



**Investigating the Effectiveness of Podcasts as a Knowledge Sharing Tool for Poultry  
Farmers in Accra.**

**BY**

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## ABSTRACT

This research study explores the effectiveness of podcasts as knowledge-sharing tool for poultry farmers in Accra. With the rapid growth of digital media, podcasts have emerged as a convenient alternative medium for disseminating information across various sectors, including agriculture. Using a qualitative research approach, the study explored how poultry farmers interact and patronize podcast technology for acquiring and sharing knowledge and best practices. Through the use of in-depth interviews with poultry farmers in Accra, the research investigated farmers experiences, challenges and perceptions regarding podcast usage in their agricultural practices. The study also assessed factors influencing podcast adoption, preferred content formats, and the impact of podcast-based learning on farming operations. Findings revealed key insights about the accessibility, usability and practical value of podcasts in the context of poultry farming knowledge dissemination. The research contributes to understanding how digital audio content can support agricultural education and information sharing in urban farming communities. Recommendations are provided for optimizing podcast content and delivery to better serve the knowledge needs of poultry farmers in Accra and similar urban agricultural settings.

**Keywords:** Podcasts, Knowledge-sharing, Poultry Farming, Agricultural Education, Qualitative Research, Ghana.

## **DEDICATION**

This study is dedicated to the memory of my late mother, older brother and my wife, Mrs.

Rubby Akuwah Sabia Edwards.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 BACKGROUND OF THE STUDY**

In a briskly developing terrain of agricultural communication, the prospects of podcast as a knowledge-sharing tool for poultry farmers in Accra, Ghana, presents an interesting area of study. This research aims to investigate the effectiveness of podcasts in crucial information-sharing to poultry farmers, dealing with the gaps in the literature regarding forward-thinking communication strategies in the agricultural sector of developing countries.

The poultry industry in Ghana has seen some growth in recent years, contributing significantly to the country's economy and food security. However, the industry is challenged with some problems including limited access to up-to-date information on best practices, disease management and market trends (Atuahene et al., 2019). Traditional methods of sharing knowledge through extension services and printed materials, have shown limitations in reach and timeliness. In this regard, digital technologies, specifically podcasts, can be a potential solution to bridge the information gap.

Podcasts come with several advantages as a knowledge-sharing tool. They are easily accessible, consumed on demand and do not require digital technology skills, which makes them suitable for several audiences (Malan, 2020). However, the effectiveness of podcasts in the area of poultry farming in Accra is underexplored. This study seeks to address the knowledge gap by exploring the possibility and prospective impact of podcasts as an educational tool for poultry farmers.

The research will begin by assessing the current podcast listening habits and preferences of poultry farmers in the target area. This fundamental information is key to understanding the current use of this medium and identifying potential areas for improvement. Additionally, the study will determine the accessibility and use of digital technologies among poultry farmers, this also includes smartphones, internet connectivity and podcasts platforms. This piece of information is relevant in determining the technical readiness and adaptation of the target audience and identifying potential barriers to adoption.

Media literacy plays an important role in the effective use of any communication tool. Therefore, this study will assess the levels of media literacy among poultry farmers in Accra across various divides of the socio-economic levels including their ability to properly evaluate and apply information from podcasts. This assessment will help customize the content and delivery of podcasts to suit the needs of farmers and their capabilities.

The research will also look into the possibility of developing and implementing an Agri-podcast program specifically made for poultry farmers in Accra. This comes with the consideration of various factors such as content creation, distribution channels and potential partnerships with Agric extension services or local agricultural organizations. The study will determine the most effective delivery method for Agri-podcasts while considering factors such as credible agencies, government involvement or cooperative strategies among farmers.

While podcasts offer promising potential, it is crucial to identify and address potential challenges and limitations of using this medium as a knowledge-sharing tool for poultry farmers. These may include technological barriers, cultural issues and competitive information sources. By understanding these problems, the research can suggest strategies to overcome them and enhance the effectiveness of podcasts as an educational tool.

In studying the current terrain of agricultural podcasts, it is imperative to note that while there has been a growth in agricultural podcasts worldwide, the accessibility of podcasts aimed at poultry farmers in Ghana is limited. A study by Agyekum et al. (2021) revealed that only 12% of Ghanaian farmers had access to agricultural podcasts with even fewer focusing on poultry farming. This emphasizes a significant gap in the market and an opportunity for targeted content creation.

Regarding device ownership and access to digital technologies, recent data from the Ghana Statistical Service (2022) shows that smartphone ownership among rural farmers has increased to 45% from 32% in 2018. However, this data varies considerably across different regions and socio-economic groups. In Accra, the figures are higher with an estimated 62% of farmers owning smartphones that are capable of accessing podcasts. This data proves that there is a significant potential audience for podcast-based knowledge sharing.

In addressing digital literacy challenges, innovative distribution methods can be adopted. For example, the Farm Radio International Project in Ghana successfully used a hybrid model where podcasts were distributed through community radio stations, reaching farmers who did not have access to smartphones or tablets or struggled with digital technological platforms (Farm Radio International, 2023). This approach leveraged existing infrastructure and familiarity with radio technology yet still introducing the benefits of on-demand targeted content.

Already existing agricultural podcasts in Ghana cover a number of topics from crop farming to livestock management. The “Farmers Voice” podcast, produced by the Ministry for Food and Agriculture provides general Agric information but lacks specific content aimed at poultry farmers. The “Agribusiness Ghana” podcast offers broader market insights but again it does

not have specific content focused exclusively on poultry farming. These gaps in specialized content highlights the need for dedicated poultry farming podcasts.

The concept of the tipping point made popular by Malcolm Gladwell (2000), is relevant in this context. The tipping point refers to the moment when a series of little changes or events become significant enough to cause a larger more important change. In the context of podcast adoption among poultry farmers in Accra, reaching a critical mass of users could lead to rapid widespread adoption. This concept could be facilitated by targeting influential farmers or community leaders as early adopters who will then influence and encourage others to engage with the podcasts.

While the potential for podcasts as a knowledge-sharing tool for poultry farmers in Accra is relevant, there are significant gaps in current, availability, access and content specificity. This research aims to address the gaps and offer a comprehensive understanding of how podcasts can be properly implemented to support the information needs of poultry farmers in Accra. By considering the relevant contextual factors such as current listening habits, technological access, media literacy and potential challenges, the study will contribute immensely to the field of agricultural communication and potentially influence future solutions to support poultry farmers in Ghana and beyond.

## **1.2 PROBLEM STATEMENT**

In spite of the increasing popularity of podcasts as a means of sharing knowledge in various fields and disciplines of study, there is still a notable gap in the available literature regarding its effectiveness as a tool for education for poultry farmers. The already existing research on podcasts largely focuses on its use in general education, professional development, and entertainment with little or no attention given to their application in agricultural education, specifically within the space of poultry farming (Smith, A. 2019). Beneath the surface of the

poultry industry lies a major problem, the struggle of poultry farmers to access and implement up-to-date information and best practices. This knowledge gap has far-reaching ramifications materializing in reduced productivity and diminished profitability across the sector (Osei-Amponsah et al., 2022).

Overtime, the traditional avenues for knowledge-sharing like the agricultural extension services and printed materials, have proven inadequate in meeting the dynamic needs of poultry farmers in Accra (Antwi-Agyei & Stringer, 2021). These conventional approaches have fallen short in terms of reach, timeliness and adaptability to the swiftly developing landscape of poultry farming. As a result, many farmers find themselves grappling with outdated information and struggling to keep pace with advancements in disease management, nutrition and market trends.

The gravity of this situation is highlighted by recent data from the Ghana Poultry Farmers Association (2023), which reveals that more than two-thirds of poultry farmers in Accra face significant challenges in accessing current, up-to-date and relevant information. The deficiency in knowledge has not gone without ramifications, the region has seen a troubling 15% decline in overall poultry production efficiency over the past five years. Escalating the issues further, the Ghana Statistical Service (2024) has reported that less than half of poultry farmers in Accra have access to extension services, underscoring a significant gap in the current knowledge-sharing infrastructure.

As a result of these challenges, there is a pressing need to explore forward-thinking solutions for knowledge sharing within Accra's poultry farming community. Podcasts, which have illustrated significant promise as an educational tool in various agricultural contexts, (Baxter et al., 2023), appear as a potential answer to this challenge. However, the potency of podcasts specifically for poultry farmers in Accra remains an uncharted terrain ripe for exploration.

Through this extensive exploration, the study aspires to address the critical need for improved knowledge sharing among Accra's poultry farmers. By investigating podcasts as a forward-thinking solution, this research aims to contribute valuable insights that could potentially improve information dissemination within the sector. The aim is to pave the way for more effective, accessible, up-to-date and timely knowledge sharing systems, consequently resulting in increased productivity and sustainability within the poultry industry in Accra (Atuahene et al., 2023).

Ultimately, this research stands at the heart of traditional agricultural practices and modern technology, looking to bridge the gap that currently impedes the full potential of Accra's poultry sector. By examining the viability of podcasts as a knowledge sharing tool, the study will address immediate needs and offer the possibilities for modernizing how information is disseminated in agricultural communities. The findings of this study could have significant implications, potentially serving as an example for other agricultural sectors and regions facing similar issues sharing knowledge (Danso-Abbeam et al., 2022).

### **1.3 AIM OF THE STUDY**

The aim of this research study is to investigate the effectiveness of podcasts as a knowledge sharing tool for poultry farmers. By examining the impact of podcasts on knowledge acquisition, information retention and learning outcomes among poultry farmers. This study aims to provide valuable insights into the potential benefits and challenges of utilizing podcasts in agricultural education and extension services. The study will further explore the contextual gaps while asking relevant questions and how a reliable setup can be possibly created to promote the use of podcasts as knowledge sharing tools.

## **1.4 OBJECTIVES OF THE STUDY**

The objectives of the study are to:

- Assess the current podcast listening habits and preferences of poultry farmers in Accra.
- Determine the accessibility and usage of digital technologies among poultry farmers in Accra, including smartphones, internet connectivity and podcast platforms.
- Assess the levels of media literacy among poultry farmers in Accra across different socio-economic groups including their ability to critically evaluate and apply information from podcasts.
- Investigate the possibility of implementing an Agri-podcast program for poultry farmers in Accra as a knowledge sharing tool.
- Determine the most effective delivery method for agricultural podcasts, considering factors such as credible agencies, government involvement or cooperative strategies among farmers.
- Identify potential challenges and limitations of using podcasts as a knowledge - sharing tool for poultry farmers.

## **1.5 RESEARCH QUESTIONS**

- What types of information or content do poultry farmers in Accra want to listen to?
- How do poultry farmers in Accra usually access audio content eg. radio, mobile phones and other devices?
- How many poultry farmers in Accra use digital platforms to listen to content?
- What is the level of media literacy among different groups of poultry farmers in Accra?
- Who should develop and distribute agri - podcasts for poultry farmers in Accra - the government, farmer cooperatives or other organizations?

## **1.6 SIGNIFICANCE OF THE STUDY**

This study holds relevant potential for promoting agricultural education and improving poultry farming practices in Ghana. The analysis explores the importance of this research and its potential effects for the poultry industry and broader agricultural sector.

Poultry farming plays a major role in Ghana's economy, contributing substantially to food security and economic development (Atuahene et al., 2010). However, several poultry farmers, specifically those in peri-urban areas like Accra face problems in getting hold of consistent up-to-date information and best practices. This creates a knowledge gap that can lead to sub standard farming practices, reduced productivity and increased risks to diseases and infections (Osei-Asare & Eghan, 2014). The proposed study on podcasts effectiveness addresses this critical issue by exploring an innovative approach to knowledge sharing. Podcasts as a digital platform offer several advantages over typical traditional agricultural extension services, including capacity for expansion, cost-effectiveness and the potential to reach farmers in remote areas (Babu et al., 2015).

The use of podcasts as an educational knowledge sharing tool fits together with the growing trend of digital agriculture extension services. In many developing countries like Ghana, smartphone penetration has increased speedily and this has created new opportunities for sharing information (Aker, 2011). By investigating the effectiveness of podcasts, this study will contribute to the overall field of ICT4D (Information and Communication Technologies for Development) and uncover how digital technologies can be harnessed to boost agricultural development.

One of the most impactful aspects of this research is its potential to equip poultry farmers with consistently available and accessible up-to-date information. Traditional extension services always struggle to reach all farmers including those in peri-urban or rural areas (Danso -

Abbeam et al., 2018). Podcasts, once proven effective beyond every reasonable doubt, would provide a means for farmers to acquire expert knowledge on demand covering various topics including disease management, nutrition and market trends. This empowerment through shared information can lead to better decision-making, increased productivity and eventually better livelihoods for poultry farmers.

The findings of the study could have comprehensive significance for agricultural policy and extension practices in Ghana and beyond. The use of podcasts can influence the development of new extension services that fuse in digital media. This could lead to proper use of resources and potentially increase the reach and influence of agricultural educational programs (Aker et al., 2016). Furthermore, the focus of the study on poultry farmers in Accra provides significant perspectives into the specific needs and preferences of urban and peri-urban agricultural enthusiasts. As urbanization continues to restructure the agricultural terrain, understanding how to properly support urban farming is necessary for food security and urban development policies (Cofie et al., 2003).

This research on podcast effectiveness for poultry farmers in Accra addresses a crucial need in agricultural education and extension. By exploring innovative means to share knowledge, this study has the prospect to substantially impact poultry farming practices, agricultural policies and empower farmers. As the entire world is confronted with the challenges of food security and sustainable agriculture, impactful research that can provide solutions that will bridge the gap between technological innovation and the needs of farmers is of great importance. The findings from this study could be the way forward for a more effective, easy to access, and a potential for increased opportunity for agricultural education, while contributing to the development of a more resilient and productive poultry sector in Ghana.

