance quality and quantity of news coverage.
>
> We are able to study the content that is consumed by our daily users over a given period of time, then we are able to say on Mondays, this is what people want. On Tuesdays or over the weekend, this is what people are interested in. So, over the week, we are able to do a preparation for what we are going to chunk out on weekends.
>
> Previously, it was even difficult to know what your audiences want. It used to be, we were the ones setting the agenda, but with AI there's a lot of interaction and engagement made possible by these applications. You are able to know what your audiences want when you put out content there; you are able to know the people who have viewed and interacted with your content because some of them leave their feedback there since we have that option.

Audience analysis allows journalists to assess how their stories are received and adjust content accordingly. AI-driven feedback analysis tools evaluate reader comments, social media interactions, and online discussions to determine public opinion. This enables newsrooms to craft content that better aligns with audience expectations while maintaining journalistic objectivity. However, some journalists note that AI-driven feedback analysis has limitations, as it may misrepresent cultural nuances and contextual factors, necessitating human oversight in final content adjustments. The following excerpts give evidence of AI use in newsrooms in Kenya for audience feedback analysis.

> Our digital departments use AI systems to analyze audience feedback to provide insights on improving content and adding numbers to our user engagement… Without feedback, we tend to ask ourselves whether we're really communicating with our

> audiences? Feedback is so crucial. It helps you to know what you did wrong or what you need to do right and what else you need to do.
>
> We also have a software that gives us feedback from our audiences. We're able to know their reactions from our stories and maybe the areas were we need to improve on. If there are any gaps, the applications tell us, and we're able to just close that through various mitigation systems.

Another important element of content curation is website user analysis, where AI tools help track audience behavior on digital news platforms. Data specialists in newsrooms, in particular, use AI-powered analytics software to monitor key metrics such as page views, time spent on articles, and reader drop-off points. These insights inform decisions on which stories to highlight, how to structure articles for better engagement, and which formats work best for specific audience segments. Some newsrooms use AI-driven recommendation engines that suggest related stories to readers based on their browsing history, ensuring sustained engagement. While these tools help maintain audience interests, journalists remain cautious about over-personalization, which may inadvertently reinforce filter bubbles, a situation where audiences are only exposed to content that aligns with their existing beliefs rather than a diverse range of perspectives. The following excerpt from a research lead in one of the news organizations explains how user analysis is performed.

> We normally use *Google Analytics* but we've been able to get other providers who are able to embed their own APIs on our sites. With this, we are able to track a user. We give him/her a specific ID (identifier). For example, this can be M1, which helps us know, when you get to our site (i.e. landing page), how you move within the website, from this category to another. And, the type of content you consume and for these number of minutes or seconds, similar to what *Google Analytics* does. The difference being that this one is a little bit more detailed because we're able to give the third parties rights to be able to view our content. What this helps us with is, we are able to check if this content was, for example, chunked out within the course of a week. Maybe if we are to chunk out 10 stories within the course of a week, we can note which stories are doing better for this user and how now are they… or is there any relationship between what they consumed last week and what they are consuming this week? With the tool, we are able to say there is a high likelihood that they are going to consume almost similar content next week.

Social media monitoring is another area where AI supports content curation by helping journalists track trending topics, analyze engagement patterns, and refine their news content. Through AI-driven analytics, journalists can detect patterns in audience preferences, assess emerging narratives in news cycles, and even receive content suggestions based on search trends and social media discourse. Some AI applications also analyze the performance of previous posts, recommending improvements for future content. While AI provides valuable insights from social media monitoring, journalists often exercise discretion in selecting story ideas, ensuring that the final narrative aligns with editorial priorities, journalistic ethics, and local contexts. The following excerpt mentions some of the tools that journalists use for social media monitoring in the context of content curation.

> I was looking at the Google reports today. It normally brings us up to speed with the issues Kenyans are searching for most, in a particular period, for instance, between the years 2023 and 2024. Without the help of AI, it is not so easy to find such information. You can imagine Kenya, which is so diverse, considering that others live in the diaspora, the millions and millions of them, but AI is able to tell us the exact feelings of Kenyans or concerns based on wherever they are searching about. For example, currently they are trying to understand the Gen Z protests and issues around the impeachment of the former deputy president, Rigathi Gachagua, and many other issues. So, in terms of feedback and trying to check where you are, what issues were shifting conversations and whether you do fit in that conversation, AI tools in this case, have been of immense benefit. Echobox also comes in handy. It scavenges the web and social media platforms, to discover what people are talking about, a particular story at a particular time.

4.2.4. Editorial Efficiency

I have significantly improved editorial efficiency by streamlining workflows in content creation, quality improvement, and content curation. By automating time-consuming tasks, AI allows journalists to focus on the more complex and creative aspects of news production, enhancing overall newsroom productivity and responsiveness. For instance, in content creation, AI accelerates the initial stages of news production by assisting journalists in

brainstorming story ideas, conducting research, generating summaries, and transcribing interviews. AI-powered search tools also provide quick access to relevant background information, helping journalists verify sources and contextualize their stories more efficiently. Additionally, AI transcription tools reduce the time spent manually converting interviews into text, allowing reporters to focus on refining their narratives. These capabilities improve turnaround time, ensuring that journalists can meet tight publication deadlines without compromising on thoroughness. The comments below support these findings, highlighting various aspects of editorial efficiency the study participants presented.

> AI helps with the relatively mundane tasks that contribute towards news content creation, like transcription, but not the content itself.

> If you are to go back to something in time or you want to break a story, like you want to go out with a story in the shortest time possible, then you don't have to go through so much, like read too many documents or articles, because AI tools are able to condense and give you exactly what you may want for a given period, and you realize then that you actually do not take a very long time having your story ready for your audiences.

4.3. AI Integration in News Distribution

AI-driven news distribution has enabled journalists and media houses to segment audiences, personalize news access, automate content delivery, and analyze audience feedback. These advancements allow media organizations to optimize news dissemination strategies, ensuring that content reaches the right audiences in real time. However, while AI enhances distribution efficiency, journalists highlight concerns over filter bubbles, algorithmic biases, and the ethical implications of automated news targeting.

4.3.1. Audience Segmentation

Audience segmentation primarily involves classifying audiences according to their demographics, such as age, gender, location, and socio-economic background. It is a critical

aspect of AI-driven news distribution in digital and broadcast media in Kenya. By categorizing audiences based on personal characteristics, demographics, and unique content preferences, AI enables journalists and media houses to tailor news distribution strategies for maximum reach and engagement. AI-powered segmentation also helps to ensure that news content is strategically targeted to relevant audience groups, enhancing the effectiveness of news delivery. The following quote highlights one of the AI tools journalists use for audience segmentation, indicating its analytical capabilities.

> I talked about Sprout Social. It gives you good analytics on so many levels. It can give you details on who is accessing your content, indicating their age, region, and preferences.

Beyond basic demographics, AI enhances audience segmentation by recognizing content preferences, such as sports, politics, entertainment, or business news. AI algorithms track user engagement across digital platforms, identifying individual and group preferences based on browsing behavior, click-through rates, and reading patterns. This information helps media houses push relevant content to specific audience segments, ensuring that users receive news tailored to their interests. AI-powered recommendation engines also suggest related stories to readers, increasing audience retention by keeping them engaged with topics they find most relevant.

> We have the analytics team, who tells us how and which audiences have interacted with our content. This makes it easier to segment audiences and cater for their specific needs, which has not always been the case. Previously, we just assumed that if, for instance, we are dealing with women, these are the topics they want.

> Sometimes you need AI to tailor news content to individual readers, based on their preferences, so it has the algorithm capability to do that. For instance, if you click a story on sports, it will start feeding you sports. Same for entertainment, features, education, or agriculture.

Another aspect of AI-assisted audience segmentation is its ability to detect emerging trends and behavioral shifts in audience engagement**.** By analyzing real-time data, AI tools can identify which types of content are gaining traction among specific audience groups. For instance, AI can detect an increasing interest in climate change among younger audiences, enabling journalists to adjust their distribution strategies to align with this shift. This adaptive approach ensures that newsrooms remain responsive to evolving public interests, ultimately improving audience engagement and news impact.

> One of the things that I've seen work, is we are able now to reach even, you see different stations have different TAs, we're now able to know, for example, if we want to reach a given age group. We are able to know specifically how to reach them in terms of their consumption. Our distribution of news right now is not very vague. We are not all over the place. We are very particular on what we are giving a specific group of people. This one also goes to the station level. If, for example, it's *Citizen*, then we know specific people who consume our content and the type of content they like. For example, if we are reaching the Gen Zs, then we know how to structure the same content that we are reaching the 45 years plus. This one has been vital, in reaching different groups with the same content. It also reduces costs of production and all that.

4.3.2. Personalized News Access

AI-driven news access personalization enhances accessibility for diverse audiences by tailoring news delivery through demographic targeting and interest-based recommendations, while simultaneously optimizing news presentation to align with the unique styles of digital news outlets. The study found that journalists in digital and broadcast media in Kenya use AI tools to target audiences with news stories that align with their demographic profiles (e.g., age, gender, location) and content preferences (e.g., politics, business, sports, entertainment). AI analyzes user engagement patterns on media websites, social media platforms, and digital news apps to determine which stories resonate with different audience segments. For instance, younger audiences may receive more visually engaging news stories on

entertainment and sports, while professionals might see in-depth analyses on business and politics. With AI-based audience segmentation, media houses ensure that each demographic receives content that is most relevant to them, enhancing the impact of news. The following excerpts further illustrate these findings.

> We're now reducing the number of stray stories. These are stories that are just chunked out but not well received by the audience because that is not what they are interested in.

> The thing we are working on, to be able to check on, is issues around how users drop off, from maybe from our sites. At what given point? If, for example, it is a website, how is the arrangement of our content? With that, we are able to check if someone is leaving, maybe, where we've placed an ad or they are leaving where we've mentioned names, and all that. What this helps us with is, for example, which stories is doing better for this user and how now are they… or is there any relationship between what they consumed last week and what they are consuming this week? With the tool, we are able to say there is a high likelihood that they are going to consume almost similar content next week. So now, we are able now to recommend to that user very specific content.

> So even in terms of how it is structured, the same content could be structured differently to reach different groups of people. For example, if we are reaching the Gen Z's, then we know how to structure the same content that we are reaching the 45 years plus. This one has been very vital, maybe to reach different groups with the same content.

Beyond initial targeting, AI enhances news access personalization through automated content recommendations, which suggest stories to audiences based on their reading or viewing history. AI algorithms track user engagement, such as articles clicked, videos watched, or keywords searched, to predict and recommend similar or related news stories. These recommendations keep audiences engaged for longer periods by offering them news that aligns with their interests. Journalists note that AI-driven recommendations are particularly useful in long-form storytelling, where users are guided from one related article to another, deepening their understanding of a topic. Here is what one of the participants said in relation to AI-driven content recommendations.