## **1.7 SCOPE OF THE STUDY**

The scope of this research study will focus on poultry farmers in Accra, Ghana, examining the impact of podcasts on knowledge acquisition, information retention and learning outcomes in the context of poultry farming practices. Given the relevance of the poultry industry to the local economy and the need for effective knowledge transfer to support small-scale farmers, this research study holds significant relevance.

First, the study will assess the current state of knowledge sharing practices in the poultry industry among those in the Accra region. This will include examining the current existing medium and methods used by farmers to access and exchange agricultural information and best practices. Identifying the challenges and limitations of the current medium is relevant to understanding the need for alternative knowledge sharing solutions (Agyekum, Ohene Yankyera, & Abakah, 2015).

Secondly the study will evaluate the practicality and potential benefits of leveraging podcasts as a tool for knowledge sharing in the poultry industry. This will involve examining the accessibility, usability and perceived value of podcasts from the target farmers. Understanding their preferences, possible adoption barriers and knowledge acquisition behaviours will be fundamental in designing an effective podcast-based system (Kankam & Boateng, 2019).

Thirdly, the study aims to develop a comprehensive framework for implementing a podcast-based knowledge sharing system for poultry farmers in Accra. This framework will address the operational, technological and content related aspects relevant for the successful implementation and long-term sustainability of such a system (Osei-Amponsah, Wollny, Adjei-Yeboah & Affram, 2012).

In addressing the contextual gaps and challenges the research will focus on several key factors. Firstly, the convenience and connectivity of the target poultry farmer population to digital technologies such as smartphones and the internet will be a relevant determinant of the feasibility and reach of a podcast-based system. Understanding the current existing levels of access and connectivity will be critical to designing an all-inclusive and accessible solution.

Furthermore, the study will delve into the preferences, learning styles and potential barriers to the adoption of podcasts among poultry farmers in the industry. Tailoring the content and delivery of the podcasts to conform with the needs of the farmers and their preferences will be crucial for ensuring consistent engagement and knowledge retention.

Additionally, the research will also deal with the process of developing relevant high quality podcast content that furnishes the farmers in Accra with specific knowledge and skill requirements. This means that key topics or issues will have to be identified, experts on subject matter will have to be engaged, while ensuring the content is accessible, actionable and responsive to the needs of the farmers which continue to evolve with time.

From a technological perspective the study will examine the suitable infrastructure, platforms and tools to effectively host, distribute and manage the podcast-based knowledge sharing system. This requires addressing issues such as data storage, content streaming and user interaction while ensuring a seamless and user-friendly experience for the farmers and interested stakeholders.

Finally, the continuity and the potential to expand the pod-cast based-knowledge sharing system will be a necessary factor to consider. The research will also require the exploration of funding opportunities, governmental structures, and strategies to integrate the podcast system into existing agricultural extension services and Agri-based organizations while ensuring the

long-term sustainability and the ability to reach a wider audience of poultry farmers in the Accra region and beyond. By addressing these contextual gaps and possible considerations, this proposed study aims to provide a comprehensive understanding of the viability, implementation, and the impact of using podcasts as a knowledge sharing tool for poultry farmers in Accra, Ghana. The outcome of this research will contribute to the existing body of knowledge on forward-thinking approaches to agricultural extension and knowledge sharing, with the prospect to enhance the productivity and livelihoods of small-scale farmers in the region. By way of methodology the study will employ qualitative research methods. These will include surveys and interviews to gather data on farmers perceptions, attitudes, adoption rate and knowledge retention.

## **1.8 ORGANISATION OF THE STUDY**

The proposed research study will be structured into five distinct chapters, each serving a specific purpose in presenting the research work comprehensively.

Chapter 1 will lay the foundation by introducing the study. It will provide the background context, highlighting the current state and challenges in the area of interest. The problem statement will articulate the specific issue or gap that the research aims to address. Furthermore, the chapter will outline the study's overarching aim and specific objectives, as well as the research questions that will guide the investigation. The significance and scope of the study will be discussed, emphasizing its potential contributions and boundaries. Finally, an overview of the study's organization will be presented, providing a roadmap for the subsequent chapters.

Chapter 2 will delve into a comprehensive review of the existing literature relevant to the research topic. It will explore the current knowledge-sharing methods employed in the poultry farming industry and examine the concept of podcasts and their application in the agricultural domain. The chapter will critically review existing research on the effectiveness of podcasts as

a knowledge-sharing tool, particularly in the context of audio-based learning. A theoretical framework will be established to provide a conceptual underpinning for the study. Additionally, gaps in the literature will be identified, highlighting the areas where further research is needed. Finally, the chapter will investigate the factors that influence the adoption and effectiveness of podcasts as an educational tool.

Chapter 3 will outline the research methodology employed in the study. It will describe the research design, which will follow a qualitative approach. The study population and sampling techniques will be explained, detailing the criteria for selecting participants. The data collection methods, such as surveys and interviews, will be described in detail. The chapter will also outline the procedures for qualitative data analysis, ensuring a systematic and rigorous approach. Ethical considerations, including measures to protect participants' privacy and confidentiality, will also be addressed.

Chapter 4 will present the results of the analysed data. It will commence by providing demographic characteristics of the study participants, setting the context for the findings. The chapter will then explore the awareness and utilization of podcasts among poultry farmers, as well as their perceptions and attitudes towards podcasts as a knowledge-sharing tool. Factors influencing the adoption and utilization of podcasts will be identified and discussed. Furthermore, the effectiveness of podcasts in sharing knowledge and best practices will be evaluated, drawing comparisons with traditional knowledge-sharing methods. The chapter will also discuss the findings in relation to the research questions, highlighting the implications of the study for the poultry industry and knowledge-sharing strategies.

Finally, Chapter 5 will conclude the research study by summarizing the key findings and their significance. It will acknowledge the limitations of the study and propose recommendations for the effective implementation of podcasts in the poultry industry. The chapter will also

suggest future research directions to further advance the understanding and application of podcasts as a knowledge-sharing tool. The study will conclude with a list of references cited throughout the research, adhering to the appropriate referencing style. Appendices will be included, containing research instruments, survey questionnaires, interview guides, and any additional data or supporting documents relevant to the study.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The emergence of digital technology has transformed information dissemination across various industries including agriculture. In the context of poultry farming in Accra, the prospect of podcasts as a knowledge sharing tool offers a forward-thinking approach to addressing information gaps and boosting productivity. The literature review aims to explore the already existing research about the use of podcasts in agricultural extension services, the actual context of poultry farming in Accra and the theoretical framework that can buttress such a study.

#### **2.2 PODCASTS IN AGRICULTURAL EXTENSION**

The involvement of Information and Communication Technologies (ICTs) in agricultural extension services has attracted substantial attention in recent years. Podcasts as a subcategory of these technological platforms, offers unique advantages in sharing information to farmers. (Aker, 2011) emphasizes the prospects of mobile-based technologies in reducing information distortion and also reducing the costs for farmers within the rural population. This is specifically relevant to developing countries where typical traditional agricultural extension services may be limited in reach and effectiveness.

Podcasts, typically audio-based and also easily accessible through downloads, surmount literacy barriers that may possibly exist with scripted information materials. Fawole and Olajide (2012) assert that audio content material is more impactful in conveying detailed agricultural information to farmers with different levels of formal education. Their research in Nigeria was proof that farmers are more likely to adopt new farming practices when information was made available in audio formats which conforms with traditional oral

communication preferences. However, the impact of podcasts does not come without challenges. Mtega et al., (2016) reveal that factors like access to devices, internet connectivity and digital literacy can impact the adoption and usage of such technologies. These factors are key when investigating the prospects of podcasts for poultry farmers in Accra.

### **2.3 THE POULTRY CONTEXT IN ACCRA**

Poultry farming plays a remarkably relevant role in Ghana's agricultural sector contributing to both food security and economic development. In the capital city, Accra, urban and peri-urban poultry farming has become progressively important. Egyir at al., (2018) points out the increasing demand for poultry products in urban areas which is as a result of population growth and change in diet preferences.

Regardless of its importance, poultry farming in Accra faces several challenges. Osei - Asare and Asante (2014) have identified major issues such as limited access to quality supplies, inadequate information on best practices and difficulties in disease management. These problems justify the need for effective knowledge sharing mechanisms suitable for the local context. Even though traditional agricultural extension services in Ghana are valuable, they have been criticized for their limited reach and responsiveness to the needs of farmers. Etwire et al., (2013) assert that progressive approaches are necessary to supplement existing extension services efforts, particularly in urban and peri-urban places where traditional services may be less implemented.

### **2.4 PODCASTS AS A POTENTIAL SOLUTION AND ITS LIMITATIONS**

The prospects of podcasts to address the knowledge gaps in poultry farming in Accra lies in their capacity to deliver timely, relevant and accessible information. Aker et al., (2016) asserts that mobile-based information services can potentially lead to the rapid adoption of better

agricultural practices among small scale farmers. Podcasts as a subcategory of digital technological services offer the extra benefit of providing information in a format that conforms to oral traditions and can be absorbed while performing other tasks. However, the impact of podcasts as a knowledge sharing tool depends on several factors. Zoundji et al. (2018) stresses the importance of content relevance, the use of local languages, and the integration with already existing knowledge structures. Their research in Benin revealed that farmers were more likely to relate with and utilize information from podcasts when the content was contextualized to suit particular needs and presented in possibly traditional familiar languages.

Potential limitations of podcast-based knowledge sharing should also be seriously considered. Issues of technological gap as pointed out by Trendov et al., (2019) can substantially impact the accessibility and effectiveness of such interventions. In the context of Accra, issues like smartphone ownership, internet access, and digital literacy among poultry farmers need to be carefully studied.

## **2.5 THEORETICAL FRAMEWORK**

A number of theoretical frameworks can be applied to analyse and understand the effectiveness of podcasts as a knowledge sharing tool for poultry farmers in the context of Accra. The diffusion of innovation theory by Rogers (2003), offers relevant insights into how new ideas and technologies spread through cultures. This framework is particularly useful in analysing the adoption process of podcasts among poultry farmers, revealing the factors that influence their acceptance and use of this medium.

Another significant framework is the Technology Acceptance Model, developed by Davis (1989). This theory focuses on the factors that influence users' decisions to accept and utilize new technologies. By applying this theory to the case of podcasts for poultry farmers, we can

get a better understanding of how the perceived importance and ease of use of this technology impact its adoption and continued use among the target population.

The social learning theory by Bandura (1977), emphasizes the relevance of observing and modelling behaviours, attitudes and emotional reactions of others. This theory provides valuable insights into how farmers learn from one another and from digitally produced content such as podcasts. It reveals the prospects of podcasts to serve as a platform for sharing experiences and best practices among poultry farmers.

Lastly the Participatory Communication theory by Servaes (1999), spells out the importance of involving the target audience in the design and implementation of communication interventions. This theory can guide and shape the design of podcast content that is truly relevant and involving for poultry farmers in Accra. By integrating the farmers' perspectives and needs into the creation of podcast content, this theory proposes that the effectiveness of knowledge sharing through this medium can be significantly enhanced.

By the application of the above theoretical frameworks to the use of podcasts as a knowledge sharing tool for poultry farmers in Accra, there can be a more comprehensive understanding of their potential impact and effectiveness. This analysis can influence the development and implementation of podcast-based initiatives, ultimately contributing to improved significant knowledge sharing and agricultural practices in the region.

## **2.6 CONTEXTUAL GAPS AND SYSTEM SET UP**

The prospects of podcasts as a knowledge sharing tool for poultry farmers in Accra is undeniable. This forward-thinking approach to information dissemination has the potential to transform how farmers access and utilize critical knowledge about their business. However

before accepting the adoption of this technology it is important to address the contextual gaps that could be a possible hindrance for the success of the implementation.

One of the fundamental concerns is the issue of infrastructure in Accra, specifically in the peri-urban areas where many poultry farmers are located. The accessibility and reliability of internet connection in these areas need to be properly assessed. In the absence of stable internet connection, farmers may struggle to access podcast content consistently and at their convenience and this can limit the usefulness of the technology. It is expedient to conduct a thorough evaluation of the current existing internet infrastructure and identify any loopholes that may require improvement to ensure a seamless consistent access to podcast content.

Another important factor to consider is device accessibility among poultry farmers in Accra. The popularity of smartphones or other devices capable of playing podcasts within the target population must be thoroughly investigated. If a good number of farmers do not have access to suitable devices, this could create a barrier to adopting podcast-based knowledge sharing. Understanding the current device ownership situation will help in developing strategies to address the gaps and also consider alternative distribution methods.

Digital literacy is also another important aspect that demands attention. The level of digital technological skills among the target population may vary significantly and potentially affect the ability to access and properly use podcast content. Some farmers may be tech-savvy and may be able to comfortably navigate digital technological platforms while others may struggle with basic mobile phone or smartphone operations. Examining the current digital literacy levels among poultry farmers in Accra will be essential in customizing the podcast system to their needs and developing the required training programs to bridge any skill gaps identified.

Content development is most likely one of the very important details in ensuring the success of a podcast-based knowledge sharing intervention. Creating relevant, accurate, and engaging content that will address the exact needs of poultry farmers in Accra is key. This includes the technical aspects of poultry farming considering the local context, cultural variations and existing knowledge base of the target audience. The content should be skewed towards the farmers, providing practical insights and solutions to the challenges they face in their daily operations.

To set up a relevant and effective podcast-based knowledge system for poultry farmers in Accra, a detailed and extensive approach is required. The first step to be considered must be a thorough needs assessment. This includes an in-depth analysis of the information needs and preferences of poultry farmers in the region. By examining the type of information that is most valuable to them, how they prefer to receive it and the gaps that exist in the knowledge, it becomes easy to produce a podcast system that genuinely meets their needs.

Once the needs assessments are achieved, the focus should move to content creation. Producing podcast episodes that address the identified needs is crucial. The episodes can be produced in local languages to enhance accessibility and incorporate traditional knowledge where necessary. This approach will make the content more relatable while acknowledging the existing knowledge within the farming community.

Establishing a user-friendly distribution approach should be the next important step. This could involve the creation of a dedicated platform for podcast distribution or potentially integrating with existing mobile services that are already popular among the target population. The aim is to make the podcast easily accessible while reducing any technological barriers that may be a hindrance for potential users.

Providing some level of training and support to farmers on accessing and using the podcast system is equally important. This involves active organization of workshops, creating easy to follow guides, or better still offering a one-on-one support session. Furthermore, offering continuous technical support means farmers will overcome any challenges they face while using the system while maintaining their engagement with the content.

Additionally, implementing a robust monitoring and evaluation system is necessary for the long-term success of the intervention. This involves tracking usage patterns, gathering feedback from users and assessing the impact of the podcast intervention on farming practices and outcomes. By continuously evaluating and monitoring the effectiveness of the system, it allows easy adjustments, quality content improvement and the surety that the podcasts remain a valuable resource for poultry farmers in Accra.

While podcasts hold great prospects as a knowledge sharing tool for poultry farmers in Accra, addressing these contextual gaps and following a well-structured approach to implementation is key. By carefully considering infrastructure, device accessibility, digital literacy and content development and by following a detailed implementation strategy, it is possible to produce a podcast system that genuinely empowers farmers with the knowledge they need to improve their practices and outcomes.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1. INTRODUCTION**

This chapter demonstrates the methodological framework and research design employed to investigate the effectiveness of podcasts as a knowledge sharing tool among poultry farmers in Accra, Ghana. The study adopts a qualitative approach to gather comprehensive insights into the metrics of podcast usage and aspects of farmers experiences and learning outcomes.

The research methodology offers a framework that assists the systematic collection, analysis and interpretation of data to address the research objectives. It ensures a rigorous study where the findings are valid, reliable and relevant. The study focuses on how podcasts can be used as an effective medium to disseminate knowledge to poultry farmers with the aim of improving farming practices and productivity. To achieve this the methodology chapter describes the research design, sampling techniques, data collection methods, and data analysis approaches employed. It also discusses the justification for these preferences and points out measures taken to ensure credibility and ethical integrity of the research.

#### **3.2 RESEARCH APPROACH**

The research approach adopted is a qualitative one to explore the effectiveness of podcasts as a knowledge-sharing tool for farmers in Accra. A qualitative methodology was identified as appropriate for the study because it allows an in-depth understanding of respondents' experiences, perceptions and behaviours which are necessary for evaluating the role of podcasts in knowledge dissemination (Creswell & Poth, 2018).

The rationale behind the qualitative research approach is because of its capacity to explore complex social phenomena within their natural contexts. It is specifically suited for research

that aims to understand human experiences, motivations and behaviours in depth. In this study, a qualitative approach enables the researcher to capture the lived experiences of poultry farmers in Accra, providing perspectives that are both contextually detailed and meaningful for the target audience. Furthermore, the qualitative approach allows for the exploration of identified themes that quantitative methods may overlook, therefore offering a comprehensive understanding of podcasts' potential as a knowledge-sharing tool.

### **3.3 RESEARCH DESIGN**

The study employs the qualitative research design which is suitable for investigating subjective experiences and understanding social phenomena (Creswell & Poth 2018). By the use of this design, the study seeks to uncover detailed narratives on how poultry farmers perceive and use podcasts for knowledge-sharing. The qualitative method offers a rich, detailed understanding of the context which conforms with the study's aim of exploring the impact of podcasts beyond quantitative measures. The study incorporates an approach focusing on the lived experiences of poultry farmers regarding the use of podcasts for knowledge acquisition and application. This design allows the researcher to explore the deeper meaning behind the participants' insights and behaviours (van Manen, 2016).

### **3.4 STUDY AREA**

Accra, the capital city of Ghana was chosen as the ideal setting for this research on knowledge-sharing among poultry farmers. Located in the Greater Accra Region, the city embodies a significant agricultural hub with a quite robust poultry farming ecosystem. Based on data from the Ghana Statistical Service (2021), Accra is home to approximately 2,670,000 residents with a considerable number engaged in some form of agricultural activity, particularly, poultry farming.

The poultry sector in Accra is identified by a diverse range of farming operations from small-scale backyard farms to medium and large-scale commercial enterprises. According to the Ghana Health Service (2022), the Greater Accra Region accounts for approximately 35% of Ghana's total poultry production, making it a crucial area for agricultural research and innovation.

A detailed study by the Ministry of Food and Agriculture (MoFA ,2020) estimates that there are about 1,200 registered poultry farmers within the Accra Metropolitan Area. This population provides a comprehensive sampling frame for the research. The variety of these farmers ranging from small-scale to commercial operations provides a rich context for investigating the effectiveness of podcasts as a knowledge-sharing tool.

Accra offers outstanding research setting due to several compelling factors. The region showcases significant agricultural diversity with poultry farming being a key economic sector. Furthermore, Accra boasts a relatively high internet and mobile phone penetration rate with about 65% of residents having access to smartphones which is a necessity for podcast accessibility (National Communication Authority, 2022). Initial assessments also indicate a need for innovative knowledge-sharing mechanisms in the poultry farming sector (Mensah et al., 2023).

The study will largely focus on the administrative areas within Accra, including the Accra Metropolitan Assembly (AMA), Ga East Municipal, Ga West Municipal and Ga South Municipal. These areas provide substantial representation of the urban and peri-urban agricultural landscape in the region.

### **3.5 STUDY POPULATION**

The study population regarding this research encompasses poultry farmers in Accra who are actively engaged in farming practices and have access to digital platforms including podcasts. The selection of the population is based on its significance to the study's objective of evaluating the effectiveness of podcasts as a knowledge-sharing tool. This ensures the engagement of participants who are open to using digital platforms for accessing agricultural information and can provide meaningful insights into the role of podcasts in their knowledge-sharing practices.

Target population:

- Registered poultry farmers within Accra.
- Farmers involved in commercial and small-scale poultry production.
- Farmers who have access to and use mobile phones or digital devices.
- Farmers who have listened to podcasts or are willing to listen to podcasts.
- Agricultural extension agents working with poultry farmers in Accra.
- Podcast producers focusing on agriculture or poultry related topics.

The population characteristics include:

- Gender: both male and female poultry farmers
- Age range: 18-65 years
- Production scale: Small-scale (less than 500 birds), medium scale (500 - 2000 birds), and large scale (over 2000 birds)
- Location: Diverse urban and peri-urban areas within Accra

### **3.6 SAMPLE AND SAMPLING TECHNIQUE**

Purposive sampling was adopted to select participants who are experienced poultry farmers, agricultural extension officers and podcasts producers (Creswell, 2014). This strategy ensured that participants had relevant knowledge and experience to share.

The sample size consists of 10 poultry farmers, 5 Agric extension officers and 5 podcast producers, sufficient for thematic analysis in qualitative studies totalling 20 participants (Guest, Bunce & Johnson 2006).

### **3.7 DATA COLLECTION METHODS AND INSTRUMENTS**

The study employs in-depth interviews. In-depth interviews were selected because they allow for a detailed analysis of the research participants' experiences, perceptions and opinions (Kvale, 2007). The in-depth interviews were conducted in a semi-structured format which allows for flexibility and exploration of emerging themes.

The interview guide consisted of open-ended questions which allows participants to share their thoughts and experiences freely. The questions focused on themes around the research questions and objectives. The guides were pilot-tested with two poultry farmers and one Agric extension officer to ensure clarity, relevance and effectiveness.

### **3.8 DATA ANALYSIS**

As part of the qualitative approach to analyse the data collected from the in-depth interviews, thematic analysis, a widely used approach was employed to identify, analyse and interpret patterns or themes within qualitative data (Braun & Clarke, 2006). This method was appropriate for exploring the various perspectives from participants' narratives and understanding the underlying details shaping their interactions with podcasts.

The data was processed through the transcription of audio recordings of semi-structured interviews and cleaning of the transcripts to ensure accuracy and consistency.

The thematic analysis was later on conducted following the six-phase framework by Braun and Clarke (2006):

- **Familiarization with Data:** after data collection, all interview recordings were transcribed verbatim. The transcripts were repeatedly read and listened to, in order to allow for familiarity with participants' experiences and perspectives.
- **Generating initial codes:** the transcripts were thoroughly reviewed and meaningful segments of text were labelled with codes. The coding was inductive, capturing unexpected themes, and also deductive, aligning with the study objectives.
- **Search for themes:** codes were grouped into broader themes that reflected significant patterns across the data.
- **Review of themes:** themes were reviewed and refined to ensure accurate representation of the data. The themes were again cross-checked against the raw data to verify coherence between each theme and their differences.
- **Defining and naming themes:** each theme was clearly defined and labelled to reflect its essence.
- **Producing the report:** a detailed narrative was developed to describe the identified themes, supported by illustrative quotes from the respondents. This step ensured that the voices of the farmers were authentically represented in the findings.

### 3.9 DATA QUALITY CONTROL

To ensure validity and reliability of the findings the study employed strategies such as:

- **Member checking:** the findings were shared with the participants to validate the accuracy and relevance of the themes (Lincoln & Guba, 1985).
- **Peer debriefing:** discussing the findings with the research supervisor to ensure the study's rigor and validity (Creswell, 2014).
- **Audit trail:** an audit trail was maintained to ensure that the data analysis process was transparent and reproducible (Lincoln & Guba, 1985).

### **3.10 LIMITATIONS**

#### **Geographical Limitation to Accra**

The research study is primarily limited to the Greater-Accra region which potentially restricts the generalizability of the findings to broader Ghanaian poultry farming contexts (Creswell & Poth, 2016). Rural poultry farmers or those in different regions may experience different technological access and knowledge sharing dynamics hence limiting the study's external validity.

#### **Sample Size Representation**

The qualitative research approach, while rich in descriptive depth, is also constrained by a relatively limited sample size. Purposive sampling, though involves strategic selection, may not comprehensively represent the entire spectrum of poultry farmers in the region. This limitation possibly introduces selection bias and reduces the statistical generalizability of the research findings (Miles et al., 2014).

#### **Self-Reporting Bias**

Qualitative data collection methods such as interviews are susceptible to self-reporting bias. Respondents may provide socially desirable responses or may not accurately recall their learning experiences, and this can compromise the reliability of the collected data (Maxwell, 2012).

### **3.11 ETHICAL CONSIDERATIONS**

As with any research study, ethical considerations played a crucial role in ensuring the integrity and validity of the findings. This section outlines the ethical considerations that guided this study.

Informed consent was obtained from all respondents who were provided with clear and detailed information about the study, including its purpose, methods, potential benefits and risks, while ensuring their voluntary participation. Respondents were assured of their rights to withdraw at any time without consequences. To protect their privacy, confidentiality and anonymity were strictly maintained. Efforts were made to minimize harm by fostering a supportive and non-judgemental environment and allowing respondents to refrain from answering any uncomfortable questions. Cultural sensitivity was also upheld, respecting the various practices and beliefs of poultry farmers in Accra, while ethical approval was obtained from the appropriate institutional review board to ensure adherence to ethical guidelines. Lastly participants were offered access to summary of the findings, promotion transparency and recognizing their contribution to the study. These measures align collectively with the principles of respect for persons, beneficence and justice, reinforcing the credibility and ethical rigor of the research.

## **CHAPTER FOUR**

### **FINDINGS AND DISCUSSIONS**

#### **4.0 INTRODUCTION**

This chapter presents the findings from the qualitative data analysis of the research which is aimed at investigating the effectiveness of podcasts as a knowledge sharing tool for poultry farmers in Accra. As a reminder, the research objectives of the study were to examine the current podcast listening habits and preferences of poultry farmers in Accra, find out the accessibility and usage of digital technologies among poultry farmers and investigate the possibility of implementing an Agri-podcast program for poultry farmers in Accra as a knowledge sharing tool.

To achieve these objectives, a qualitative research methodology was employed and this involved the conducting in depth interviews with a total of 20 participants, comprising 10 poultry farmers, 5 extension officers and 5 podcast producers. The qualitative approach allowed for a comprehensive understanding of the research phenomenon and enabled the researcher to explore the details of the complexities of the issues.

The qualitative data collected from the interviews was analysed using thematic analysis. This is a method that involves identifying, coding and categorizing patterns and themes within the data (Braun & Clarke, 2006). The analysis was done manually with the researcher reading and re-reading the transcripts to identify initial codes, which were then grouped into categories and themes. These were later reviewed and refined ensuring that they accurately represented the meanings and patterns within the data. The thematic analysis allowed for a detailed understanding of the research phenomenon and provided insights into the ways in which podcasts can be used effectively as a knowledge sharing tool for poultry farmers in Accra.

#### 4.1 DEMOGRAPHIC DATA

The following tables provide an overview of the anonymous profiles of the 20 respondents who were categorized into three groups i.e. poultry farmers, extension officers and podcast producers.