> What we are using at the moment is able to study the trend of our consumers. We're able to follow a user from how, for example, they get to our website, the type of content they are consuming on a daily basis, and then now using the AI, we are able to do very customized recommendation to them. So this one is helping us to be able to retain more users on our site and also to increase the engagement rates.

Through AI-driven news access personalization, media houses ensure that content reaches audiences with diverse needs, including those with disabilities. The study participants mentioned that some of the digital and broadcast media houses in Kenya have already integrated AI-powered tools that convert text-based news into audio formats or convert broadcast news into text. Some digital news platforms feature AI-powered text-to-speech functionalities, allowing users to listen to articles instead of reading them. Similarly, journalists use automated transcription tools to convert radio or television news into text for web publication, increasing accessibility for audiences who may prefer text-based news consumption. While these AI-driven accessibility tools enhance inclusivity, journalists highlight challenges such as inaccuracies in AI-generated transcriptions and the need for continuous refinement to accommodate linguistic nuances, especially in multilingual news environments. Here is what one of the study participants said about addressing special needs of various audiences using AI within the context of news distribution.

> At the moment, we are using the NLP (Natural Language Processing). What we are doing with this is, for example, with our radio stations, if we upload an audio then it's able to convert it to text. Part of this effort is to be able to convert a lot of this content into like what is consumed as podcast. And also, rather than really having to get someone to do the script or do the news, the tool is able to pick the audio and also be able to summarize and send it out as an alert or article.

Artificial intelligence also assists journalists in adapting news content for different digital platforms, optimizing storytelling formats based on the unique publishing dynamics of various distribution channels. Media houses use AI tools such as *Echobox* to customize news posts for platforms like *Facebook, Twitter, Instagram,* and *TikTok*, ensuring that the same

news story is presented in a format best suited to each platform's audience. For example, news for *Facebook* and *LinkedIn* might be packaged as long-form text with infographics, while *Twitter* posts require concise headlines with embedded links, and *TikTok* or *Instagram* news pieces are presented as short video snippets with engaging captions. However, some journalists expressed concerns that AI-driven content repackaging may sometimes oversimplify complex news stories, necessitating editorial oversight to maintain depth and accuracy across platforms. One study participant said:

> Audiences consume information differently. We package the same information for different social media platforms. So, my work has been made easier by *Echobox*, which takes that information and packages it differently for *Instagram*, *Facebook*, *Twitter*, *LinkedIn*, and *TikTok*.

Another study participant said that he just places her news content on Echobox and it instantly crafts the messages for the different social media platforms, emphasizing the convenience and speed of AI-assisted news distribution through automation.

4.3.3. Automated News Distribution

AI-driven news distribution has significantly enhanced the efficiency of news dissemination in digital and broadcast media in Kenya. AI accelerates audience segmentation and content personalization by rapidly analyzing vast amounts of audience data, identifying trends, demographics, and user preferences in real time. Once AI categorizes audiences based on their interests and engagement patterns, it automates the distribution process, ensuring that news stories are instantly delivered to the most relevant audience segments. Unlike traditional manual distribution, which requires editors to identify and target specific audiences, AI automates these decisions, significantly reducing time delays and enhancing

precision in news distribution. The following quotes from the study participants illustrate these findings and provide more context.

> I use Google AI to help with analytics. It analyses audiences' data. This has made it easier for us, even in content sharing, it does that very fast, and is more efficient as its distribution is just instant.

> You can write a story and leave, then Echobox comes in and after scavenging the web, discovers that people are talking about a particular story at a particular time, then it shares the story.

Artificial intelligence also assists journalists in posts scheduling, which allows them to pre-set distribution timelines for various platforms. AI tools such as *Echobox* and *Sprout Social* analyze audience activity patterns to determine the optimal times for automatically sharing news content, ensuring maximum engagement. These AI systems track when specific audience segments are most active on platforms like *Facebook*, *Twitter*, *Instagram*, and *TikTok*, allowing media houses to schedule posts accordingly. For instance, AI might detect that sports enthusiasts engage more with content in the evenings, while political news gains more traction in the morning. By automating these scheduling decisions, AI ensures that news stories are strategically timed to reach audiences when they are most receptive. Beyond scheduling, AI also enables real-time adjustments in news distribution. If an AI system detects a surge in interest around a particular topic, such as a breaking news event or a trending social issue, it can automatically push related stories to audiences without human intervention. This dynamic response to news cycles ensures that audiences receive timely updates, keeping media outlets competitive in an environment where real-time news dissemination is crucial. One of the study participants supported these findings, stating:

> We use Echobox to share stories. It helps us share stories across all social media platforms. Sometimes you feed it and schedule it to share stories at certain times. Other times it does that on its own. You can write a story and leave, then ***Echobox*** comes in and after scavenging the web, discovers that people are talking about a particular story

> at a particular time, then it shares the story. You can also schedule *YouTube* uploads on the AI tool. Let's say, for instance, a campaign, you can schedule your posts and videos, for like the next six months. You can instruct it to share stories, like three times in a day, or specify the timings, like morning, afternoon, and evening. It does these things almost automatically, but normally there's someone telling it exactly what to do. Sometimes you need it to tailor news content to individual readers, based on their preferences, so it has the algorithm capability to do that. If you click a story on sports, for instance, it will start feeding you sports - same for entertainment, features, education, or agriculture. It personalizes content directly to you, based on the stories you click on every time you visit the website.

4.3.4. Feedback analysis

AI-powered news feedback analysis also enables media houses to refine their news distribution strategies and enhance audience engagement. Using analytics from AI tools, journalists and digital editors can assess audience reactions, track engagement metrics, and identify trends that inform future distribution strategies. This continuous feedback loop ensures that newsrooms that have integrated AI solutions remain responsive to audience needs while optimizing their outreach efforts. The following excerpt highlights AI's role in audience feedback analysis in the context of news distribution.

> The new technologies have made things easier, and we're able to adapt to the changing audience needs because whenever I'm publishing my stories, I instantly interact with them. Normally, they give feedback; they say this is what… they just advise you on what their needs are.

AI tools can track key engagement metrics, such as the number of views, shares, likes, comments, and click-through rates on different platforms. By analyzing this data, journalists gain insights into how audiences interact with news content and which stories generate the most engagement. Popular examples of AI-powered analytics tools that allow media houses to monitor audience behaviors across multiple channels include *Google Analytics, Sprout Social*, and *Echobox***.** These solutions allow media organizations to assess whether their distribution strategies are effective. They can also identify drop-off points, potentially

showing where audiences lose interest in an article or video, providing crucial insights for optimizing future content formats and lengths. One participant provided the following explanation about their organization's use of AI to reduce churn rates.

> The other thing we are working on, to be able to check on, is issues around how users drop off, from maybe from our sites. At what given point? If, for example, it's a website, then the arrangement of our content, with that, we are able to check if someone is leaving where we've placed maybe an ad or they are leaving where we've mentioned names, and all that.

Participants also indicated that they can use AI to conduct sentiment analysis, helping them to gauge audience reactions to news content. Specific AI algorithms can analyze comments, social media discussions, and reader feedback to determine whether the audience perceives a story positively, negatively, or neutrally. Such analysis allows journalists to detect audience concerns or potential controversies and enables media houses to adjust their content strategies accordingly**.** For instance, if sentiment analysis reveals that a particular news segment is receiving negative feedback, which may be due to misinterpretation or lack of clarity, journalists can intervene by providing additional context or follow-up stories to clarify the issues. The following quote specifies how AI-powered solutions have simplified sentiment analysis for media houses.

> Previously, it was even difficult to know what your audiences want. It used to be that we were the ones setting the agenda, but with AI, there's a lot of interaction and engagement made possible by these applications. You are able to know what your audiences want when you put out content there; you are able to know the people who have viewed and interacted with your content because some of them leave their feedback there since we have that option.

AI-driven feedback analysis also helps media houses to identify emerging news consumption trends and shifts in content preferences**.** AI tools can detect changes in audience interests by analyzing data patterns, allowing journalists to adapt their distribution strategies to match evolving trends. For example, if analytics indicate that audiences are increasingly engaging

with short-form video content over traditional text articles, media houses may prioritize visual storytelling formats in future distributions. Similarly, if feedback shows that audiences prefer localized stories over international news**,** newsrooms can adjust their coverage focus to maintain relevance. Here is a quote that highlights the use of AI to enhance audience engagement.

> What this helps us with is, we are able to check if this content was, for example, chunked out within the course of a week. Maybe if we are to chunk out 10 stories within the course of a week, which stories is doing better for this user and how now are they… or is there any relationship between what they consumed last week and what they are consuming this week? With the tool, we are able to say there is a high likelihood that they are going to consume almost similar content next week. So, we're able now to recommend to that user very specific content.

The knowledge regarding emerging audience trends can directly influence future news distribution decisions. Some journalists use their audience feedback analysis to shape their distribution strategies and ensure that news content reaches audiences most effectively. Journalists and editors can use AI insights to adjust publication times, modify content presentation, and refine platform-specific strategies**.** For instance, if feedback indicates that engagement is higher on mobile devices than on desktops, media houses may optimize their news formats for mobile consumption. Likewise, if analytics show that a particular demographic prefers news updates on Twitter rather than Facebook, distribution strategies can be adjusted to align with audience behavior.

4.4. Challenges in AI Integration into News Production and Distribution

Journalists and media houses face several challenges that hinder the full integration of AI in news production and distribution processes despite its growing adoption among Kenya's broadcast and digital media journalists. The study identified AI-generated inaccuracies, loss of editorial control, ethical dilemmas, financial constraints, lack of technical expertise,

regulatory uncertainties, and resistance to AI adoption as the key issues. While AI presents opportunities for improved efficiency, journalists stress the importance of balancing automation with human editorial judgment to safeguard journalistic standards. Below is a detailed discussion of the key challenges in AI adoption within the media industry.

4.4.1. AI-Generated Errors and Misinformation Risks

The risk of inaccuracies and misinformation in AI-generated content emerged as a major concern that journalists expressed about AI integration. While AI tools are efficient in processing and summarizing information, they are prone to misinterpreting facts, fabricating details, or providing outdated information**,** especially when used for news writing or research. Journalists highlight instances where AI-generated scripts contained factual errors or misrepresented key events, raising credibility concerns. The issue of AI hallucination, where AI fabricates non-existent facts, poses a major risk in news production. This situation necessitates rigorous human oversight to prevent the dissemination of misleading information. One participant noted that AI misinformation is particularly a serious concern where the journalists involved have little information about the topic.

> AI even exaggerates or fakes images. You might end up misreporting, particularly if you are not very familiar with the story. For instance, the other day, someone was doing a story on the late Robert Ouko, and the facts were misrepresented. And some people had to point out that the reporter seemed to have used AI and forgot to verify/read through.

4.4.2. Loss of Editorial Control and Journalistic Integrity

Over-reliance on AI-driven processes can lead to the potential loss of editorial independence, even though cases of such overreliance are few in the Kenyan context. Journalists worry that the ability of artificial intelligence to automate news selection, personalize content, and optimize engagement could lead to the prioritization of virality over journalistic depth and

integrity**.** AI algorithms are primarily designed to maximize audience engagement, often by identifying and promoting content most likely to generate clicks, shares, and interactions. While this can enhance reader retention, it also raises the risk of prioritizing sensational or trending topics over substantive, in-depth reporting. The following quotes regarding how Echobox automates content curation and sharing in response to audience activity highlight how such a tool can effectively diminish editorial control in content production and distribution.

> So, my work has been made easier by Echobox, which takes that information and packages it differently for Instagram, Facebook, Twitter, and TikTok.
>
> Sometimes you feed it and schedule it to share stories at certain times. Other times it does that on its own. You can write a story and leave, then Echobox comes in and after scavenging the web, discovers that people are talking about a particular story at a particular time, then it shares the story.

This challenge raises ethical concerns about editorial oversight**,** as journalists emphasize that AI should be a tool to support, rather than dictate, editorial decisions**.**

4.4.3. Ethical and Attribution Dilemmas

The integration of artificial intelligence in news production raises ethical dilemmas, particularly regarding authorship and attribution. As AI tools become more sophisticated, they are increasingly capable of drafting substantial portions of news articles, raising questions about who should be recognized as the true author. Journalists question the extent to which AI-generated content can be credited to human reporters, especially when AI tools are used to draft large portions of news articles. This situation can blur the lines of authorship and present media houses with challenges when defining editorial policies regarding AI-generated contributions. The following quote highlights the authorship and attribution dilemmas associated with AI-generated content.

> Again, there are stories where you find maybe three-quarters of the information is AI-generated, so you wonder how to attribute that. The issue of attribution is quite a challenge for us. Because if AI has done three-quarters of your work, who gets the by-line? Would you say the story was done by AI or the reporter?

Deep fakes and images generated through AI present additional ethical dilemmas. The ability of AI to create hyper-realistic visuals, whether for legitimate use or malicious manipulation, has made it significantly more challenging for journalists to verify the authenticity of multimedia content. Media professionals emphasize the need for ethical guidelines and transparency in AI-assisted journalism to maintain audience trust, as evident in the following quote:

> The ethical problem that the technology poses including data privacy, should be addressed by the industry players because it poses a lot of challenges, especially misinformation and disinformation.

4.4.4. Financial Constraints and Limited AI Adoption

Media houses, especially state-owned and smaller private outlets, seem to struggle with financial constraints that limit their ability to invest in advanced artificial intelligence solutions. Premium AI services such as *ChatGPT* Pro, automated transcription software, and AI-driven analytics tools require subscription fees that some organizations cannot afford. One participant observed that media organizations in Kenya face sustainability challenges due to lower revenues.

> I know there are resource challenges. Most media houses are struggling. There's a significant reduction in revenue. Some of them are even struggling to remain afloat

Consequently, journalists often rely on free or limited-access AI tools**,** which do not offer the full range of functionalities needed for optimal efficiency. The study identified the high cost of AI infrastructure, training, and maintenance as factors inhibiting the widespread adoption of artificial intelligence in the media. This situation leaves only well-funded media

organizations able to fully integrate AI into their news production and distribution processes, hence its inconsistent adoption.

4.4.5. Limited AI Training and Technical Knowledge

Many journalists seem to lack the necessary training and technical expertise to adopt AI. This knowledge gap can be attributed to the absence of personal initiative among some journalists and organizational policies favoring such training. Many media houses have not formally trained their staff on how to use AI tools effectively, leading to inconsistent adoption across newsrooms. While some journalists have taken personal initiative to familiarize themselves with AI, others remain hesitant or skeptical about its application due to limited knowledge of how it works. The following quotes underscore how AI knowledge is limited among media professionals.

> The challenge at the organizational level is that there's not so much information amongst the people who work here about what is what or what works where.
>
> Another challenge is that it's only understandable to the new generation, which I talked about earlier. Is there really a way that millennials can also be taught about it?
>
> I'd also talk about now people who are also, we do not have a lot of, maybe, data scientists or engineers who are experts in this field who are also now tied to the media industry

4.4.6. Regulatory Uncertainty and the Need for AI Governance

The lack of clear regulations on AI use in journalism remains a significant challenge for media houses in Kenya. While journalists, especially those from the private sector are pushing for editorial guidelines, possibly to maintain their independence, those from state-owned media outlets seem to emphasize the need for national AI policies to provide legal guidance on AI adoption. The Media Council of Kenya has drafted relevant guidelines to ensure the ethical and appropriate integration of AI in journalism within the country, but they

are yet to be fully implemented. This situation has left media houses to navigate the integration of artificial intelligence without proper regulations that apply industry-wide. While comparing the regulatory environment within the country to that in other countries, one participant noted that Kenya appears to fall behind.

> Again, I think the legal framework, the environment around, the laws pertaining to AI, I don't think we've really developed them in this part of the world compared to out there. And as such, you know, it also calls for us to try and understand the legal framework as has been done out there. I know that when the US talks about AI, there is a legislative environment to deal with it. I doubt we have that back home at the moment. So there is best practice that we need to borrow to make it perfect and, you know, to make it work for us, because I think it has to work for us.

Concerns over data privacy, ethical AI use, and copyright laws further complicate AI adoption, as journalists remain uncertain about how AI-generated content should be managed within existing legal frameworks. Many media professionals advocate for comprehensive AI policies to ensure responsible AI integration while safeguarding journalistic freedoms.

4.4.7. Change Resistance

Moreover, the study highlighted resistance to AI adoption as a key challenge, particularly among older media professionals who perceive AI as a likely threat to job security. Some journalists fear that AI automation may replace traditional editorial roles**,** leading to job losses in the media industry. While AI is primarily used to augment rather than replace journalists, skepticism about its long-term impact on employment remains high. Additionally, journalists report workplace disruptions as some media houses struggle to balance AI adoption with traditional newsroom practices**.** To ease this transition, some journalists emphasized the need for inclusive AI policies that demonstrate how AI can complement, rather than displace, human journalists. The following quotes echo participants' thoughts on resistance to AI adoption and how to address it.

> AI is the way to go. I know there are fears that it is going to replace us as journalists, which I think it cannot because AI definitely needs a lot of oversight or close monitoring because it can distort information…one of the things is, the greatest, maybe I would say opposers of the tools would be the journalist, because most of them have their own, maybe before they have their own structured ways of doing things.
>
> I think it is time we, as a media house, sat and thought through it and came up with how it is that we would incorporate it into our news production because I would imagine that just the way we have come through the processes, from the typewriter to computer, internet, and use of the digital devices to ease news production.

4.5. Chapter Summary

This chapter examined AI integration in news production and distribution in Kenya's digital and broadcast media while also focusing on the challenges the journalists and media houses face in integrating AI into their news production and distribution processes. Findings indicate that AI plays a growing role in journalism, assisting journalists in content creation, quality improvement, content curation, and editorial efficiency. AI-powered tools also facilitate audience segmentation, automates and personalizes content delivery, and provides real-time feedback analysis for stories.

Despite these advantages, the study identifies key challenges in AI adoption. Journalists express concerns over AI-generated misinformation, editorial control, ethical dilemmas, including content attribution, and the financial constraints of customizing and or acquiring advanced AI tools. Limited technical expertise and regulatory uncertainty further hinder AI integration, while some journalists remain skeptical about its impact on traditional newsroom practices, including their potential replacement in editorial processes by AI tools like *Echobox* with automation capabilities.

Generally, the findings highlight both the transformative potential and the risks of AI in journalism. While AI enhances efficiency and audience engagement, human oversight remains essential to ensuring accurate, nuanced, and ethical reporting, as well as editorial independence.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

5.0. Introduction

This chapter brings together the final components of the study by summarizing the key findings, discussing their significance in relation to the existing literature, and presenting the study's main conclusions. It also outlines practical recommendations for key stakeholders, including the journalists, media organizations, training institutions, and regulators, and identifies priority areas for future research. In doing so, this chapter synthesizes how AI is shaping news production and distribution processes in Kenya and what these developments mean for the future of journalism.

5.1. Summary of Key Findings

The study identified several ways in which AI has been integrated into news production processes. AI tools are widely used in content creation, assisting journalists in brainstorming story ideas, conducting informational research, summarizing reports, transcribing interviews, and generating scripts. For instance, tools like *ChatGPT* are commonly used for quick research, although journalists remain cautious about over-reliance due to concerns about accuracy and misinformation. However, AI-generated scripts often lack depth and contextual sensitivity, necessitating human oversight to ensure editorial quality.

AI also plays a significant role in quality improvement. Tools like *Grammarly, QuillBot, and Hemmingway Editor* are frequently used for editing, proofreading, and stylistic refinement. Additionally, fact-checking tools help verify sources, but journalists emphasize the need for human verification to ensure accuracy. AI-generated infographics and data visualization

have also become essential in enhancing storytelling, particularly in business reporting, where complex data must be presented clearly.

In terms of content curation, AI helps analyze audience feedback, track user behavior, and monitor social media engagement to tailor content effectively. It enables news personalization, allowing media houses to align content with audience preferences. AI-powered analytics provide insights into emerging trends, improving strategic content planning. AI also enhances editorial efficiency by automating repetitive tasks like research, transcription, and summarization, allowing journalists to meet tight deadlines without compromising quality.

Regarding news distribution, AI supports audience segmentation by categorizing audiences based on demographics and content preferences. AI-powered tools like *Sprout Social and Echobox* are used to analyze audience behavior and optimize news targeting. Additionally, personalized news access is enhanced through AI-driven recommendation engines that suggest related stories based on reading habits. AI also adapts content formats for different platforms, such as text-heavy articles for LinkedIn or short videos for TikTok, improving reach and engagement.

Automated news distribution is another critical application, with tools like *Echobox and Google AI* automating content sharing across multiple platforms. These tools optimize distribution times based on audience activity patterns and detect trending topics, ensuring timely content delivery. AI further supports feedback analysis by tracking engagement metrics like views, likes, and shares. It also enables sentiment analysis, helping journalists gauge audience reactions and adjust content accordingly.

Despite these advancements, the study identified several challenges hindering AI integration in Kenyan media houses. AI-generated errors and misinformation remain significant concerns, as AI tools can misinterpret facts, fabricate details, or provide outdated information. The phenomenon of AI "hallucination" poses a particular risk, requiring strict editorial oversight. Journalists also expressed concerns about loss of editorial control, as AI algorithms often prioritize engagement metrics over journalistic depth, potentially favoring sensationalism. Automation tools like *Echobox* can further diminish editorial decision-making, raising ethical concerns.

Ethics and attribution dilemmas are also critical, as AI-generated content raises questions about authorship and verification. Deepfake technology and AI-generated images complicate efforts to authenticate sources and ensure journalistic integrity. Financial constraints also limit AI adoption, as the high costs of premium AI tools are often beyond the reach of smaller media houses. Furthermore, many journalists lack formal AI training, leading to inconsistent adoption across newsrooms. The absence of structured organizational training programs exacerbates this challenge.