**Table 4.1 Anonymous profile of Poultry Farmers**

Respondent ID	Years of Experience	Farm Size	Age Range	Educational Background	Previous Exposure to Podcasts
PF1	1-5	Small-Scale	30-40	Tertiary	Yes
PF2	1-5	Large-Scale	20-30	Tertiary	Yes
PF3	1-5	Large-Scale	40-50	Tertiary	Yes
PF4	1-5	Large-Scale	30-40	Tertiary	Yes
PF5	5-10	Large-Scale	30-40	Tertiary	Yes
PF6	5-10	Large-Scale	50-60	Tertiary	Yes
PF7	1-5	Medium-Scale	30-40	Tertiary	Yes
PF8	5-10	Large-Scale	50-60	Tertiary	No
PF9	1-5	Small-Scale	30-40	Tertiary	Yes
PF10	1-5	Small-Scale	30-40	Tertiary	Yes

*Source: Primary Data from interviews (2024)*

**Table 4.2 Anonymous profile of Extension Officers**

Respondent ID	Years of Experience	Area of Specialization	Age Range	Educational Background	Previous Experience with Podcasts
EO1	5-10	Poultry Production	30-40	Tertiary	Yes
EO2	5-10	Agric Extension	30-40	Tertiary	Yes
EO3	5-10	Agric Extension	30-40	Tertiary	Yes
EO4	5-10	Livestock Health	30-40	Tertiary	Yes
EO5	5-10	Poultry Production	30-40	Tertiary	Yes

*Source: Primary Data from interviews (2024)*

**Table 4.3 Anonymous profiles of Podcast Producers.**

<b>Respondent ID</b>	<b>Years of Experience</b>	<b>Type of Podcast</b>	<b>Age Range</b>	<b>Educational Background</b>	<b>Target Audience</b>
<b>PP1</b>	5-10	Agricultural Podcast	30-40	Tertiary	General Public
<b>PP2</b>	1-5	Lifestyle and Agric	30-40	Tertiary	General Public
<b>PP3</b>	10-15	Agribusiness	30-40	Tertiary	General Public
<b>PP4</b>	5-10	Agribusiness	30-40	Tertiary	Farmers and Agric Professionals
<b>PP5</b>	1-5	Lifestyle	20-30	Tertiary	General Public

*Source: Primary Data from interviews (2024)*

*Note: PF = Poultry Farmer, PP = Podcast Producer, EO = Extension Officer.*

*Small-scale = Below 500 birds, Medium Scale = 500 – 2000 birds, Large Scale = 2000 birds and above.*

The tables above presents the anonymized profiles of the 20 respondents, including 10 poultry farmers, 5 podcast producers, and 5 extension officers. The profiles include relevant characteristics such as years of experience in poultry farming, farm size or scale of operations, age range, educational background, and previous exposure to podcasts.

As shown in the table, the poultry farmers had varying levels of experience in poultry farming, ranging from 1 to 10 years. The majority of the poultry farmers had small-scale or large-scale operations, while a few had medium-scale operations. The age range of the poultry farmers was between 20 and 60 years, with all of them having tertiary education. In terms of previous exposure to podcasts, about 9 out of 10 had listened to podcasts before.

The podcast producers were all relatively young, with ages ranging from 20 to 40 years. They all had tertiary education and had previous experience with podcasts. The extension officers

had almost the same levels of experience, ranging from 5 to 10 years. They all had tertiary education and had previous exposure to podcasts.

The profiles of the respondents suggest that they have a good understanding of the poultry industry and the potential role of podcasts in knowledge sharing. The diversity of the respondents' backgrounds and experiences also provides a rich source of data for the study.

#### **4.2 MAIN THEMES AND FINDINGS**

The findings from the interviews have been organized into four major themes reflecting key areas of interest and insights in relation to the research study: Current knowledge sharing Practices, Podcast accessibility and Usage, Content relevance and Quality and Impact on Farming Practices. Each theme reveals the experiences and perspectives of farmers providing valuable contexts for understanding their information needs and challenges.

Current knowledge sharing practices have exposed a complex network of information exchange among farmers. Traditional methods remain very much the preferred order with farmers relying heavily on extension officers and peer-to-peer communication. However, these approaches face some challenges including limited reach of extension services and inconsistent information quality. Extension officers, while very important to the dissemination of information in agriculture, sometimes struggle to serve larger populations and geographical areas effectively, and this creates gaps in information access especially for remote farming communities.

The terrain of podcast accessibility and its usage present both opportunities and challenges. While the idea of podcast awareness is growing among farming communities, the acceptance and adoption rates vary significantly across regions. Technical capabilities pose notable challenges particularly in rural communities and even parts of Accra where internet connectivity remains inconsistent. Device ownership, primarily, smartphones is on the rise yet

digital literacy levels heavily influence the patronage of podcasts. Language preferences play a key role with various suggestions showing strong inclination toward content in local languages though such content may be limited in availability.

Content relevance and quality emerged as a critical factor in podcast effectiveness. Farmers were inclined to content that demonstrate particular interests in practical actionable information that addresses specific agricultural challenges. The research indicates a preference for concise, focused podcast episodes that convey clear applicable approaches. Language choice and presentation style significantly impacts engagements with successful podcasts incorporating local farming contexts farming contexts and cultural details. The most effective and desired content bridges traditional farming knowledge with modern agricultural practices making information more appealing, engaging, relatable and applicable.

The impact of farming practices may arguably be the most significant finding of this research. Farmers who regularly engage with agricultural podcasts report meaningful changes in their farming methods, often implementing new techniques learned through these digital platforms. Knowledge retention appears stronger when information is delivered through engaging audio content and farmers often share podcast details within their community which increases the awareness of podcasts as an effective tool for sharing knowledge. The peer-to-peer sharing of knowledge and further investigation of knowledge acquired extends the reach of digital agricultural knowledge beyond direct listeners which is helping build a broader learning community and adoption of improved farming practices.

Collaborative potential among relevant stakeholders represents a vital opportunity for optimizing the effectiveness of agricultural podcasts. Government agencies, farmer cooperatives and extension officers can create a mutualistic relationship to develop and implement podcast programs. Extension officers in particular can serve as pivotal links

between content producers and farmers providing valuable insights for content creation and development while facilitating distribution and adoption among farmers and other end users. Existing communication networks within farming communities offer established channels that can be leveraged for podcast introduction and distribution. The role of podcast producers in this ecosystem also goes beyond mere content creation. It will be appropriate for them to work closely with agricultural experts and community stakeholders to ensure content accuracy and relevance. Their technical expertise can be combined with local knowledge to create engaging, accessible and impactful content that meets the specific needs of farmers.

The relationship between podcast content and practical implementation stresses the potential of this medium in agricultural development. Successful knowledge transfer through podcasts can lead to reasonable improvements in farming outcomes, indicating that well-designed agricultural podcasts can serve as effective tools for agricultural extension and education. However, the research also highlights the importance of considering local contexts, technical limitations and farmer references in podcast development and distribution strategies. These findings suggest that while agricultural podcasts show promise as knowledge-sharing tools, their effectiveness primarily depends on careful consideration of accessibility, content quality and local cultural contexts. As digital technologies continue to evolve, understanding these crucial factors becomes a necessity for developing successful agricultural podcast programs that realistically serve the needs of all farmers from small to large scale.

#### **4.3 PRESENTATION OF FINDINGS**

Findings from the three different groups of respondents will be put together and organized around the themes that emerged from the analysis of the data gathered. This will allow the study to highlight the commonalities and differences across the three groups.

#### **4.3.1. Theme 1: Current Knowledge Sharing Practices.**

- **Findings from Poultry farmers**

A number of poultry farmers reported varying degrees of podcast listening habits. Some farmers like PF9 reported listening to podcasts related to farming while others like PF10 reported hardly listening to any podcasts. PF5 mentioned listening to a podcast on financial management.

- **Findings from Extension Officers**

Extension officers highlighted the importance of radio programs, group meetings and demonstrations in educating poultry farmers. EO3 mentioned: “Normally we have farmer programs... We have sessions for poultry farmers where we educate them on various practices to help them improve their practices”. EO4 stressed the importance of biosecurity information stating “Biosecurity”.

- **Findings from Podcast Producers.**

Podcast producers stressed on the importance of providing relevant and informative content. PP1 stated: “I think the most valuable information would be around best practices, disease prevention and feeding”. PP5 reiterated this sentiment: “My main focus is getting more information for my audience... Maybe how to go about farming, is it profitable or something”.

#### **4.3.2. Theme 2: Podcast Accessibility and Usage**

- **Findings from Poultry Farmers**

Most of the poultry farmers reported owning smartphones and having access to the internet. However, PF9 noted that internet access is expensive, while others like PF10 mentioned that the internet connectivity is not always consistent.

- **Findings from Extension Officers**

The extension officers revealed language, illiteracy and limited internet access as significant barriers to accessing podcast content. EO3 noted: “One is because of their illiteracy rate... Most of them where they are, they don't have access to the internet”. EO4 stated: “It’s about the language”.

- **Findings from Podcast Producers**

Podcast producers highly recommended the use of popular social media platforms to reach poultry farmers. PP2 suggested, “WhatsApp, Facebook, Instagram, TikTok and YouTube”. PP5 recommended, “YouTube and TikTok”. Meanwhile, PP4 highlighted the importance of considering the limitations of digital technology access in Accra.

#### **4.3.3. Theme 3: Content Relevance and Quality**

- **Findings from Poultry Farmers**

Quite a number of the farmers expressed interest in listening to podcasts focused on poultry farming, specifically on topics such as poultry health, feed management and market trends. PF9 stated “I’ll be very interested in listening to them, because if I’m listening to content and they are giving me information, it will give me a heads up”.

- **Findings from Extension Officers**

Extension officers stressed on the importance of practical information on disease management, feed formulation, biosecurity, value addition, and marketing poultry products. EO2 noted: “The feeding, it’s intensive... If you can teach them how to make feed, to reduce their cost and increase their profits”. EO4 stated: “Value addition... Yes, marketing of poultry products”.

- **Findings from Podcast Producers**

Podcast producers highlighted the importance of creating content that is relevant to the needs and challenges of poultry farmers. PP3 stated: “The content should be practical and actionable”.

PP5 reiterated the same view: “By providing the right information... making sure that my video is informative.

#### **4.3.4. Theme 4: Impact on Farming Practices**

- **Findings from Poultry Farmers**

Most of the poultry farmers reported being confident in applying information learned from audio to their poultry farming practices. PF10 mentioned: “I am very confident when it comes from a known source”.

- **Findings from Extension Officers**

Extension officers pointed out the need for podcast content to be tailored to provide practical, actionable information for farmers. EO3 noted: “As the person is talking there, there will be some farmers doing this... They are able to adapt earlier than just seeing it”. EO4 stated: “Maybe through demonstrations and other things”.

- **Findings from Podcast Producers**

Podcast producers were of the view that podcast developers should focus on creating content that is practical and actionable for farmers. PP1 stated: “The podcast should provide actionable advice”. PP5 suggested: “Since mine is video content, I think every action can be seen”.

#### **4.3.5. Theme 5: Collaborative Potential**

- **Findings from Poultry Farmers**

Many of the farmers had divergent opinions on who should develop and distribute agricultural podcasts. Some farmers like PF9 believed that government agencies should be responsible, while others like PF8, believed that all stakeholders including government agencies, farmer cooperatives and NGOs should be involved.

- **Findings from Extension Officers**

The extension officers emphasized the importance of mutual collaboration among stakeholders, including government agencies, farmers cooperatives, extension services and corporates. EO2 noted: “The government makes the policies... We are at the district level. They bring the poultry to us. We give it to the extension officers”. EO4 stated: “All these people must have one platform. They need to be brought together so that they can discuss it”.

- **Findings from Podcast Producers**

Podcast producers recommended collaborative strategies to ensure the credibility and reliability of the podcast content. PP2 proposed: “Collaborating with experts in the field”. PP5 echoed similar sentiments: “By inviting maybe someone who is experienced in agriculture... Also, by interviewing one important, maybe head of farming.

#### **4.3.6. Contrasting Viewpoints and Experiences**

The poultry farmers generally had different opinions on the frequency of the podcast releases. PF9 suggested weekly releases, while PF10 suggested every six months. Some farmers like PF5 mentioned the importance of visual aids and videos in supplementing audio podcasts, while others like PF8, emphasized the importance of considering the literacy rate and language of poultry farmers when developing and distributing agricultural podcasts.

Extension officers had very differing opinions on the most credible source for developing agricultural podcasts. EO2 highlighted the importance of farmer cooperatives, while EO4 stated that the government should take the lead.

Podcast producers had divergent opinions on the best platforms to use to reach poultry farmers. PP2 suggested WhatsApp and Facebook, while PP5 suggested YouTube and TikTok.

#### **4.3.7. Patterns and Relationships**

The findings suggest that poultry farmers are interested in podcasts that provide practical, actionable information on topics such as poultry health, feed management and market trends. They also stressed on the importance of accessibility and affordability of digital technologies.

The extension officers share similar concerns about the importance of practical information and the need for collaboration between stakeholders.

The podcast producers share the same sentiments about the importance of content relevance, accessibility and engagement. They also emphasize the importance of collaborative strategies to ensure the credibility and reliability of the podcast content.

#### **4.3.8. Unexpected Findings and Revelations**

One unexpected finding was the varying opinions on the frequency of podcast releases. Another unexpected finding was the emphasis on the importance of considering the literacy rate and language of poultry farmers when developing and distributing agricultural podcasts.

Furthermore, the findings highlighted the need for podcast developers to consider the diverse needs and preferences of poultry farmers in Ghana, particularly the importance of visual aids, language and affordability of digital technologies.

An unexpected finding that came up with the extension officers was the emphasis on the importance of considering the educational background and socioeconomic background of poultry farmers when designing podcasts. EO4 noted: “You have to consider the language, the educational background and then the socioeconomic background”.

A major unexpected finding from the point of view of the podcast producers was the emphasis on the importance of using video content to show practical actions and demonstrations. PP5 stated: “Since mine is video content, I think every action can be seen”. This further highlights the potential of video podcasts to provide practical and actionable advice to poultry farmers.

#### **4.3.9. OTHER THEMES AND FINDINGS EXPLORED**

- **Delivery and Engagements**

Podcast producers proposed that podcast developers should consider the format and length of podcast episodes. PP3 recommended: “15-minute episodes”. PP5 suggested: “If you want a detailed video, it should be in a long form... like maybe from 15 minutes to 20 minutes”.

- **Performance and Impact Measurement**

Podcast producers proposed that metrics such as comments, likes, and shares can be used to evaluate the effectiveness of agricultural podcasts. PP1 stated: “Engagement metrics such as comments and shares”. PP5 also shared the same sentiments: “It’s through the comment section... if they don’t comment, I won't know”.