Finally, the study highlighted regulatory uncertainty as a major barrier. Kenya still lacks clear policies on AI use in journalism, creating confusion around data privacy, ethics, and copyright laws. This regulatory gap complicates AI integration and raises concerns about long-term viability. Additionally, some journalists, particularly older professionals, perceive AI as a threat to job security, leading to resistance to change and hesitation to fully embrace AI technologies

.

5.2. Discussion

This study provides a detailed analysis of AI integration in news production and distribution within Kenyan broadcast and digital media. It addresses three key research questions, beginning with an examination of the specific news production processes that have been integrated with AI technologies. The study then explores how AI has been integrated into news distribution, focusing on audience segmentation, personalized news access, automated dissemination, and feedback analysis. Lastly, the study discusses the challenges hindering AI integration in news production and integration in the broadcast and digital newsrooms in Kenya, including concerns over misinformation, loss of editorial control, ethical dilemmas, financial constraints, limited AI training, regulatory uncertainty, and resistance to change. Key findings are organized under each research question to provide a structured and in-depth discussion of AI's evolving role in journalism.

5.2.1. AI Integration in News Production

The findings of the study reveal that AI has been integrated into various aspects of news production, enhancing content creation, quality improvement, content curation, and editorial efficiency. These integrations reflect broader technological transformations in journalism, aligning well with the principles outlined in the Technological Determinism Theory, which posits that technology fundamentally shapes communication practices and societal information dynamics.

Despite the numerous benefits associated with AI integrations in news production and distribution, the rise of AI in journalistic contexts has sparked considerable concerns regarding issues of accuracy, contextual sensitivity, and the potential over-reliance on

automated processes. Journalists have voiced fears, particularly in recent years, regarding AI's limitations, notably in its tendency to generate misinformation. This trend highlights the ongoing need for human oversight in content creation to maintain journalistic integrity and accuracy (Mahony & Chen, 2024).

The study's findings also resonate with existing literature that explores AI's transformative role in journalism. Prior research by Mabweazara & Mare (2021) and Chioma & Lepe (2024) emphasizes that while AI-driven journalism enhances operational speed and efficiency, it often comes at the expense of depth. Furthermore, the findings corroborate arguments put forth by Jenkins (2006) and Kristina (n.d.), which assert that while new media technologies support dynamic content creation, they also necessitate rigorous ethical oversight to avert the spread of misinformation.

One emerging insight is the cautious use of AI for content creation. Although AI tools, such as ChatGPT, provide substantial assistance in research, script generation, and other journalistic tasks, there remains a pervasive skepticism among journalists regarding the reliability of AI-generated material. This apprehension reinforces Ogola's (2023) assertion that AI-generated content should always be supplemented by critical human editorial judgment to ensure accuracy and contextuality.

Another important observation highlighted in this study is the role of AI in news optimization, which enhances audience engagement through personalized content delivery. However, this same capability also raises concerns about the creation of information echo chambers, where audiences are exposed only to viewpoints that reinforce their existing interests and or beliefs (Du, 2023).

From a practical standpoint, AI integration is revolutionizing news production processes by automating repetitive and time-consuming tasks. This shift allows journalists to redirect their focus toward higher-level editorial work that leverages their creativity and analytical skills (Gruber, n.d.). Nevertheless, for media organizations to fully harness the benefits of AI, they must develop hybrid workflows that balance automation with essential editorial oversight (Carpenter, 2024).

Furthermore, training journalists in AI literacy emerges as a fundamental necessity to address concerns around misinformation linked to AI hallucination and algorithmic bias associated with echo chambers. By equipping journalists with the knowledge and skills to effectively evaluate AI tools, media organizations can cultivate a more robust and responsible reporting environment. As Carpenter (2024) notes, in the age of artificial intelligence, human intelligence is our greatest asset.

The findings also reinforce the concept of Technological Determinism, underscoring the notion that technology plays a pivotal role in shaping journalistic practices and influencing societal information flows (Zamith & Braun, 2019). AI's influence on content creation demonstrates how technological advancements drive media evolution. Yet, as McLuhan (1964) theorized, the very medium through which news is produced significantly alters the nature of that news, necessitating careful ethical considerations in its application (Broussard et al., 2019; Thurman et al., 2019). This underscores the need for a balanced approach that embraces technological progress while preserving the core principles of journalism characterized by traditional news production practices.

5.2.2. AI Integration in News Distribution

Artificial intelligence tools have also enhanced news distribution processes, improving audience segmentation, personalized news access, automated news distribution, and feedback analysis. These enhancements allow media houses to optimize news targeting, automate distribution, and refine strategies based on audience engagement. AI-powered tools like *Sprout Social* and *Echobox* analyze audience behavior, ensuring tailored news distribution. They personalize news access by suggesting related stories to users based on their reading, listening, or viewership habits. However, as Carden and Gerlings (2021) point out, while recommender systems offer valuable assistance to consumers navigating today's information overload, different audiences consume news differently hence there is a need for different approaches to recommender systems, including public editors.

Tools like *Google AI* are transforming news dissemination by tailoring content delivery to individual user preferences. They analyze real-time data to identify trending topics, automatically pushing relevant news content from websites to interested audiences. This ensures timely information delivery and increases the likelihood of content sharing (Chan-Olmsted, 2019). Furthermore, AI monitors user engagement metrics, such as views, likes, and shares, allowing news platforms to refine their distribution strategies (Kilgo et al., 2021). AI-powered sentiment analysis also plays a crucial role, enabling journalists to gauge audience reactions and adjust content accordingly. This responsiveness fosters greater audience engagement and builds trust (Nasser El Erafy, 2023). Therefore, as news platforms increasingly integrate AI technologies, news delivery becomes more dynamic and audience-centric (Pérez-Seijo & Silva-Rodríguez, 2024).

These AI-driven news distribution advancements present both opportunities and challenges. While AI optimizes audience targeting, it also raises concerns about algorithmic bias and information silos. The reliance on AI for feedback analysis and trend detection enhances newsroom responsiveness but may contribute to sensationalism if algorithms prioritize engagement over journalistic integrity (Cohen, 2021). Similarly, the role of AI in news personalization is two-fold. On the one hand, it enhances user experience by curating relevant content. On the other, it creates concerns about filter bubbles, where audiences are only exposed to information that aligns with their preferences, limiting variety in consumption (Ross Arguedas et al., 2022; Spohr, 2017).

Again, from a practical standpoint, AI has streamlined news distribution, ensuring timely delivery and improved audience engagement. However, media houses must actively monitor AI-driven personalization to prevent content bias. Journalists should also develop expertise in AI-powered analytics to balance data-informed decision-making with editorial judgment (Carpenter, 2024). The findings further reinforce Technological Determinism Theory, demonstrating how AI-driven automation is reshaping content dissemination. As AI continues to evolve, media organizations must implement guidelines ensuring that AI-driven distributions align with ethical journalism standards (Bojic et al., 2024). Therefore, careful oversight is necessary to address potential biases and ensure that AI remains a tool for enhancing, rather than constraining journalistic integrity.

5.2.3. AI Integration Challenges

While AI offers numerous benefits to broadcast and digital journalists and media houses, its integration into news production and distribution faces significant challenges. These include

AI-generated errors and misinformation, loss of editorial control, ethical use concerns, financial constraints in media houses, limited AI training, regulatory uncertainty, and resistance to change.

The findings indicate that AI tools can misinterpret facts, fabricate details, or provide outdated information, raising concerns about misinformation. Giray (2023) similarly reports that while AI tools, such as *ChatGPT*, can generate credible essays, the content can be a mix of accurate and inaccurate information. AI hallucination occurs when large language models generate un-factual responses due to errors in encoding and decoding text and prompt misinterpretation (Kristina, n.d.). These inaccuracies necessitate strict editorial oversight to prevent the spread of false narratives.

Artificial intelligence tools like *Sprout Social* and *Echobox* also prioritize engagement-driven content, often amplifying sensationalism over journalistic depth. While emphasizing the need for human oversight linked to concerns over editorial control and potential erosion of journalistic integrity, Chioma & Lepe (2024) similarly report that AI algorithms limit the visibility of nuanced journalism, which raises ethical concerns, including algorithmic bias and lack of transparency.

Ethical dilemmas also arise with AI-generated content, including authorship attribution and verification of AI-generated deepfakes. According to Carpenter (2024, p.3.), “Today’s lies are seamless and harder to spot than ever before. Deepfake videos can make world leaders appear to say things they never said and show celebrities in compromising situations they never were in.” Carpenter (2024) further expresses concern, in her book, *A Practical Guide*

to Living in a World of Deepfakes, Disinformation, and AI-Generated Deceptions, that the very nature of reality is up for grabs because it's getting harder to tell what is real and what is just a convincing illusion.

This study also finds that financial constraints hinder AI integration in news production and distribution. This finding is key, given reports, such as Doyle (2013) and Kiguta (2018), that mainstream media houses struggle financially due to declining revenues as they compete with online platforms for audiences and advertising. Stray (2021) notes that complex AI models that can handle or train on unique news production challenges are expensive and difficult to amortize.

imited AI training and technical knowledge among journalists hinders AI integration in news production and distribution due to inconsistent adoption across newsrooms. It is also concerning as such knowledge may be journalists' primary defense against AI hallucination, crucial for protecting their integrity and public trust (Carpenter, 2024). To effectively evaluate and understand content, journalists' training must incorporate emerging ethical standards, including sensationalism and clickbait, public interest and value, source credibility, factual accuracy, and attribution and transparency - all vital for assessing news article quality (Bojic et al., 2024; Chioma & Lepe, 2024).

These challenges reflect broader global concerns about AI integration in news production and distribution. Regulatory uncertainty, particularly regarding data privacy and copyright, complicates AI adoption by journalists and media houses (Hunt & McKelvey, 2019; Kazmi & Ali, 2025). Resistance to change, especially among older journalists, underscores fears about job security and the displacement of traditional newsroom practices (Kazmi & Ali,

2025). However, a qualitative study by Milosavljević & Vobič (2021) across the United Kingdom, Germany, and the United States suggests a different perspective, indicating that human agency remains dominant over technology and that technological innovations can liberate, rather than subordinate, journalists. These differing findings may be explained by the contrasting contexts of media houses in the Global West and the Global South, where this present study is conducted (Kenya).

Addressing these challenges requires structured AI literacy programs, ethical guidelines, and regulatory frameworks. Notably, media houses must implement strategies to balance AI automation with editorial integrity, ensuring that AI complements rather than replaces human journalism.

5.3. Conclusions

This study set out to investigate how AI is being integrated into news production and distribution in two major Kenyan media houses. The findings show that AI is already reshaping journalistic processes by improving research, content creation, editing, personalization, and distribution. Journalists use AI tools to brainstorm ideas, conduct background research, summarize long documents, transcribe interviews, develop scripts, refine grammar, verify claims, and produce data-driven visual content. These findings align with global studies highlighting AI's growing role in improving newsroom efficiency and expanding creative possibilities (Beckett, 2023; Diakopoulos, 2019).

In line with the research question on news distribution, the data show that AI enhances audience segmentation, automates posting schedules, analyzes audience behavior, and recommends platform-specific formats. Tools such as *Echobox* and *Sprout Social* help

optimize publishing times and track real-time engagement trends. This mirrors global evidence that AI-driven analytics are central to digital distribution strategies (Túñez-López et al., 2019; Rantanen & Kelly, 2021).

However, the study also concludes that the integration of AI into Kenyan newsrooms is uneven and constrained by several challenges. Journalists are concerned about AI-generated misinformation, factual errors, and "hallucinations," echoing findings from international literature warning that AI outputs require strong editorial control (Harbinja & Foster, 2024). The lack of structured training and limited awareness of AI capabilities lead to inconsistent and often cautious adoption among practitioners. Financial constraints further limit access to premium AI tools, while regulatory uncertainty in Kenya leaves media houses without clear guidance on data privacy, ethics, copyright, and attribution.

A key conclusion is that AI does not replace core journalistic expertise. Instead, AI's value lies in complementing professional judgment. Journalists in this study consistently emphasized the need for careful oversight to maintain accuracy, credibility, and ethical integrity. This resonates with scholarship asserting that human editorial intervention remains essential in AI-assisted journalism (Ceide et al., 2024; Ogola, 2023).

Finally, the study concludes, in line with the Diffusion of Innovations Theory, that Kenya is still in the early-to-intermediate stage of AI integration. While AI tools support efficiency and innovation, the full potential of AI in journalism will only be realized if media houses invest in capacity building, establish clear guidelines, and engage proactively with emerging regulatory frameworks. Thus, AI's future impact in Kenyan journalism hinges on deliberate, responsible, and well-informed adoption.

5.4. Recommendations

The recommendations from this study are organized according to the key stakeholder groups most directly positioned to strengthen responsible and effective AI integration in Kenyan journalism. This structure ensures that the proposed actions respond to the distinct needs, capacities, and responsibilities of journalists, media organizations, journalism training institutions, regulatory bodies, and researchers. Each recommendation is grounded in the study's findings and aligned with the challenges and gaps presented in Chapter Four of this thesis, under the study findings

.

5.4.1. Recommendations for Journalists

The findings showed that journalists frequently relied on AI tools for research, transcription, summarization, and editing, yet many expressed uncertainty about accuracy, ethical use, and potential misinformation, particularly related to hallucinations. In response, journalists should prioritize building stronger AI literacy, not only in tool usage but also in understanding limitations, risks, and verification procedures. This includes actively seeking training on AI-assisted research techniques, fact-checking, and ethical considerations when interacting with generative systems.

The study also found that AI-generated scripts and summaries often lacked contextual depth. Journalists should therefore adopt a hybrid approach that blends AI-assisted efficiency with traditional reporting practices such as field interviews, sourcing diversity, and triangulation of information. This balanced approach would safeguard editorial depth, reduce overreliance on automation, and reinforce the human-centered principles essential to credible journalism.

Given the documented prevalence of AI error, particularly misinformation generated during content brainstorming and background research, journalists must further strengthen verification and critical evaluation habits. This means treating all AI outputs as preliminary rather than authoritative, cross-checking claims with independent sources, and employing fact-checking tools as complements rather than replacements for professional judgment.

5.4.2. Recommendations for Media Organizations

The study revealed uneven adoption of AI tools across departments and highlighted concerns about inadequate training, limited editorial oversight, and overdependence on algorithmic distribution platforms such as *Echobox*. To address these gaps, media organizations should invest in structured and continuous capacity-building programs that equip journalists and editors with the skills needed to use AI tools responsibly. These programs should focus on practical newsroom applications, including AI-enhanced scripting, verification, data visualization, and audience analytics.

second recommendation arises from concerns about ethics, authorship, and editorial control. Media houses should develop and implement clear AI governance and editorial guidelines, specifying appropriate use cases for AI, mandatory verification procedures, protocols for attribution, and acceptable limits on automation. Establishing such guidelines would help standardize practices across the newsroom, reduce ethical ambiguity, and maintain consistency in editorial quality.

The study also found that financial constraints hindered access to premium AI tools, particularly for smaller departments. Organizations should therefore pursue cost-effective AI adoption strategies, including partnerships with technology firms, collaborations with

universities, and use of high-quality open-source tools. Such approaches would allow newsrooms to innovate without compromising financial sustainability.

Finally, the findings highlighted risks associated with algorithm-driven content distribution, such as prioritizing engagement over depth. Media managers should strengthen editorial oversight over AI-driven distribution, ensuring that algorithms support rather than supplant editorial judgment. This hybrid oversight model would maintain content integrity while still benefiting from AI-generated efficiencies.

5.4.3. Recommendations for Journalism Training Institutions

The study found that journalists often learned AI skills informally and lacked structured academic grounding in AI ethics, verification techniques, and digital storytelling methods. Journalism training institutions therefore have a critical role to play in modernizing curricula to include comprehensive AI literacy modules. These should cover ethical implications of AI in news production, verification techniques for AI-generated content, prompt engineering and effective use of LLMs, AI-assisted data journalism, digital storytelling and multimedia automation, and bias detection in machine-generated text and images. Integrating these elements into undergraduate and postgraduate programs would ensure graduates enter newsrooms prepared to navigate emerging technological challenges with confidence.

Institutions should also promote experiential learning through newsroom simulations, collaborative projects with media organizations, and exposure to AI-driven editorial workflows. Such training aligns with global calls for journalism education that keeps pace with technological change and supports students in mastering both practical and ethical dimensions of AI.

5.4.4. Recommendations for Regulatory Bodies

The study revealed significant regulatory uncertainty surrounding data privacy, attribution of AI-generated content, deepfake proliferation, and transparency of automated decision-making in distribution. Regulatory bodies such as the Media Council of Kenya, the Communications Authority, and the Office of the Data Protection Commissioner should develop clear national guidelines and standards governing AI use in journalism. These guidelines should clarify expectations on transparency, editorial independence, data protection, and synthetic media disclosure.

Given the risk of AI-enabled misinformation, regulators should also support public-interest initiatives that enhance media literacy among audiences while encouraging responsible innovation within the sector. This includes creating awareness campaigns on AI use in newsrooms, developing ethical benchmarks for AI-driven storytelling, and ensuring that data used in AI models complies with national privacy standards.

At the same time, regulatory bodies should collaborate with media organizations, academia, and civil society to establish sector-wide ethical codes for AI-assisted journalism, ensuring that innovations do not compromise the core values of fairness, accuracy, and accountability.

5.4.5. Recommendations for Further Research

Future research should explore AI's actual and potential impact on newsroom employment, examining whether its integration in news production and distribution enhances job roles or leads to job losses within media organizations. A deeper investigation is needed to understand how AI contributes to misinformation and how journalists can mitigate these risks. Studies should also assess audience perception of AI-generated news, determining

whether audiences trust such content and how they perceive its credibility. Also, future research should analyze the ethical dilemmas of AI use in journalism, including issues like bias, deep-fakes, and content attribution.

Because AI technologies, and their uses in journalism, continue to evolve rapidly, further research is essential to complement and deepen the findings of this study. Future studies should examine the impact of AI integration on newsroom labor dynamics, including changing job roles, skills demands, and perceptions of technological displacement.

Research should also explore audience trust in AI-assisted news, assessing whether Kenyans can distinguish between human-written and AI-influenced content, and how these perceptions affect credibility. Another important area for investigation is the ethical dimension of AI, particularly regarding deepfakes, algorithmic bias, and challenges of content attribution.

Finally, broader comparative research across multiple media houses, including community media, vernacular stations, and emerging digital outlets, would provide a more holistic understanding of AI adoption across Kenya's diverse media ecosystem.

5.5. Chapter Summary

This study examined how AI technologies are being integrated into news production and distribution processes within Kenya's mainstream broadcast and digital media. Guided by a qualitative descriptive design, the study explored the experiences of journalists and data specialists to understand how AI tools are used and the challenges they present in newsroom environments.

The study findings showed that AI has become embedded in several stages of news production. Journalists use AI tools to brainstorm story ideas, conduct background research, summarize documents, transcribe interviews, support writing and editing, verify information, and enhance visual storytelling. These applications reflect broader international trends where AI is increasingly used to automate routine tasks and improve newsroom efficiency. Similarly, in news distribution, tools such as *Echobox* and *Sprout Social* help segment audiences, optimize posting times, track engagement metrics, and tailor content to platform-specific formats. These processes allow newsrooms to expand reach and respond more quickly to audience behaviors.

However, the study also revealed significant challenges that influence how AI is integrated. Journalists expressed concerns about AI-generated misinformation, hallucinations, outdated data, and errors that require human oversight. Financial barriers limit access to advanced AI tools, especially for smaller departments. Many journalists lack formal training in AI ethics, verification, or digital storytelling, leading to cautious and inconsistent adoption. The absence of clear national regulations on AI use in journalism contributes to uncertainty around data privacy, content attribution, and ethical responsibility. Some participants also worried about the impact of automation on job security, revealing anxieties about technological change within newsrooms.

The discussion demonstrated how these findings align with global scholarship on AI in journalism, while also reflecting Kenya's unique context. As in many developing media markets, AI offers Kenyan newsrooms opportunities to increase efficiency, expand storytelling possibilities, and strengthen audience engagement. Yet these benefits are

accompanied by structural constraints, limited resources, uneven skills, and regulatory gaps, that require deliberate action from journalists, media organizations, training institutions, and regulators.

The study concluded that AI is not replacing journalism but transforming it. AI tools complement human judgment by streamlining tasks and supporting content creation, but they cannot provide the contextual depth, critical thinking, and ethical reasoning that journalism demands. For AI to strengthen rather than undermine media integrity, newsrooms must adopt responsible strategies that prioritize human oversight, editorial independence, and ethical standards.

The recommendations presented in this chapter outline practical pathways for strengthening AI integration in Kenyan journalism. Journalists are encouraged to build AI literacy and reinforce verification practices. Media organizations should invest in structured training, adopt clear AI governance policies, and ensure editorial oversight over automated systems. Journalism training institutions should revise curricula to incorporate AI ethics, verification techniques, and digital storytelling. Regulatory bodies should provide national guidelines that clarify expectations on transparency, copyright, attribution, and data protection. Finally, the study recommends further research on the impact of AI on newsroom employment, audience trust, and ethical decision-making.

The study's findings, conclusions, and recommendations highlight that the future of AI-assisted journalism in Kenya depends on balancing innovation with responsibility. If supported by adequate training, ethical frameworks, and policy guidance, AI has the potential

to enhance journalistic practice, strengthen public trust, and contribute to a more dynamic and responsive media landscape.