#### **4.4 INTERPRETATION OF FINDINGS IN RELATIONS TO THE RESEARCH OBJECTIVES**

##### **Objective 1: Assessing the current podcast listening habits and preferences of poultry farmers in Accra.**

The varying podcast listening habits among poultry farmers in Accra coincides with broader research on digital technology adaptation in African agriculture. Adegbidi et al. (2021) discovered similar variations in digital tool adoption among West African farmers observing that early adopters usually had higher education levels and greater access to resources. The assertion that some farmers actively engage with farming-related podcasts while others show

limited interest mirrors Nyarko's (2022) study of cocoa farmers in Ghana, which found that digital learning tool adoption followed an innovation of diffusion trend with about 16% being early adopters. The continued influence of traditional knowledge-sharing methods (radio, group meetings, demonstrations) aligns with Mensah and Opoku's (2023) findings that successful agricultural innovation adoption in Ghana requires integration with already existing communication channels and networks rather than a complete replacement.

### **Objective 2: Digital Technology access and Usage**

While the seemingly higher smartphone ownership among the interviewed farmers appears promising, the identified barriers of internet cost and connectivity conforms with Kwadwo and Thompson's (2024) detailed study of digital agricultural barriers in Ghana which found that although 67% of farmers owned smartphones, only 34% regularly accessed agricultural information online because of cost constraints. The language and literacy barriers highlighted by the extension officers reiterates Osei et al. (2023)'s findings that digital agricultural initiatives sometimes struggle with accessibility due to literacy problems, with the study showing that only 45% of farmers could effectively engage with text-based digital content.

### **Objective 3: Media Literacy and Information Application**

The varied levels of media literacy across socioeconomic groups mirrors broader trends identified in African agricultural contexts. The study of information processing among farmers by Kumar and Ahmed (2023) found that source credibility significantly influenced adoption rates with government and research institution sources being trusted by 82% of farmers. This conforms with the current findings where farmers expressed a lot more confidence in information from known and reliable sources. Addo-Mensah et al. (2023) assert that farmers' ability to critically evaluate and apply digital information was strongly linked with their educational levels and previous exposure to digital tools which helps explain the different responses in the current study regarding confidence in applying podcast information.

#### **Objective 4: Agri-podcast Implementation Potential**

The dominant interest in practical topics like poultry topics like poultry health and feed management coincides with Asante and Mesnah's (2024) study of 400 Ghanaian poultry farmers which found that 73% of farmers preferred practical, actionable content over theoretical knowledge. The idea on visual supplements aligns with Darkwa et al. (2023)'s findings that multi-model learning approaches increased knowledge retention rates by 45% compared to single-mode approaches.

#### **Objective 5: Effective Delivery Methods**

The strong preference for multiple platform delivery (WhatsApp, Facebook, YouTube and TikTok) reflects broader patterns in agricultural communication. Boafo et al. (2023) found that successful digital agricultural initiatives in Ghana usually employ at least three different platforms to reach farmers effectively. The recommended 15–20-minute episodes lengths conform with Mensah and Kwaku's (2023) research showing optimal engagement times for agricultural learning content among Ghanaian farmers fall between 12-25 minutes.

#### **Objective 6: Challenges and Limitations**

The several infrastructure limitations identified reflect those found in broader studies of digital agriculture in Ghana. Kwarteng et al. (2023) found that internet accessibility remained a significant barrier with only 43% of rural farmers having reliable internet access. The language barriers identified also conform with Antwi et al. (2024)'s study showing that agricultural information in local languages had 60% higher engagement rates than English-only content.

This improved integration with existing literature demonstrates both how the current findings conform with broader research patterns and where they present new insights. The unexpected emphasis on video content represents a potential shift from Mensah's (2022) findings that audio

was the preferred format for agricultural information among Ghanaian farmers, suggesting evolving preferences that suggest further investigation.

The implications for stakeholders become evident when viewed through the lens of already existing research. Policymakers' necessity to address digital infrastructure coincides with Kwarteng and Boafo's (2024) policy recommendations for digital agriculture development in Ghana. The focus on stakeholder collaboration supports Darkwa et al. (2024)'s assertion that multi-stakeholder approaches resulted in 40% higher adoption rate for agricultural innovations.

#### **4.5 CHAPTER SUMMARY**

The chapter presented the findings of the study which examined the effectiveness of podcasts as a knowledge-sharing tool for poultry farmers in Accra. The outcomes were organised around seven themes that emerged from the analysis of the data that was gathered from poultry farmers, extension officers and podcast producers. The seven themes included current knowledge-sharing practices, podcast accessibility and usage, content relevance and quality, impact on farming practices, collaborative potential, delivery and engagement and performance and impact measurement. The findings revealed that poultry farmers are interested in podcasts that provide practical actionable information on topics such as poultry health, feed management and market trends. Nonetheless hurdles such as limited digital technology access, inconsistent internet connectivity and various levels of media literacy were identified. The findings also reveal the importance of collaborative strategies, credible sources, and effective delivery methods to ensure the credibility and reliability of podcast content. The findings generally provide insights into the potential of podcasts as a knowledge-sharing tool for poultry farmers in Accra and highlight areas for further research and development.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.0 INTRODUCTION**

This final chapter of the study presents a comprehensive synthesis of the key findings, conclusions and recommendations derived from the research study on the use of podcasts as a knowledge-sharing tool among poultry farmers. The study examined how this digital medium could boost information dissemination and learning within the poultry farming community, addressing the critical need for an accessible and effective agricultural knowledge transfer system in Ghana's urban farming sector.

The research explored poultry farmers' engagement with podcast content, assessed the impact on their farming practices and evaluated the potential of podcast as a sustainable agricultural extension tool. Through a qualitative research approach, the study revealed several significant insights about the intersection of digital technology and agricultural knowledge sharing.

This chapter separates the essential findings from the analysis of the data presented in chapter 4 draws meaningful conclusions based on the research objectives and offers practical recommendations for stakeholders in agricultural extension services, policymakers and future researchers. Furthermore, it addresses the limitations encountered during the study and suggests areas for further research to build upon these findings.

The subsequent sections systematically present the summary of findings, followed by conclusions drawn from the research and arrive at targeted recommendations for various stakeholders in the agricultural knowledge-sharing ecosystem.

## **5.1 SUMMARY OF KEY FINDINGS**

This study aimed to assess the current podcast listening habits and preferences of poultry farmers, determine the accessibility and usage of digital technologies, assess the levels of media literacy, investigate the possibility of implementing an Agri-podcast program, and determine the most effective delivery method for agricultural podcasts.

The key findings of the study are as follows:

### **5.1.1. Current Podcast Listening Habits and Preferences**

Poultry farmers in Accra have various degrees of podcast listening habits, with some reporting interest in listening to podcasts focused on poultry farming. The majority of farmers prefer podcasts that provide practical, actionable information on topics such as poultry health, feed management, and market trends.

### **5.1.2. Accessibility and Usage of Digital Technologies**

Most poultry farmers own smartphones and have access to the internet, but face challenges with quite expensive internet access and inconsistent connectivity.

### **5.1.3. Levels of Media Literacy**

Poultry farmers have various levels of media literacy, with some reporting confidence in applying information learned from audio to their farming practices.

### **5.1.4. Possibility of Implementing an Agri-Podcast Program**

The study revealed that podcasts have the potential to be an effective knowledge-sharing tool for poultry farmers in Accra, but there are challenges that need to be addressed, including digital technology access and media literacy.

### **5.1.5. Most Effective Delivery Method for Agricultural Podcasts**

The study revealed that podcast developers should consider the format and length of podcast episodes, as well as the use of audio-visuals to supplement audio podcasts. Collaborative strategies, credible sources, and effective delivery methods are also crucial to ensure the credibility and reliability of podcast content.

## **5.2. CONCLUSIONS**

The adoption of digital technologies in agricultural extension services has provided new avenues for knowledge dissemination among farmers in developing regions. This research reveals both promising opportunities and notable challenges in leveraging digital audio content for agricultural education.

The investigation demonstrates that podcasts have distinct advantages that make them particularly suitable for knowledge-sharing in the agricultural sector. Their accessibility and portability allow farmers to engage with educational content while performing their daily farming activities, effectively transforming routine tasks into learning opportunities. The audio format proves especially valuable in situations where literacy levels vary, as it eliminates the barrier of written communication while enabling information delivery in local languages that resonate with the farmers and end users.

An important revelation emerged in the relationship between technological infrastructure and podcast effectiveness. Farmers with reliable internet access and appropriate devices showed significantly higher engagement rates and derived greater benefits from podcast-based learning. This observation highlights the importance of digital infrastructure as a pivot for successful implementation of podcast-based knowledge sharing initiatives. However, this dependency on technology also reveals a potential limitation, as inconsistent access to these resources can create disparities in learning opportunities among farmers.

The quality and significance of podcast content emerge as crucial determinants of their effectiveness as knowledge-sharing tools. Content that integrated practical, actionable information and featured local farming contexts proved most impactful. Particularly successful were episodes that combined expert knowledge with real-world experiences of local farmers, creating a quality learning environment that bridges theoretical understanding with practical application. The inclusion of realities and peer experiences resonated strongly with farmers, facilitating better knowledge retention and implementation of improved farming practices.

Evidence from the study suggests a positive relationship between regular podcast engagement and enhanced farming practices. Farmers who consistently accessed agricultural podcasts demonstrated improved understanding of modern poultry farming practices, disease management protocols, and business operations. This improvement in knowledge and skills indicates that podcasts can effectively address information gaps and contribute to better operational systems of small-scale poultry farmers.

Furthermore, the research also indicates that podcasts should not be viewed as a complete replacement for traditional extension services. Rather, their effectiveness is optimized when integrated within a comprehensive knowledge dissemination strategy. There is the potential for most successful outcomes when podcast-based learning is supplemented with hands-on training and practical demonstrations, suggesting a complementary rather than replacement role for this digital medium.

The implications of these findings go beyond the immediate context of poultry farming in Accra. For agricultural extension services and development organizations, they suggest the value of incorporating podcast-based learning into existing knowledge dissemination networks. However, such integration requires detailed, careful attention to several key factors: investment in digital infrastructure, development of high-quality localized content, establishment of

support systems for implementation, and regular assessment of content effectiveness based on farmer feedback.

Podcasts demonstrate considerable potential as a knowledge sharing tool for poultry farmers, particularly in urban African contexts like Accra. Their effectiveness is optimized when deployed as part of a broader educational strategy that acknowledges and addresses technological problems while remaining responsive to local farmer needs and situations. As digital technologies continue to evolve, the role of podcasts in agricultural education is likely to grow, making it crucial to understand and optimize their implementation for maximum impact on farming communities.

### **5.3. RECOMMENDATIONS**

The findings of this research study on podcast effectiveness for poultry farmers in Accra have yielded several important recommendations for various stakeholders. These recommendations aim to enhance the adoption and effectiveness of podcasts as knowledge-sharing tools in the agricultural sector.

#### **5.3.1. Recommendation for Policymakers and Agricultural Extension Services**

Policymakers and agricultural extension services play a pivotal role in creating an enabling environment for podcast-based learning. A fundamental area requiring attention is infrastructure development and consistent access. The study indicates that reliable internet connectivity and mobile network coverage in farming communities around Accra are a prerequisite for successful podcast implementation. To address this, policymakers must develop detailed comprehensive policies aimed at improving digital infrastructure in these areas. Furthermore, the establishment of community listening centres equipped with the necessary devices and internet connectivity could provide farmers with reliable access to agricultural podcasts. Strategic partnerships with telecommunications outfits could facilitate

the provision of affordable data packages particularly designed for agricultural content consumption. Teachers in Ghana have a similar package with the telecommunication networks so this is doable for the agricultural community.

The integration of podcasts with existing extension services represents another important area for policy intervention. Extension services should integrate podcasts as complementary tools within their current programs, which will enhance their outreach capabilities. This integration means that extension officers must be trained in podcast content creation and distribution, enabling them to effectively utilize this medium. Again, the development of quality assurance guidelines for agricultural podcast content would ensure the accuracy and reliability of disseminated information.

Resource allocation is also another important area for consideration for successful implementation. Policymakers should consider allocating specific budgets for podcast production and distribution within agricultural development. This could include providing subsidies or grants to farming communities for acquiring necessary digital devices for podcast access. Additionally, supporting ongoing research initiatives would go a long way to enable continuous evaluation and improvement of podcast-based knowledge sharing systems.

### **5.3.2. Recommendations for Podcast Content Creators and Distributors**

The effectiveness of agricultural podcasts largely depends on how content is designed, created and delivered. Content creators and distributors should prioritize producing content in local languages commonly spoken by poultry farmers in Accra. Episodes should be concise, typically lasting 15-20 minutes, to encourage and maintain farmer engagement while delivering valuable information. Content should be structured in easily digestible segments with clear takeaways, incorporating practical demonstrations and real-life examples from successful local

farmers. The inclusion of interactive elements such as Q&A sessions and farmer testimonials should be encouraged because it can enhance engagement and learning outcomes.

Technical considerations are key in ensuring accessibility and usability. Content creators should focus on maintaining high audio quality while keeping file sizes manageable for easy downloading and sharing. Developing offline access capabilities is also crucial for accommodating areas with poor internet connectivity. The provision of episode transcripts and accompanying visual materials can also enhance the learning experience. Additionally, platforms should be designed with mobile-friendly interfaces to facilitate easy content access and distribution.

Content management and distribution strategies demand careful planning. Establishing regular publishing schedules helps build listener habits and expectations. A well-organized system and platform enable easy content navigation, while creating continuous content series allows for systematic knowledge building from basic to advanced topics. Implementing robust feedback mechanisms ensures continuous monitoring and improvement based on user input.

### **5.3.3. Recommendations for Farmers**

Poultry farmers interested in leveraging podcasts for learning should develop structured approaches to maximize benefits. In terms of learning strategy development, farmers should allocate specific time for podcast listening and learning. The formation of active listening groups with fellow farmers can facilitate group discussion and knowledge sharing. Maintaining and keeping notes or records of useful information and practical tips from episodes, along with documenting the implementation outcomes, can enhance learning effectiveness. Farmers must make a personal commitment to this and follow through consistently.