REFERENCES

Adeniran, R. (2024). Exploring audience engagement strategies of data journalism practices in Nigerian online news media. *Mediální studia*, *18*(01), 113-135.

Adu, J. A. (2024). *The Diffusion and Reinvention of Information and Communication Technology in Africa: An Exploratory Study of Artificial Intelligence in Ghana and Kenya* (Doctoral dissertation). https://hdl.handle.net/2346/100491

Ahmad, N., Alias, F. A., & Abdul Razak, N. A. (2023). Understanding population and sample in research: Key concepts for valid conclusions. *Sigcs: E-Learning*, *6*, 19-24. https://appspenang.uitm.edu.my/sigcs/2023-2/Articles/20234_UnderstandingPopulationAndSampleInResearch.pdf

Ahmed, S. (2024). The Pillars of Trustworthiness in Qualitative Research. *Journal of Medicine, Surgery, and Public Health*. https://doi.org/10.1016/j.glmedi.2024.100051.

Al Jazeera. (2024, June 19). *A lack of trust: How deepfakes and AI could rattle the US elections*. https://www.aljazeera.com/amp/news/2024/6/19/a-lack-of-trust-how-deepfakes-and-ai-could-rattle-the-us-elections

Algabri, H. K. M. (2024). *Artificial intelligence and ChatGPT*. Academic Guru Publishing House.

Anyango, M. G. (2025). The influence of artificial intelligence on journalism: Exploring ethical considerations for Kenyan newsrooms.

Anyanwu, C., Imiti, A. L., & Anyanwu, C. J. (2024). Traditional news media as agents of authenticity: Nigerian audiences weathering the onslaught of new media streaming. *Journalism and media*, *5*(2), 456-466.

Arakpogun, E. O., Elsahn, Z., Olan, F., & Elsahn, F. (2021). Artificial intelligence in Africa: Challenges and opportunities. *The fourth industrial revolution: Implementation of artificial intelligence for growing business success*, 375-388. https://doi.org/10.1007/978-3-030-62796-6_22

Archana, R., & Jeevaraj, P. (2024). Deep learning models for digital image processing: a review. *Artificial Intelligence Review*, 57, 1-33. https://doi.org/10.1007/s10462-023-10631-z.

Babbie, E. R. (2020). *The practice of social research*. Cengage Au.

Babu, M. V. S., & Banana, K. R. I. S. H. N. A. (2024). A study on narrow artificial intelligence—An overview. *Int. J. Eng. Sci. Adv. Technol*, *24*, 210-219. https://www.ijesat.com/ijesat/files/V24I0428_1714383466.pdf

Bagozzi, R. P. (2007). The legacy of the technology acceptance model and a proposal for a paradigm shift. *Journal of the association for information systems*, *8*(4), 3.

BBC. (2017, January 1). *AI in production: A guide to understanding AI's role in media*. https://www.bbc.co.uk/rd/projects/ai-production

Bengio, Y., Courville, A., & Vincent, P. (2015). Representation learning: A review and new perspectives. *IEEE Transactions on Pattern Analysis and Machine Intelligence, 35*(8), 1798-1828. https://doi.org/10.1109/TPAMI.2015.213563

Bernard, H. R., Wutich, A., & Ryan, G. W. (2016). *Analyzing qualitative data: Systematic approaches*. SAGE publications.

Boczkowski, P. J., & Mitchelstein, E. (2018). The news gap: When news breaks in social media. *Journalism Studies, 19*(9), 1282-1298. https://doi.org/10.1177/1461444817750396

Borchardt, A. (2022). Go, Robots, Go! the value and challenges of artificial intelligence for local journalism. *Digital Journalism*, *10*(10), 1919-1924. https://doi.org/10.1080/21670811.2022.2149584

Broussard, M., Diakopoulos, N., Guzman, A. L., Abebe, R., Dupagne, M., & Chuan, C. H. (2019). Artificial intelligence and journalism. *Journalism & mass communication quarterly*, *96*(3), 673-695. https://doi.org/10.1177/1077699019859901

Çakıroğlu, Ü., Saylan, E., Çevik, I., Mollamehmetoğlu, M., & Timuçin, E. (2022). Faculty adoption of online teaching during the Covid-19 pandemic: A lens of diffusion of innovation theory. *Australasian Journal of Educational Technology*. https://doi.org/10.14742/ajet.7307.

Call, D., & Herber, D. (2022). Applicability of the diffusion of innovation theory to accelerate model-based systems engineering adoption. *Systems Engineering*, 25, 574 - 583. https://doi.org/10.1002/sys.21638.

Carden, H.S. & Gerlings, J. (2021). Artificial Intelligence in Digitalized News Media. Copenhagen Business School. https://research-api.cbs.dk/ws/portalfiles/portal/68334970/1279098_Master_Thesis_.pdf

Chan-Olmsted, S. M. (2019). A review of artificial intelligence adoptions in the media industry. *International journal on media management*, *21*(3-4), 193-215. https://doi.org/10.1080/14241277.2019.1695619

Chao, C. (2019). Factors Determining the Behavioral Intention to Use Mobile Learning: An Application and Extension of the UTAUT Model. *Frontiers in Psychology*, 10. https://doi.org/10.3389/fpsyg.2019.01652.

ChatGPT. (2024, December 3). *ChatGPT*. https://chatgpt.com

Chatterjee, R. (2020). Fundamental concepts of artificial intelligence and its applications. *Journal of Mathematical Problems, Equations and Statistics*, *1*(2), 13-24.

Chepchirchir, S. (2024). Integrating Artificial Intelligence Literacy in Library and Information Science Training in Kenyan Academic Institutions. https://karuspace.karu.ac.ke/handle/20.500.12092/3201

Chui, M., & Francisco, S. (2017). Artificial intelligence the next digital frontier. *McKinsey and Company Global Institute*, *47*(3.6), 6-8.

CleverTap. (2024, December 3). *Neural networks*. https://clevertap.com/blog/neural-networks/

Cohen, J. (2021). News distribution in the digital age: Challenges and opportunities. *Journalism Studies, 22*(5), 623-638.

Dafoe, A. (2015). On technological determinism: A typology, scope conditions, and a mechanism. *Science, Technology, & Human Values, 40*(6), 1047–1076. https://doi.org/10.1177/0162243915579283

Danzon-Chambaud, S. (2021). A systematic review of automated journalism scholarship: guidelines and suggestions for future research. *Open research europe*, *1*, 4.

Daramola, O., & Etim, E. (2022). Affordances of digital platforms in sub-Saharan Africa: An analytical review. *The Electronic Journal of Information Systems in Developing Countries*, *88*(4), e12213.

De la Cruz Paragas, F., & Lin, T. T. (2016). Organizing and reframing technological determinism. *New Media & Society*, *18*(8), 1528-1546.

Diakopoulos, N. (2019). *Automating the news: How algorithms are rewriting the media*. Harvard University Press.

Doyle, G. (2013). Understanding media economics.

Drisko, J. (2024). Transferability and Generalization in Qualitative Research. *Research on Social Work Practice*. https://doi.org/10.1177/10497315241256560.

Du, Y. R. (2023). Personalization, echo chambers, news literacy, and algorithmic literacy: a qualitative study of AI-powered news app users. *Journal of Broadcasting & Electronic Media*, *67*(3), 246-273.

Dwivedi, Y., Rana, N., Jeyaraj, A., Clement, M., & Williams, M. (2017). Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a Revised Theoretical Model. *Information Systems Frontiers*, 21, 719 - 734. https://doi.org/10.1007/s10796-017-9774-y.

El Malouf, N.& Bahemia, H. (2025) *Diffusion of Innovations: A review*. In S. Papagiannidis (Ed), TheoryHub Book. Available at https://open.ncl.ac.uk / ISBN: 9781739604400

Eva Zinreich. (2023). Mass communication: Understanding the power of media in today's world. *Journal of Mass Communication & Journalism, 13*(3). https://doi.org/10.2139/ssrn.4321394

Firat, F. E. Y. Y. A. Z. (2019). Robot journalism. *The International Encyclopedia of Journalism Studies*, *5*. DOI: 10.1002/9781118841570.iejs0243

Gartner. (2024, May 7). *Gartner survey*. https://www.gartner.com/en/newsroom/press-releases/2024-05-07-gartner-survey

Georgii Slavin, R. (2022). Overview of the historical evolution of traditional media in the United States. *International Journal of Science and Research (IJSR), 11*(2), 218-224.

Google Gemini. (2024, December 3). *Google Gemini*. https://gemini.google.com

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: systematic review and recommendations. *The milbank quarterly*, *82*(4), 581-629.

Gruber, B. (n.d.). *Artificial intelligence and journalism*. Goethe-Institut. https://www.goethe.de/prj/k40/en/lan/aij.html

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, *2*(163-194), 105. https://miguelangelmartinez.net/IMG/pdf/1994_Guba_Lincoln_Paradigms_Quali_Research_chapter.pdf

Gunkel, D. J. (2020). *An introduction to communication and artificial intelligence*. Polity Press. https://cir.nii.ac.jp/crid/1130285377336493568

Gutiérrez-Caneda, B., Lindén, C. G., & Vázquez-Herrero, J. (2024). Ethics and journalistic challenges in the age of artificial intelligence: talking with professionals and experts. *Frontiers in Communication*, *9*, 1465178.

Hauer, T. (2017). Technological determinism and new media. *International Journal of English Literature and Social Sciences*, *2*(2), 239174.

Hua, Z. (2015). Identifying research paradigms. *Research methods in intercultural communication: A practical guide*, 1-22. **https://doi.org/10.1002/9781119166283.ch1**

Ishengoma, D. J., & Magolanga, E. M. (2025). Adaptations of artificial intelligence (AI) in Tanzanian newsrooms: Opportunities, benefits and threats to journalism professionals. *Journal of Applied Journalism & Media Studies*.

Jaakkola, M. (2023). Reporting on artificial intelligence: A handbook for journalism educators.

Jamil, S. (2021). Artificial intelligence and journalistic practice: The crossroads of obstacles and opportunities for the Pakistani journalists. *Journalism Practice*, *15*(10), 1400-1422. https://doi.org/10.1080/17512786.2020.1788412

Jan, A., Naz, S., Khan, O., & Khan, A. Q. (2020). Marshal McLuhan's technological determinism theory in the arena of social media. *Theoretical and Practical Research in Economic Fields*, *11*(2), 133-137.

Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York University Press. DOI: 10.3395/reciis.v2i1.165pt

Johnson, J., Adkins, D., & Chauvin, S. (2019). A Review of the Quality Indicators of Rigor in Qualitative Research. *American Journal of Pharmaceutical Education*, 84. https://doi.org/10.5688/ajpe7120.

Jones, R., & Jones, B. (2021). Atomising the news: The (in) flexibility of structured journalism. In *Algorithms, Automation, and News* (pp. 178-200). Routledge.

Jwan, J. O. & Ong'ondo, C. O. (2011). *Qualitative Research: An Introduction to Principles and Techniques*. Eldoret: Moi University Press.

Kaminski, J. (2011). Diffusion of innovation theory. *Canadian Journal of Nursing Informatics*, *6*(2), 1-6.

Karimi, M., Jannach, D., & Jugovac, M. (2018). News recommender systems–Survey and roads ahead. *Information Processing & Management*, *54*(6), 1203-1227.

Kasparov, G. (2010). The chess master and the computer. *The New York Review of Books*, *57*(2), 16-19.

Kauffman, R., & Techatassanasoontorn, A. (2009). Understanding early diffusion of digital wireless phones. *Telecommunications Policy*, 33, 432-450. https://doi.org/10.1016/j.telpol.2009.03.006.

Kazmi, S. H. Z., & Ali, M. (2025). The Role of AI in Journalism: Perspectives from Media Professionals. *Review Journal of Social Psychology & Social Works*, *3*(1), 92-99. https://doi.org/10.71145/rjsp.v3i1.79

Kerongo, G. (2025). Ai adoption in content management at Nation Media Group. https://ecommons.aku.edu/theses_dissertations/2377/

Kevin-Alerechi, E., Abutu, I., & Oladunni, O. AI and the Newsroom: Transforming Journalism with Intelligent Systems. *J Artif Intell Mach Learn & Data Sci 2025*, *3*(1), 1930-1937. https://doi.org.10.519/JAIMLD/Elfredah-Kevin-Alerechi.426

Khaleel, M., Jebrel, A., & Shwehdy, D. M. (2024). Artificial Intelligence in Computer Science: *International Journal of Electrical Engineering and Sustainability (IJEES)*, 2(2), 01–21. https://doi.org/10.5281/zenodo.10937515

Kiaka, R., & Kimana, R. V. (2024). *Digital Technology in Kenyan Agriculture: A Scoping Report*. Working Paper 67. Cape Town: Institute for Poverty, Land and Agrarian Studies, University of the Western Cape, South Africa, 10-11. https://plaas.org.za/wp-content/uploads/2024/05/Working-Paper-67-Digital-Technology-in-Kenyan-Agriculture-Kiaka.pdf

Kibria, M. G., Nguyen, K., Villardi, G. P., Zhao, O., Ishizu, K., & Kojima, F. (2018). Big data analytics, machine learning, and artificial intelligence in next-generation wireless networks. *IEEE access*, *6*, 32328-32338. **DOI:** 10.1109/ACCESS.2018.2837692

Kiguta, J. W. (2018). The Impact of Social Media On Print Journalism (Doctoral dissertation, University of Nairobi). https://erepository.uonbi.ac.ke/handle/11295/104968

Kilgo, D. K., Harlow, S., García-Perdomo, V., & Salaverría, R. (2021). From# Ferguson to# Ayotzinapa: Analyzing differences in domestic and foreign protest news shared on social media. In *Social Media News and Its Impact* (pp. 122-146). Routledge.

Kim, H. (2019). AI in journalism: Creating an ethical framework. https://surface.syr.edu/honors_capstone/1083/

Kinnunen, J. (1996). Gabriel Tarde as a founding father of innovation diffusion research. *Acta sociologica*, *39*(4), 431-442.

Kioko, P., Booker, N., Chege, N., & Kimweli, P. (2022). The Adoption of Artificial Intelligence in Newsrooms in Kenya: a Multi-case Study. *European Scientific Journal, ESJ*. https://doi.org/10.19044/esj.2022.v18n22p278.

Korkmaz, H., Fidanoğlu, A., Ozcelik, S., & Okumuş, A. (2021). User Acceptance of Autonomous Public Transport Systems (APTS): Extended UTAUT2 Model. *Journal of Public Transportation*. https://doi.org/10.5038/2375-0901.23.1.5.

Korstjens, I., & Moser, A. (2017). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *The European Journal of General Practice*, 24, 120 - 124. https://doi.org/10.1080/13814788.2017.1375092.

Kovach, B., & Rosenstiel, T. (2014). *The elements of journalism: What newspeople should know and the public should expect*. Three Rivers Press.

Lim, W. (2024). What Is Qualitative Research? An Overview and Guidelines. *Australasian Marketing Journal*. https://doi.org/10.1177/14413582241264619.

Lewis, S. C., Guzman, A. L., Schmidt, T. R., & Lin, B. (2025). Generative AI and its disruptive challenge to journalism: An institutional analysis. *Communication and Change*, *1*(1), 9.

Lund, B. (2025). Diffusion of innovations: still a relevant theory for studying library technology in the age of AI?. *Library Hi Tech News*. https://doi.org/10.1108/lhtn-12-2024-0209.

Mabweazara, H. M., & Mare, A. (2021). *Participatory journalism in Africa: Digital news engagement and user agency in the South*. Routledge. https://doi.org/10.4324/9780429242908

Magsamen-Conrad, K., Upadhyaya, S., Joa, C., & Dowd, J. (2015). Bridging the divide: Using UTAUT to predict multigenerational tablet adoption practices. *Computers in human behavior*, 50, 186-196 . https://doi.org/10.1016/j.chb.2015.03.032.

Mahony, S., & Chen, Q. (2024). Concerns about the role of artificial intelligence in journalism, and media manipulation. *Journalism*, 14648849241263293.

Manheim, K., & Kaplan, L. (2019). Artificial intelligence: Risks to privacy and democracy. *Yale JL & Tech.*, *21*, 106. https://heinonline.org/HOL/LandingPage?handle=hein.journals/yjolt21&div=4&id=&page=

Marconi, F. (2020). *Newsmakers: Artificial intelligence and the future of journalism*. Columbia University Press.

Masele, J. J., & Joseph, R. (2023). Media firms' preparedness and coping strategies in the emergence of social media: a case of Tanzania. *Journal of Media Business Studies*, *20*(4), 339-363. https://doi.org/10.1080/16522354.2022.2163794

Media Council of Kenya (MCK) Media Center. (2023). *MCK unveils taskforce on data and AI guidelines*. https://mediacouncil.or.ke/media-center/mck-newsroom/news/mck-unveils-taskforce-data-and-ai-guidelines

McLuhan, M. (1964). *Understanding media: The extensions of man*. McGraw-Hill.

Media Council of Kenya. (2023). *Mandate and objectives*. https://mediacouncil.or.ke/

Media Council of Kenya. (2023). *State of the media report, 2023*. Media Council of Kenya.

Milosavljević, M., & Vobič, I. (2021). 'Our task is to demystify fears': Analysing newsroom management of automation in journalism. *Journalism*, *22*(9), 2203-2221. https://doi.org/10.1177/1464884919861598

Momanyi, S. (2017). DIGITAL MIGRATION AND PERFORMANCE OF MEDIA HOUSES IN KENYA: A CASE STUDY OF ROYAL MEDIA SERVICES, KENYA.

Müller, B., Reinhardt, J., & Strickland, M. T. (2012). *Neural networks: An introduction*. Springer Science & Business Media.

Muya, P. (2024). Appropriation of Artificial Intelligence in Broadcast Media Production in Kenya: Opportunities and Concerns. *Journal of the Kenya National Commission for UNESCO*, *5*(1).

Nanz, A., Binder, A., & Matthes, J. (2025). AI in the Newsroom: Does the Public Trust Automated Journalism and Will They Pay for It?. *Journalism Studies*, 1-20.

Nassaji, H. (2020). Good qualitative research. *Language Teaching Research*, 24, 427 - 431. https://doi.org/10.1177/1362168820941288.

Nasser El Erafy, A. (2023). Applications of Artificial Intelligence in the field of media. *International Journal of Artificial Intelligence and Emerging Technology*, *6*(2), 19-41. 10.21608/ijaiet.2024.275179.1006

Ngugi, A. I. (2024). Innovating for efficiency: the use of generative AI in Kenyan newsrooms.

Ndlela, M. N., & Mulwo, A. (2017). Social media, youth and everyday life in Kenya. *Journal of African Media Studies, 9*(3), 277–290. https://doi.org/10.1386/jams.9.2.277_1

Niblock, S. (2012). *Journalism: A beginner's guide*. Oneworld Publications.

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-Based Nursing*, 18, 34 - 35. https://doi.org/10.1136/eb-2015-102054.

O'Sullivan, D. (2020). AI in journalism: The ethical dilemmas of using algorithms. *Journalism Ethics*, *29*(4), 1-12.

Odera, L. (2024). Harnessing the potential of digital media for business growth of legacy media in Kenya. https://ecommons.aku.edu/theses_dissertations/2312/

Ogola, G. (2023). *AI, journalism, and public interest media in Africa*. International Media Support. https://www.mediasupport.org/wp-content/uploads/2023/06/AI-Africa-Report-2023R-Double-Spread-View.pdf

OpenAI. (2024, December 3). *OpenAI Charter*. https://openai.com/charter

Oso, W. Y., & Onen, D. (2009). *A general guide to writing research proposals and reports: A handbook for beginning researchers* (Rev. ed.). Jomo Kenyatta Foundation.

Pandolfini, B. (1997). *Kasparov and Deep Blue: The historic chess match between man and machine*. Simon and Schuster.

Petersson, L., Larsson, I., Nygren, J. M., Nilsen, P., Neher, M., Reed, J. E., Tyskbo, D., & Svedberg, P. (2022). Challenges to implementing artificial intelligence in healthcare: a qualitative interview study with healthcare leaders in Sweden. *BMC Health Services Research*, *22*(1), 850.

Pérez-Seijo, S., & Silva-Rodríguez, A. (2024). Innovation in Digital Media beyond Technology: The Audience-Centered Approach and Pending Challenges. *Journalism and Media*, *5*(1), 311-324. **https://doi.org/10.3390/journalmedia5010021**

Prakash, D. (2025). Classification of Real Vs AI Generated Images Using Deep Learning. *INTERANTIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT*. https://doi.org/10.55041/ijsrem42077.

Prakash, G., & Sabharwal, D. (2024). AI Revolution in Online Media: Transforming Content Creation, Distribution, and Consumption. *Media and AI: Navigating*, *179*.

Quinonez, C., & Meij, E. (2024). A new era of AI-assisted journalism at Bloomberg. *AI Magazine*, *45*(2), 187-199. **https://doi.org/10.1002/aaai.12181**

Rantanen, T., & Kelly, A. (2021). The digital transformation of international and national news agencies: challenges facing AFP, AP, and TASS. *Global journalism: Understanding world media systems*, *189*.

Raza, S., & Ding, C. (2022). News recommender system: a review of recent progress, challenges, and opportunities. *Artificial Intelligence Review*, *55*(1), 749-800.

Reilley, M. (2024). *The Journalist's Toolbox: A Guide to Digital Reporting and AI*. Taylor & Francis.