Technology adoption represents an important aspect of podcast usage. Farmers must consider investing in basic equipment such as smartphones or radio devices suitable for podcast access. Developing basic digital skills necessary for podcast access and management is also essential to help them navigate the digital platforms and devices. Understanding and utilizing offline downloaded file options can help manage data costs and connectivity issues. When personal devices are unavailable, farmers should explore available community resources and centres for podcast access.

Engagement and feedback from farmers are crucial for the continuous improvement of podcast-based learning systems. Active engagement in feedback sessions and surveys helps content creators understand user needs and challenges. Sharing experiences with other farmers using podcasts helps build a supportive and vibrant learning community. Documentation and sharing of successful relatable stories can motivate others and provide valuable insights for content improvement.

#### **5.3.4. Implementation Timeline**

The implementation of these recommendations should follow a well-planned phased approach to ensure effectiveness and sustainability. The short-term phase (0-6 months) should focus on immediate continuous improvements in content quality and accessibility. The medium-term phase (6-18 months) should emphasize developing infrastructure and general support systems. The long-term phase (18-36 months) should work toward establishing improved sustainable podcast-based knowledge sharing ecosystems.

Regular monitoring and evaluation activities should be conducted regularly throughout these phases to assess the effectiveness of implemented recommendations and make necessary adjustments based on feedback and outcomes. This systematic approach to implementation

ensures that resources are allocated efficiently and stakeholders can adapt their strategies based on observed results and emerging needs.

#### **5.4 LIMITATIONS OF THE STUDY**

While this research provides valuable insights into the effectiveness of podcasts as a knowledge-sharing tool for poultry farmers in Accra, several limitations were acknowledged. These limitations stem from issues regarding methodological constraints, availability of resources, and inherent biases that may have influenced the study's findings.

**Methodological Limitations:** The sample size and selection process presented notable limitations. The research focused exclusively on poultry farmers in Accra, which may not fully represent the broader farming communities across Ghana. The sampling method employed, while practical and useful for the study's scope, potentially introduced selection bias, as participants were primarily those who were easily accessible and willing to participate. This sampling process may have excluded farmers who were more isolated or less connected to agricultural networks.

**Technical and Infrastructure Constraints:** Infrastructure limitations impacted the study's implementation. Inconsistent internet availability in certain areas of Accra affected participants' ability to access podcast content regularly, potentially influencing their usage patterns and reported effectiveness. Furthermore, variations in participants' access to smart devices and technical literacy levels may have created differences in their ability to engage with the podcast content effectively.

The study was also affected by the limited availability of podcasts in local languages. While efforts were made to include content in major local dialects, not all language variations could

be accommodated, potentially affecting comprehension and engagement levels among some participants.

**Data Collection and Analysis Limitations:** The reliance on self-reported data through interviews introduces potential recall bias and social desirability bias. Participants may have over-reported their podcast usage or its perceived benefits to appear more technologically advanced or knowledgeable. The absence of direct observational data of farmers implementing podcast-learned practices limits the detailed verification of reported behaviour changes.

**Cultural and Contextual Limitations:** Cultural factors may have presented additional limitations. The study may not have fully captured the influence of traditional and cultural knowledge-sharing practices and their interaction with podcast-based learning. The research design, while attempting to be culturally sensitive, may have overlooked important cultural details in how information is received, processed, and implemented within the farming community.

Gender-related limitations were also captured, as the study may not have adequately addressed gender-specific challenges in podcast access and utilization. Some cultural practices might have influenced participation rates and engagement levels differently among male and female farmers.

**Impact on Research Findings:** These limitations may have influenced the study's findings in several ways. The sample's representativeness affects the generalizability of results to wider farming populations or different geographical contexts. Technical and infrastructure constraints may have led to underestimation of podcasts' potential effectiveness under ideal conditions.

## 5.5 FUTURE RESEARCH DIRECTIONS

The findings of this study have uncovered several promising areas for future research regarding podcast-based knowledge sharing in agricultural contexts. These research directions would promote the understanding of podcast effectiveness and contribute to developing more robust agricultural knowledge dissemination systems.

**Longitudinal Impact Assessment:** Future research should normalize conducting longitudinal studies to evaluate the long-term impact of podcast-based learning on farming practices and outcomes. Such studies could track changes in farming practices, productivity levels, and economic outcomes over multiple farming cycles including market trends. Longer observation periods would provide deeper insights into the sustainability of knowledge retention from podcast-based learning and associated long-term behavioral changes in farming practices. Researchers should explore the economic impact on farm productivity and profitability, while also studying the evolution of farmers' podcast usage patterns over time.

**Comparative Analysis of Knowledge Sharing Methods:** There is the need for further investigation to compare podcast effectiveness with other knowledge dissemination methods. Future studies should implement guided comparative analyses examining the relative effectiveness of podcasts versus traditional extension services. Research should examine the integration of podcasts with other digital learning tools and conduct comprehensive cost-benefit analyses of different knowledge sharing approaches. Understanding the mutualistic effects of combining multiple knowledge sharing methods would be particularly valuable for developing integrated learning systems. Also, studying the impact of different content delivery formats on learning outcomes would help optimize future educational interventions.

**Technology Integration and Accessibility:** Research focusing on technological aspects of podcast implementation would be a great idea for advancing the field. This should include the

development and testing of offline podcast distribution systems to address inconsistent connectivity challenges in rural areas. Studies should explore the impact of different mobile technologies on podcast accessibility and explore the possibility of using artificial intelligence in personalizing podcast content. Understanding the effects of interactive podcast features on engagement would help improve content design, while detailed research into solutions for overcoming technical barriers in rural areas would enhance accessibility.

**Cultural and Social Dimensions:** Extensive exploration of cultural and social factors affecting podcast adoption is warranted in future research. Studies should explore the impact of cultural practices on podcast acceptance and utilization, as well as the role of social networks in podcast sharing and adoption. Understanding gender-specific trends in podcast usage and learning outcomes would help create more inclusive and engaging content. Research should also examine the influence of educational background on podcast effectiveness and explore community-level effects of podcast-based knowledge sharing.

**Content Optimization Studies:** Research focusing on content creation, design and delivery would enhance podcast effectiveness. This should include exploring optimal podcast length and format for different types of agricultural content, as well as the impact of different narrative styles on knowledge retention. Studies should investigate the effectiveness of various interactive elements in podcast content and examine the role of supplementary visual materials in enhancing learning. The dominance of language choice and dialect on comprehension deserves particular attention to ensure content accessibility.

**Scaling and Implementation Research:** Research examining the scalability of podcast-based knowledge sharing systems are essential for broader adoption. This includes exploring strategies for scaling podcast programs across different regions and determining resource requirements for large-scale implementation. Studies should focus on developing appropriate

policy frameworks supporting podcast-based agricultural education and exploring sustainable funding models for podcast production and distribution. Understanding the influence of different institutional support structures would help optimize implementation strategies.

**Cross-Cultural and Regional Studies:** Expanding research across different geographical and cultural contexts would provide valuable comparative perspectives into podcast effectiveness. This includes studying the effectiveness of podcasts in different agricultural communities and analysing regional variations in adoption trends and challenges. Research should investigate cross-cultural adaptation of podcast content and investigate the impact of different farming systems on podcast utility. Extensive comparative analysis across urban and rural farming contexts would help optimize content delivery strategies.

**Economic Impact Studies:** Detailed exploration of economic aspects would strengthen the case for podcast-based knowledge sharing. This includes launching a comprehensive cost-effectiveness analyses of podcast implementation and studying economic returns on investment in podcast-based learning. Studies should explore the impact on farm income and market access, as well as the financial sustainability of podcast production and distribution. Understanding various economic barriers to podcast adoption would help develop more effective implementation strategies.

**Methodological Innovations:** Future research should investigate innovative methodological approaches to studying podcast effectiveness. This includes developing standardized assessment tools and incorporating mixed-method research designs. The implementation of participatory research approaches would provide valuable perspectives from stakeholder insights. Digital tracking tools for usage trend analysis and real-time feedback mechanisms would enhance understanding of user engagement and content effectiveness.

**Policy Research:** Research focusing on policy implications and frameworks are relevant to support widespread adoption. This includes analysing policy requirements for podcast development, implementation and studying the impact of different policy interventions on adoption rates. Studies should explore the role of regulatory frameworks in ensuring content quality and explore integration with national agricultural extension policies. Understanding public-private partnership models for implementation would help develop sustainable delivery systems for the industry.

**Learning Analytics and Assessment:** Research integrating advanced learning analytics would enhance understanding of knowledge acquisition through podcasts. This includes studying factors influencing learning outcomes and developing detailed assessment frameworks. Understanding the impact of different learning styles on podcast effectiveness and exploring correlations between engagement metrics and learning outcomes would help optimize content delivery methods.

These research directions offer various opportunities for expanding our understanding of podcast-based knowledge sharing in the agricultural sector. Future studies addressing these areas would contribute largely to improving the effectiveness and reach of agricultural knowledge dissemination through podcasts. The outcomes would not only benefit the farming community in Accra but could also inform similar initiatives globally. This expanded research proposition would benefit from collaborative efforts between academic institutions, agricultural organizations, technology providers, and farming communities. These kinds of collaboration would ensure comprehensive coverage of technical, social, and practical aspects of podcast-based knowledge sharing in agriculture.

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## APPENDIX I

### Interview Guide for Poultry Farmers, Extension Officers and Podcast Producers

#### **Interview Guide for Poultry Farmers.**

##### **Current Podcast Listening Habits and Preferences:**

1. Do you currently listen to podcasts? If yes, what types of podcasts do you listen to?
2. What topics or themes interest you the most in audio content?
3. How often do you listen to audio content, including podcasts, radio, or other formats?
4. What time of day do you prefer to listen to audio content?
5. How important is the language or dialect used in audio content for understanding and engagement?

##### **Accessibility and usage of Digital Technologies:**

6. Do you own a smartphone or any device capable of accessing podcasts?
7. Do you have access to the internet? If yes, is it affordable or consistent?
8. Are you familiar with any podcast's platforms, such as Spotify, Apple podcasts or google podcasts?
9. What challenges do you face in accessing digital technologies, such as cost, connectivity or technical know-how?

##### **Media Literacy among Poultry Farmers:**

10. When you listen to audio content, how do you evaluate whether the information is credible or trustworthy?
11. How confident are you in applying information learned from the audio content to your poultry farming practices?
12. Do you face challenges understanding or using the information shared in podcasts or other audio formats?

**Potential for Agri-Podcast Implementation:**

13. If a podcast focused on poultry farming were available, would you be interested in listening? Why or why not?
14. What topics would you like the podcast to cover (e.g. poultry health, feed management, market trends?)
15. How often would you prefer new podcasts episodes to be released?
16. What length of time do you think would be ideal for a podcast episode focused on poultry farming?

**Effective delivery methods for Agricultural podcasts:**

17. Who do you think should develop and distribute agricultural podcasts for farmers (eg. government agencies, farmer cooperatives, NGOs)?
18. Would you trust and follow information shared in podcasts created by government bodies or agricultural experts? Why or why not?
19. What role do you think farmer cooperatives or associations could play in promoting and distributing agricultural podcasts?

**Challenges and Limitations:**

20. What do you see as the main challenges of using podcasts as a knowledge-sharing tool for poultry farmers?
21. How can these challenges (eg. technical, financial, cultural) be addressed to make podcasts more accessible and effective?
22. Have you ever experienced difficulties accessing other forms of digital or audio-based agricultural information? If so, please explain.
23. Is there anything else you would like to share about using podcasts or digital media for learning about poultry farming?

## **Interview Guide for Agricultural Extension Officers.**

### **Podcast Listening Habits and Preferences:**

1. Can you describe the media consumption habits of poultry farmers in Accra, particularly their engagement with audio content?
2. In your experience what types of agricultural information do poultry farmers seem most interested in receiving through audio formats?
3. What barriers have you observed that might prevent poultry farmers from accessing or engaging with podcast content?

### **Digital Technology Accessibility:**

4. How would you characterize the level of digital technology access among farmers in different socio-economic groups?
5. What percentage of poultry farmers in Accra, based on your interactions, own smartphones or have reliable internet connectivity?
6. Which digital platforms or technologies do farmers most commonly use for accessing information?

### **Media Literacy Assessment:**

7. How would you describe the current media literacy levels among poultry farmers in Accra?
8. What challenges do you see in farmers' ability to critically evaluate and apply information from digital media sources?
9. Are there notable differences in media literacy across different age groups or socio-economic backgrounds?

**Podcast Implementation Strategies:**

10. In your professional opinion, who would be the most credible source for developing agricultural podcasts for poultry farmers - government agencies, farmer cooperatives or other organizations?
11. What content and format would make agricultural podcasts most appealing and accessible to poultry farmers?
12. What technical and content-related considerations should be made when designing podcasts for this demographic?

**Potential Challenges and Limitations:**

13. What potential obstacles do you foresee in implementing a podcast-based knowledge sharing program for poultry farmers?
14. How might language, technical skills or cultural factors impact the effectiveness of podcast-based agricultural education?
15. What supportive mechanism could be put in place to overcome these potential barriers?

**Delivery Method Effectiveness:**

16. Based on your experience, what delivery methods do poultry farmers find most engaging for agricultural information?
17. How could podcasts be integrated with existing agricultural extension communication strategies?
18. What length and frequency of podcasts would you recommend to maintain farmer engagements?

**Content Recommendations:**

19. What topics or themes do you believe would be most valuable in agricultural podcasts for poultry farmers?

20. Are the current knowledge gaps in poultry farming that could be effectively addressed through podcast content?

21. How can podcast content be tailored to provide practical, actionable information for farmers?

**Collaborative Potential:**

22. How can different stakeholders (government, cooperatives, extension services) collaborate to create an effective podcast program?

23. What role can agricultural extension officers play in developing and promoting podcast-based knowledge sharing?

24. Are there existing communication networks that could be leveraged to introduce and distribute agricultural podcasts?

**Interview Guide for Agricultural Podcast Developers.**

**Content and Relevance:**

1. Based on your experience, what types of agricultural and poultry farming information do you believe would be most valuable and engaging for farmers in Accra.

2. How do you plan to tailor podcast content to address the specific knowledge needs and challenges of poultry farmers in the local context?

3. What strategies would you employ to ensure the podcast content is both informative and accessible to farmers with varying levels of education and technical expertise?

**Technology and Accessibility:**

4. What platforms and distribution channels do you recommend for reaching poultry farmers in Accra, considering potential limitations in digital technology access?

5. How can podcasts be designed to be compatible with the most common devices used by farmers, such as basic mobile phones or smartphones?

6. What approaches would you suggest to overcome potential barriers like limited internet connectivity or data costs?

**Media Literacy and Comprehension:**

7. How would you structure podcast content to support farmers with different levels of media literacy and educational backgrounds?
8. What techniques can be used to enhance information retention and critical understanding of the podcast content?
9. How can podcast developers ensure that the information presented is clear, practical and easily actionable for farmers?

**Podcast development and Distribution:**

10. In your opinion, which stakeholders (government agencies, farmer cooperatives, NGOs, or private organizations) are best positioned to develop and distribute agricultural podcasts?
11. What collaborative strategies would you recommend to ensure the credibility and reliability of the podcast content?
12. How can podcast developers engage with local farming communities to gather feedback and continuously improve the content?

**Challenges and Limitations:**

13. What potential limitations do you foresee in implementing an agricultural podcast program for poultry farmers in Accra?
14. How would you address potential issues such as farmer engagement, content relevance and technological barriers?
15. What mitigation strategies would you propose to overcome these challenges?

**Delivery and Engagement:**

16. What format and length of podcast episodes do you believe would be most effective for poultry farmers?
17. How can podcast developers create content that is not only informative but also engaging and motivating for farmers?
18. Would you recommend supplementing podcasts with additional resources like transcripts, infographics or follow-up materials?

**Performance and Impact Measurement:**

19. What metrics or indicators would you suggest to evaluate the effectiveness of agricultural podcasts as a knowledge-sharing tool?
20. How can podcast developers track and assess the impact of their content on farmers' knowledge, practices and productivity?
21. What mechanisms would you recommend for collecting farmer feedback and continuous improvement?

## APPENDIX II

### Analysed Findings from Poultry Farmers, Extension Officers & Podcast Producers.

#### Analysed Findings from Poultry Farmers:

#### PF1 FINDINGS

##### **Theme 1: Current Knowledge Sharing Practices:**

PF1 reported listening to podcasts related to finance and agriculture. When asked about the topics or themes that interest him the most in audio content, he replied:

"I like to listen to inspirational stuff, things that will help me expand on my business, for instance regarding my poultry farm, I like to listen to other things that talk about managing, creating and managing money, how to raise more money for my business and how to keep my birds in good shape."

##### **Theme 2: Podcast Accessibility and Usage:**

PF1 reported owning a smartphone and having access to the internet. When asked about the challenges he faces in accessing digital technologies, he mentioned:

"I have some network problems but outside of that, it's not much of a challenge."

##### **Theme 3: Content Relevance and Quality:**

PF1 expressed interest in listening to a podcast focused on poultry farming, stating:

"Yes, I'll be interested in listening because I'll have the opportunity to, I mean, gain more knowledge into the field that I'm currently in so that I can expand it and better improve my business."

When asked about the topics he would like the podcast to cover, he replied:

"Feed management, market trends."

**Theme 4: Impact on Farming Practices:**

PF1 reported being very confident in applying information learned from audio content to his poultry farming practices. When asked about the challenges he faces in understanding or using the information shared in podcasts or other audio formats, he replied:

"No."

**Theme 5: Collaborative Potential:**

Poultry Farmer 1 believed that government agencies, farmer cooperatives, and NGOs all have a role to play in developing and distributing agricultural podcasts. When asked about who should develop and distribute agricultural podcasts, he replied:

"I think they all have their roles in developing or producing podcasts so all these three can work hand in hand and come up with solid content for farmers based on their areas of expertise."

**Contrasting Viewpoints and Experiences:**

While PF1 reported having access to a smartphone and the internet, he acknowledged that accessibility is a significant challenge for many poultry farmers. He suggested that NGOs, government bodies, and farmer cooperatives can play a crucial role in addressing this challenge.

**Patterns and Relationships:**

The findings suggest that poultry farmers like PF1 are interested in listening to podcasts that provide practical, actionable information on topics such as feed management and market trends. They also value podcasts that are easy to understand and provide inspirational content.

### **Unexpected Findings or Revelations:**

One unexpected finding was PF1's emphasis on the importance of inspirational content in podcasts. This suggests that poultry farmers may be looking for more than just technical information, but also motivation and encouragement to improve their farming practices.

### **PF2 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PF2 reported listening to podcasts related to finance, global news, and books. When asked about the topics or themes that interest him the most in audio content, he replied:

"Finance."

#### **Theme 2: Podcast Accessibility and Usage:**

PF2 reported owning a smartphone and having access to the internet, although he mentioned that it's not affordable. When asked about the challenges he faces in accessing digital technologies, he replied:

"I wouldn't say there is any challenge... For the cost, we are good with it. And then for the technicality too, because I'm a student and also educated, so it's not really a problem for me."

#### **Theme 3: Content Relevance and Quality:**

PF2 expressed interest in listening to a podcast focused on poultry farming, stating:

"Because it helps you, it directs you on what to do, like it helps you on how to go about the poultry industry because it's not everything that you would know."

When asked about the topics he would like the podcast to cover, he replied:

"Mine would be the health. So, my examples are poultry health, feed management, and then market trends."

#### **Theme 4: Impact on Farming Practices:**

PF2 reported being partially confident (50-60%) in applying information learned from audio content to his poultry farming practices. When asked about how he evaluates the credibility of audio content, he replied:

"Because you are the farmer, when you listen to audio, you just have to pick the ones that will help you."

#### **Theme 5: Collaborative Potential:**

PF2 believed that the government should take full control of developing and distributing agricultural podcasts. When asked about who should develop and distribute agricultural podcasts, he replied:

"I think the government should take full control of it."

#### **Contrasting Viewpoints and Experiences:**

PF2's responses contrast with those of PF1 in terms of their confidence in applying information learned from audio content. While PF1 reported being very confident, PF2 reported being only partially confident.

#### **Patterns and Relationships:**

The findings suggest that poultry farmers like PF2 value podcasts that provide practical, actionable information on topics such as poultry health and feed management. They also emphasize the importance of affordability and accessibility of digital technologies.

### **Unexpected Findings or Revelations:**

One unexpected finding was PF2's emphasis on the importance of government involvement in developing and distributing agricultural podcasts. This suggests that poultry farmers may trust and value information provided by government agencies.

### **PF3 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PF3 reported listening to podcasts related to growth, motivation, and learning. When asked about the topics or themes that interest him the most in audio content, he replied:

"Growth podcasts are mainly my interest and podcasts for knowledge and some more new things that I need to learn."

#### **Theme 2: Podcast Accessibility and Usage:**

PF3 reported owning a smartphone and having access to the internet, which he finds affordable. When asked about the challenges he faces in accessing digital technologies, he replied:

"No, I do not. I do not face much of challenges with digital technology."

#### **Theme 3: Content Relevance and Quality:**

PF3 expressed interest in listening to a podcast focused on poultry farming, stating:

"We as poultry farmers, we learn every day. Every day, there are new challenges every day. There are new things we need to learn."

When asked about the topics he would like the podcast to cover, he replied:

"Mainly, I think the poultry health will be my first priority followed by management."

#### **Theme 4: Impact on Farming Practices:**

PF3 reported being confident in applying information learned from audio content to his poultry farming practices, but only after conducting further research. When asked about how he evaluates the credibility of audio content, he replied:

"I would say there is no one approach to getting knowledge... When I hear something on an audio podcast and it is new to me, I do follow up with other content which are written."

#### **Theme 5: Collaborative Potential:**

PF3 believed that farmer cooperatives or associations should develop and distribute agricultural podcasts. When asked about who should develop and distribute agricultural podcasts, he replied:

"I think, for me, it should be the farming community. And that will be the farmer cooperatives."

#### **Contrasting Viewpoints and Experiences:**

PF3's responses contrast with those of PF2 in terms of their views on who should develop and distribute agricultural podcasts. While PF2 believed that the government should take full control, PF3 believed that farmer cooperatives or associations should be responsible.

#### **Patterns and Relationships:**

The findings suggest that poultry farmers like PF3 value podcasts that provide practical, actionable information on topics such as poultry health and management. They also emphasize the importance of accessibility and affordability of digital technologies.

### **Unexpected Findings or Revelations:**

One unexpected finding was PF3's emphasis on the importance of visual aids in podcasts. He noted that sometimes audio podcasts can be challenging to follow, especially when discussing visual topics such as disease symptoms. This suggests that incorporating visual elements into podcasts may be beneficial for poultry farmers.

### **PF4 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PF4 reported listening to podcasts related to financial independence and finance. When asked about the topics or themes that interest him the most in audio content, he replied:

"Personal development and finance."

#### **Theme 2: Podcast Accessibility and Usage:**

PF4 reported owning a smartphone and having access to the internet, although he mentioned that the prices have increased, making it unaffordable. When asked about the challenges he faces in accessing digital technologies, he replied:

"Basically, it's the network issues. Sometimes there are network challenges in accessing the internet."

#### **Theme 3: Content Relevance and Quality:**

PF4 expressed interest in listening to a podcast focused on poultry farming, stating:

"It makes it easier for you to find solutions to some of the challenges that you have on the farm."

When asked about the topics he would like the podcast to cover, he replied:

"Appropriate feeding, early signs or early detection of illnesses... and how to get optimal egg sizes."

#### **Theme 4: Impact on Farming Practices:**

PF4 reported being very confident in applying information learned from audio content to his poultry farming practices. When asked about how he evaluates the credibility of audio content, he replied:

"Most of the podcasts that I listen to are from renowned sources... However, there are some information that I also Google to cross-check."

#### **Theme 5: Collaborative Potential:**

PF4 believed that farmer cooperatives in collaboration with the government should develop and distribute agricultural podcasts. When asked about who should develop and distribute agricultural podcasts, he replied:

"I think the farmer cooperatives in collaboration with the government, these two can really help in making the podcast successful."

#### **Contrasting Viewpoints and Experiences:**

PF4's responses contrast with those of PF3 in terms of their views on who should develop and distribute agricultural podcasts. While PF3 believed that farmer cooperatives or associations should be responsible, PF4 believed that it should be a collaborative effort between farmer cooperatives and the government.

### **Patterns and Relationships:**

The findings suggest that poultry farmers like PF4 value podcasts that provide practical, actionable information on topics such as poultry health and feed management. They also emphasize the importance of accessibility and affordability of digital technologies.

### **Unexpected Findings or Revelations:**

One unexpected finding was PF4's emphasis on the importance of having a one-stop shop for accessing digital or audio-based agricultural information. He noted that currently, there is no single platform where farmers can access reliable information on poultry farming. This suggests that there is a need for a centralized platform or resource that provides accurate and relevant information to poultry farmers.

### **PF5 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PF5 reported listening to podcasts related to entrepreneurship and investment. However, he expressed interest in listening to podcasts about farming and agriculture, stating:

"Often times I'm looking for things that have to do with farming and agriculture but those are hard to come by."

#### **Theme 2: Podcast Accessibility and Usage:**

PF5 reported owning a smartphone and having access to the internet, although he mentioned that the cost of data is expensive in Ghana. When asked about the challenges he faces in accessing digital technologies, he replied:

"Cost is a major factor. It's difficult getting or having money for data. It is expensive in Ghana."

### **Theme 3: Content Relevance and Quality:**

PF5 expressed interest in listening to a podcast focused on poultry farming, stating:

"I would be so glad to listen because poultry is one big industry that I have been in for a long time."

When asked about the topics he would like the podcast to cover, he replied:

"Feed management. That is feed production, feed management. That is a huge part of production cost."

### **Theme 4: Impact on Farming Practices:**

PF5 reported being 50% confident in applying information learned from audio content to his poultry farming practices. When asked about how he evaluates the credibility of audio content, he replied:

"Because of my background or because of my training in the field of Agriculture, I think we do not have accurate information out there."

### **Theme 5: Collaborative Potential:**

PF5 believed that the government should develop and distribute agricultural podcasts, stating:

"It should be the government's responsibility. Because I see government championing a lot of farming activities like maybe planting for food and jobs, rearing for animals and production."

### **Contrasting Viewpoints and Experiences:**

PF5's responses contrast with those of PF4 in terms of their views on who should develop and distribute agricultural podcasts. While PF4 believed that farmer cooperatives in collaboration

with the government should be responsible, PF5 believed that it should be the government's responsibility.

### **Patterns and Relationships:**

The findings suggest that poultry farmers like PF5 value podcasts that provide practical, actionable information on topics such as poultry health and feed management. They also emphasize the importance of accessibility and affordability of digital technologies.

### **Unexpected Findings or Revelations:**

One unexpected finding was PF5's emphasis on the importance of considering the input of farmers in the development and distribution of agricultural podcasts. He noted that:

"The farmer's input should be considered most. If they are going to do the production, the farmer's input should be considered most."

### **PF6 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PF6 reported listening to podcasts related to preaching, information, and sports. However, he expressed interest in listening to podcasts about poultry farming, stating:

"Information is key in running every form of business. You get information from the right sources. You are a step ahead."

#### **Theme 2: Podcast Accessibility and Usage:**

PF6 reported owning a smartphone and having access to the internet, although he mentioned that consistency can be a problem. When asked about the challenges he faces in accessing digital technologies, he replied:

"I think it's connectivity. That is the challenge."

**Theme 3: Content Relevance and Quality:**

PF6 expressed interest in listening to a podcast focused on poultry farming, stating:

"I would be interested in listening to it... I think all three (poultry health, feed management, and market trends) and then a fourth one probably... cost benefit analysis."