Reuters Fact Check. (2023, March 23). *Video of Australian news interview featuring Bill Gates edited using AI*. Reuters. https://www.reuters.com

Ross Arguedas, A., Robertson, C., Fletcher, R., & Nielsen, R. (2022). Echo chambers, filter bubbles, and polarisation: A literature review. https://ora.ox.ac.uk/objects/uuid:6e357e97-7b16-450a-a827-a92c93729a08

Russell, S., & Norvig, P. (2010). *Artificial intelligence: A modern approach* (3rd ed.). Prentice Hall.

Raza, S., & Ding, C. (2022). News recommender system: a review of recent progress, challenges, and opportunities. *Artificial Intelligence Review*, *55*(1), 749-800.

Ryan, B., & Gross, N. C. (1943). The diffusion of hybrid seed corn in two Iowa communities. *Rural sociology*, *8*(1), 15.

Saini, P., Kumar, K., Kashid, S., Saini, A., & Negi, A. (2023). Video summarization using deep learning techniques: a detailed analysis and investigation. *Artificial Intelligence Review*, 1 - 39. https://doi.org/10.1007/s10462-023-10444-0.

Salazar, I. (2018). Robots and Artificial Intelligence. New challenges of journalism. *Doxa comunicación*, *27*, 295-315. https://doi.org/10.31921/doxacom.n27a15

Salonen, M., Ehrlén, V., Koivula, M., & Talvitie-Lamberg, K. (2023). Post-publication gatekeeping factors and practices: data, platforms, and regulations in news work. *Media and Communication*, *11*(2), 367-378.

Sančanin, B., & Penjišević, A. (2022). Use of artificial intelligence for the generation of media content. *Social informatics journal*, *1*(1), 1-7. https://doi.org/10.58898/sij.v1i1.01-07

Sehl, A., & Eder, M. (2023). News personalization and public service media: the audience perspective in three European countries. *Journalism and Media*, *4*(1), 322-338.

Serdouk, A., & Bessam, A. C. (2023). Bots in newsrooms: what future for human journalists?. *Media Watch*, *14*(1), 100-115. https://doi.org/10.1177/09760911221130816

Siebecker, M. R. (2022). The incompatibility of artificial intelligence and citizens united. *Ohio St. LJ*, *83*, 1211.https://heinonline.org/HOL/LandingPage?handle=hein.journals/ohslj83&div=47&id=&page=

Simon, F. (2024). Artificial intelligence in the news: How AI retools, rationalizes, and reshapes journalism and the public arena. https://www.cjr.org/tow_center_reports/artificial-intelligence-in-the-news.php

Sonni, A. F., Hafied, H., Irwanto, I., & Latuheru, R. (2024). Digital newsroom transformation: A systematic review of the impact of artificial intelligence on journalistic practices, news narratives, and ethical challenges. *Journalism and Media*, *5*(4), 1554-1570.

Spohr, D. (2017). Fake news and ideological polarization: Filter bubbles and selective exposure on social media. *Business information review*, *34*(3), 150-160. https://doi.org/10.1177/0266382117722446

Stark, S., & Harry, T. (2005). *Case study* in B. Somekh & C. Lewin (Eds.), *Research methods in the social sciences* (pp. 113-125). Vistaar Publications.

Stray, J. (2021). Making artificial intelligence work for investigative journalism. *Algorithms, Automation, and News*, 97-118.

Tallam, E., Mulwo, A., & Chepkuto, P. (2014). New media and democracy in Kenya: Redefining democracy and politics. *New Media and Mass Communication*, *3*, 37–50. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=06e096c371b743ef0e3d478aa6362ca001ff464d

The Comm Spot. (2025, October 28). *Technological determinism theory*. https://thecommspot.com/communication-basics/communication-theories/technological-determinism-theory/

Thurman, N., Lewis, S. C., & Kunert, J. (2019). Algorithms, automation, and news. *Digital journalism*, *7*(8), 980-992. https://doi.org/10.1080/21670811.2019.1685395

Trang, T. T. N., Chien Thang, P., Hai, L. D., Phuong, V. T., & Quy, T. Q. (2024). Understanding the adoption of artificial intelligence in journalism: An empirical study in Vietnam. *Sage Open*, *14*(2), 21582440241255241.

Trattner, C., Jannach, D., Motta, E., et al. (2022). Responsible media technology and AI: Challenges and research directions. *AI Ethics*, *2*, 585-594. https://doi.org/10.1007/s43681-021-00126-4

Túñez-López, M., Toural-Bran, C., & Abad, C. V. (2019). Automation, bots and algorithms in newsmaking. Impact and quality of artificial journalism. *Revista latina de comunicación social*, (74), 1411-1433. DOI: 10.4185/RLCS-2019-1391

Umejei, E., Ayisi, A., Phiri, M., & Tallam, E. (2025). Artificial Intelligence and Journalism in Four African Countries: Optimists, Pessimists, and Pragmatists. *Journalism Practice*, 1-17.

Venkatesh, V., Morris, M., Davis, G., & Davis, F. (2003). User Acceptance of Information Technology: Toward a Unified View. *Institutions & Transition Economics: Microeconomic Issues eJournal*. https://doi.org/10.2307/30036540.

Waguda, C. (2025). EXPLORING THE INTEGRATION OF ARTIFICIAL INTELLIGENCE IN JOURNALISM EDUCATION AT RONGO UNIVERSITY, KENYA. *International Research Journal of Rongo University*, (Special Issue 2), 145-157.

Wamunyu, W. (2017). NEW ACTORS IN JOURNALISTIC PRACTICE: THE CASE OF A KENYAN RADIO STATION. *Journal of Language, Technology & Entrepreneurship in Africa*, 8, 26-35. https://doi.org/10.4314/jolte.v8i2.

Wamunyu, W., & Wahutu, S. (2019). Old Habits, New Realities: Digital Newsrooms in Kenyan Commercial Media Houses. *African Journalism Studies*, 40, 36 - 52. https://doi.org/10.1080/23743670.2019.1583583.

Wu, C., Wu, F., Huang, Y., & Xie, X. (2023). Personalized news recommendation: Methods and challenges. *ACM Transactions on Information Systems*, *41*(1), 1-50.

Yu, Y., & Huang, K. (2021). Friend or foe? Human journalists' perspectives on artificial intelligence in Chinese media outlets. *Chinese Journal of Communication*, *14*(4), 409-429. https://doi.org/10.1080/17544750.2021.1915832

Zamith, R., & Braun, J. A. (2019). Technology and journalism. *The international encyclopedia of journalism studies*, 1-7. DOI: 10.1002/9781118841570.iejs0040

Zohuri, B., & Rahmani, F. M. (2020). Artificial intelligence versus human intelligence: A new technological race. *Acta Scientific Pharmaceutical Sciences (ISSN: 2581-5423)*, *4*(5).

APPENDICES

APPENDIX 1: INTERVIEW SCHEDULES FOR REPORTERS/EDITORS

Department _____

Interview date _____

Interviewee Code_____

Section A: General Background

1. Tell me about your role in the media house?
2. What digital devices are using in your day-to-day activities?
3. Tell me about the challenges you experience in your day-to-day activities at work (Time taken to deliver?)
4. What do you know about AI and have you used it? (daily life (other than for work)? If yes, how is the experience? Do you think AI can enhance our living?)

Section B: Integration of AI in News Production.

5. Tell me about your experience in using AI to do certain **tasks** for news production? (which forms of tasks, do you use AI for? opinion do you think AI has added value to your work?)
6. What specific **AI technologies** has been integrated into your news production processes
   (e.g. automated reporting, content curation, audience analysis)
7. What are your recommendations on how best AI technologies can ease production?

SECTION C: Integration of AI in News Distribution.

8. Tell me how you use AI for news distribution?
9. What specific **AI technologies** have you integrated into your news distribution processes

(feedback analysis, automated news updates, audience analysis, etc.)

10. How has AI influenced news distribution and audience engagement in your media house? (Faster content sharing, more efficient editing after distribution, feedback from audience.)

SECTION D: Challenges to AI Adoption:

11. Can you share some of the challenges you have encountered while using AI technologies?
12. How are these challenges impacting the overall effectiveness of your work?
13. What steps, do you believe, are necessary to be taken to overcome these challenges?
14. What support or initiatives has your media house put in place to assist users in making use of AI technologies?
15.

SECTION E: Conclusion

16. Is there anything else you would like to add regarding AI in media?

Appendix 2: Interview Schedules for Data Experts (ICT)

Interviewee Name_____

Department _____

Interview date _____

Interviewee Code_____

Section A: General Background

1. Tell me about your role in the media house?
2. What digital devices are using in your day-to-day activities?
3. Tell me about the relevance of AI in your everyday work? (Can you provide examples of successful AI implementations in your organization?)

Section B: Integration of AI in News Production

4. What specific AI tools/technologies have been integrated into **news production. (aspects like access to file footage, historical background with political stories)**
5. Tell me about the AI Tools you use in your organization (open source or commercial software?
6. How has AI shaped/reshaped news Production processes in your media house? (e.g. easy access to file footage etc.)

SECTION C: Integration of AI in News Distribution

7. What specific AI tools/technologies has been integrated into your news distribution?
8. Tell me about the AI Tools you use in your organization for news distribution (are they open source or commercial software?
9. How is AI enhancing news Distribution in your media house? (e.g. fast and efficient distribution of news content, etc.)

SECTION D: Challenges to AI Adoption

10. What challenges have you encountered when sourcing for AI technologies? (Integrating and adopting AI technologies? budget constraints, lack of infrastructure, resistance to change by the journalists)
11. What steps do you believe are necessary to overcome these challenges?

SECTION E: Conclusion

12. Is there anything else you would like to add regarding AI in media?

APPENDIX II NACOSTI DOCUMENTS

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 842386

Date of Issue: 04/December/2024

RESEARCH LICENSE

This is to Certify that Ms. MERCY JEBET KANDIE of Moi University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: Integration of Artificial Intelligence (AI) Technologies in news Production and Distribution ; A study of two Mainstream Media Houses in Kenya. for the period ending : 04/December/2025.

License No: NACOSTI/P/24/14575

842386

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
    i. Endanger national security
    ii. Adversely affect the lives of Kenyans
    iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
    iv. Result in exploitation of intellectual property rights of communities in Kenya
    v. Adversely affect the environment
    vi. Adversely affect the rights of communities
    vii. Endanger public safety and national cohesion
    viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

PLAGIARISM REPORT

SR850

ISO 9001:2019 Certified Institution

THESIS WRITING COURSE

PLAGIARISM AWARENESS CERTIFICATE

This certificate is awarded to

MERCY J. KANDIE

SHRD/PGC/06/13

In recognition for passing the University's plagiarism

Awareness test for Thesis **entitled: INTEGRATION OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN NEWS PRODUCTION AND DISTRIBUTION: A MULTIPLE CASE STUDY OF TWO MAINSTREAM MEDIA HOUSES IN KENYA with** similarity index of 5% and striving to maintain academic integrity.

Word count:23288

Awarded by

Prof. Anne Syomwene Kisilu
CERM-ESA Project Leader Date: 22/05//2025