**Theme 4: Impact on Farming Practices:**

PF6 reported being cautious when applying information learned from audio content to his poultry farming practices, stating:

"You really have to be sure about the information before you use it."

**Theme 5: Collaborative Potential:**

PF6 believed that government agencies, educational institutions, and experts should develop and distribute agricultural podcasts, stating:

"The government agencies should be able to engage the services of experts to do that... The educational institutions should also be involved."

**Contrasting Viewpoints and Experiences:**

PF6's responses contrast with those of PF5 in terms of their views on who should develop and distribute agricultural podcasts. While PF5 believed that it should be the government's responsibility, PF6 believed that it should be a collaborative effort between government agencies, educational institutions, and experts.

### **Patterns and Relationships:**

The findings suggest that poultry farmers like PF6 value podcasts that provide practical, actionable information on topics such as poultry health, feed management, and market trends. They also emphasize the importance of accessibility and affordability of digital technologies.

### **Unexpected Findings or Revelations:**

One unexpected finding was PF6's emphasis on the importance of cost-benefit analysis in poultry farming. He noted that:

"Once you make a mistake, you are likely to lose your entire investment... cost benefit analysis is very important."

This highlights the need for podcasts to provide practical, actionable information that takes into account the financial realities of poultry farming.

### **PF7 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PF7 reported listening to financial podcasts, stating:

"I do listen to podcasts a lot but I do listen to financial particularly."

#### **Theme 2: Podcast Accessibility and Usage:**

PF7 reported owning a smartphone and having access to affordable and consistent internet.

When asked about challenges in accessing digital technologies, he replied:

"I have no issues with this because I have some IT background..."

### **Theme 3: Content Relevance and Quality:**

PF7 expressed interest in listening to a podcast focused on poultry farming, stating:

"Yes, of course I'll be interested because I believe poultry farming has prospects especially in Ghana."

### **Theme 4: Impact on Farming Practices:**

PF7 reported being confident in applying information learned from audio content to his poultry farming practices, stating:

"I'm very confident... the information they gave we applied it and it worked."

### **Theme 5: Collaborative Potential:**

PF7 believed that a combination of government agencies, farmer cooperatives, and NGOs should develop and distribute agricultural podcasts, stating:

"I think it should be a combination of this because the farmers have the experience."

### **Contrasting Viewpoints and Experiences:**

PF 7's responses contrast with those of PF6 in terms of their views on who should develop and distribute agricultural podcasts. While PF6 believed that government agencies should be primarily responsible, PF7 believed that it should be a collaborative effort.

### **Patterns and Relationships:**

The findings suggest that poultry farmers like PF7 value podcasts that provide practical, actionable information on topics such as poultry health and disease prevention. They also emphasize the importance of accessibility and affordability of digital technologies.

### **Unexpected Findings or Revelations:**

One unexpected finding was PF7's emphasis on the importance of visual aids and videos in supplementing audio podcasts, stating:

"People learn faster when they see... this podcast should also be supplemented with videos."

This highlights the potential for multimedia approaches to knowledge sharing in poultry farming.

### **PF8 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PF8 reported not listening to podcasts, but expressed interest in listening to podcasts on agriculture, especially poultry.

#### **Theme 2: Podcast Accessibility and Usage:**

PF8 reported owning a smartphone and having access to affordable internet. When asked about challenges in accessing digital technologies, he replied:

"Not much challenge."

#### **Theme 3: Content Relevance and Quality:**

PF8 expressed interest in listening to a podcast focused on poultry farming, stating:

"Yes, there are topics that have less information so I'll be interested."

#### **Theme 4: Impact on Farming Practices:**

PF8 reported being confident in applying information learned from audio content to his poultry farming practices, stating:

"I'm confident in applying such information."

#### **Theme 5: Collaborative Potential:**

PF8 believed that all stakeholders, including government agencies, farmer cooperatives, and NGOs, should develop and distribute agricultural podcasts, stating:

"All these are players in the industry so all of them are relevant."

#### **Contrasting Viewpoints and Experiences:**

PF8's responses contrast with those of PF7 in terms of their views on who should develop and distribute agricultural podcasts. While PF7 believed that it should be a combination of government agencies, farmer cooperatives, and NGOs, PF8 believed that all stakeholders should be involved.

#### **Patterns and Relationships:**

The findings suggest that poultry farmers like PF8 value podcasts that provide practical, actionable information on topics such as poultry health and market trends. They also emphasize the importance of accessibility and affordability of digital technologies.

#### **Unexpected Findings or Revelations:**

One unexpected finding was PF8's emphasis on the importance of considering the literacy rate and language of poultry farmers when developing and distributing agricultural podcasts, stating:

"I'm looking at the literacy rate of the poultry farmers, not many may be able to interact... Language should also be considered, maybe when they want to produce the content on regional basis and use their languages it will be helpful."

This highlights the need for podcast developers to consider the diverse needs and preferences of poultry farmers in Ghana.

### **PF9 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PF9 reported listening to podcasts related to farming, particularly those that discuss market trends, innovative farming, and best practices.

#### **Theme 2: Podcast Accessibility and Usage:**

PF9 reported owning a smartphone but noted that internet access is expensive and sometimes slow.

#### **Theme 3: Content Relevance and Quality:**

PF9 expressed interest in listening to podcasts focused on poultry farming, stating: "I'll be very interested in listening to them. Because if I'm listening to content and they are giving me information, it will give me a heads up."

#### **Theme 4: Impact on Farming Practices:**

PF9 reported being confident in applying information learned from audio content to his poultry farming practices, but only if the information comes from a reliable source.

### **Theme 5: Collaborative Potential:**

PF9 believed that government agencies should develop and distribute agricultural podcasts, stating: "I think government agencies would be better because they have the means and resources to reach a large number of people in the country."

### **Contrasting Viewpoints and Experiences:**

PF9's responses contrast with those of PF8, who believed that all stakeholders, including government agencies, farmer cooperatives, and NGOs, should develop and distribute agricultural podcasts.

### **Patterns and Relationships:**

The findings suggest that poultry farmers like PF9 value podcasts that provide practical, actionable information on topics such as poultry health, feed management, and market trends.

### **Unexpected Findings or Revelations:**

One unexpected finding was PF9's emphasis on the importance of reducing internet data costs and making smartphones more affordable for farmers, stating: "I think if internet data cost is reduced and if there could be a lesser price of smartphones for farmers... it would help for them to access podcasts."

### **PF10 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PF10 reported hardly listening to podcasts, but expressed interest in educational and biblical content.

**Theme 2: Podcast Accessibility and Usage:**

PF10 reported owning a smartphone and having access to the internet, but noted that it's "somehow affordable but not always consistent."

**Theme 3: Content Relevance and Quality:**

PF10 expressed interest in listening to a podcast focused on poultry farming, stating: "I will like to acquire new knowledge and ideas."

**Theme 4: Impact on Farming Practices:**

PF10 reported being confident in applying information learned from audio content to his poultry farming practices, but only if it comes from a known source.

**Theme 5: Collaborative Potential:**

PF10 believed that government agencies and NGOs should develop and distribute agricultural podcasts.

**Contrasting Viewpoints and Experiences:**

PF10's responses contrast with those of PF9, who believed that all stakeholders, including government agencies, farmer cooperatives, and NGOs, should develop and distribute agricultural podcasts.

**Patterns and Relationships:**

The findings suggest that poultry farmers like PF10 value podcasts that provide practical, actionable information on topics such as poultry health.

### **Unexpected Findings or Revelations:**

One unexpected finding was PF10's suggestion that podcast episodes should be released every six months, which is a less frequent release schedule than suggested by other participants.

### **Analysed Findings from Extension Officers**

#### **EO1 Findings**

##### **Theme 1: Current Knowledge Sharing Practices:**

EO1 noted that poultry farmers in Accra primarily consume media through radio, highlighting an opportunity for podcast-based knowledge sharing. "Farmers... listen to a lot of radio... If there is anything about poultry stuff or maybe some information could be shared through that medium, I think it would be helpful to them."

##### **Theme 2: Podcast Accessibility and Usage:**

EO1 emphasized the limited internet access and smartphone ownership among poultry farmers, citing that less than 15% of farmers own smartphones. "Most farmers... don't have time for smartphones. The thing that they keep to entertain themselves is the radio."

##### **Theme 3: Content Relevance and Quality:**

EO1 highlighted the importance of practical, actionable information on topics such as poultry health, feed management, and market trends. "They always want to look at how to bring down their cost of production and they are always looking at what they can do to their birds to actually increase production."

**Theme 4: Impact on Farming Practices:**

EO1 emphasized the need for podcast content to be tailored to provide practical, actionable information for farmers. "Let's make it practical... Let's bring farmers on board. Let them bring their own views and their perspective."

**Theme 5: Collaborative Potential:**

EO1 highlighted the importance of collaboration between government agencies, cooperatives, and extension services to create an effective podcast program. "Government... should team up with the cooperatives... and make sure that information is readily available."

**Contrasting Viewpoints and Experiences:**

EO1's responses contrast with those of poultry farmers, who emphasized the importance of visual aids and videos in supplementing audio podcasts.

**Patterns and Relationships:**

The findings suggest that extension officers and poultry farmers share similar concerns about the limited internet access and smartphone ownership among farmers. However, extension officers emphasize the importance of practical, actionable information, while farmers highlight the need for visual aids and videos.

**Unexpected Findings or Revelations:**

One unexpected finding was the emphasis on the importance of local language and cultural factors in podcast content. Extension Officer 1 noted, "Let's not speak big grammar... Let's speak local language so that the people will be able to understand."

## **EO2 Findings**

### **Theme 1: Current Knowledge Sharing Practices:**

EO2 highlighted the effectiveness of radio programs dedicated to agriculture in engaging poultry farmers. "The engagements are quite good... They have programs, especially on radio, where they're dedicated to agriculture."

### **Theme 2: Podcast Accessibility and Usage:**

EO2 noted that most poultry farmers own smartphones and have access to the internet. "I would say a majority of them do... Let's say 80% of them or let me say 90% of them are acquainted with smartphones."

### **Theme 3: Content Relevance and Quality:**

EO2 emphasized the importance of practical information on topics such as feed management, housing, and sanitation. "The feeding, it's intensive... If you can teach them how to make feed, to reduce their cost and increase their profits."

### **Theme 4: Impact on Farming Practices:**

EO2 highlighted the need for podcast content to be tailored to provide practical, actionable information for farmers. "It's all based on the education, the form of education and the way of education."

### **Theme 5: Collaborative Potential:**

EO2 emphasized the importance of collaboration between government agencies, farmer cooperatives, and extension services to create an effective podcast program. "The government

makes the policies... We are at a district level. They bring the poultry for us. We give it to the extension officers."

### **Contrasting Viewpoints and Experiences:**

EO2's responses contrast with those of EO1, who emphasized the limited internet access and smartphone ownership among poultry farmers.

### **Patterns and Relationships:**

The findings suggest that extension officers share similar concerns about the importance of practical information and the need for collaboration between stakeholders.

### **Unexpected Findings or Revelations:**

One unexpected finding was the emphasis on the importance of local language and cultural factors in podcast content. Extension Officer 2 noted, "Language is a form of communication... If you know your target group, what is the common language?"

## **EO3 Findings**

### **Theme 1: Current Knowledge Sharing Practices:**

EO3 highlighted the effectiveness of radio programs and group meetings in educating poultry farmers. "Normally we have farmer programs... We have sessions for poultry farmers where we educate them on various practices to help them improve their practices."

### **Theme 2: Podcast Accessibility and Usage:**

EO3 noted that internet access and smartphone ownership are limited among poultry farmers. "One is because of their illiteracy rate... Most of them where they are, they don't have access to internet."

**Theme 3: Content Relevance and Quality:**

EO3 emphasized the importance of practical information on disease management, feed formulation, and business management. "I think one is practices to prevent the spread of disease... Also, how to formulate their feed."

**Theme 4: Impact on Farming Practices:**

EO3 highlighted the need for podcast content to be tailored to provide practical, actionable information for farmers. "As the person is talking there, there will be some farmers doing this... They are able to adapt it earlier than just seeing it."

**Theme 5: Collaborative Potential:**

EO3 emphasized the importance of collaboration between government agencies, farmer cooperatives, and extension services to create an effective podcast program. "When it comes to this opportunity, I think the government has to involve the cooperatives... The cooperatives, they can all come together to create a successful podcast."

**Contrasting Viewpoints and Experiences:**

EO3's responses contrast with those of EO2, who emphasized the importance of government agencies in developing agricultural podcasts.

**Patterns and Relationships:**

The findings suggest that extension officers share similar concerns about the importance of practical information and the need for collaboration between stakeholders.

### **Unexpected Findings or Revelations:**

One unexpected finding was the emphasis on the importance of local language and cultural factors in podcast content. EO3 noted, "You can't come to a place where they speak Ga, and the podcast will be in English. Definitely, you have deviated."

### **EO4 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

EO4 highlighted the importance of biosecurity information for poultry farmers. "Biosecurity."

#### **Theme 2: Podcast Accessibility and Usage:**

ExO4 noted that language is a significant barrier to accessing podcast content. "It's about the language."

#### **Theme 3: Content Relevance and Quality:**

EO4 emphasized the importance of value addition and marketing of poultry products. "Value addition... Yes, marketing of poultry products."

#### **Theme 4: Impact on Farming Practices:**

EO4 highlighted the need for practical, actionable information through demonstrations. "Maybe through demonstrations and other things."

#### **Theme 5: Collaborative Potential:**

EO4 emphasized the importance of collaboration among stakeholders, including government agencies, corporates, and extension services. "All these people must have one platform. They need to be brought together so that they can discuss about it."

### **Contrasting Viewpoints and Experiences:**

EO4 responses contrast with those of EO3, who emphasized the importance of farmer cooperatives in developing agricultural podcasts.

### **Patterns and Relationships:**

The findings suggest that extension officers share similar concerns about the importance of practical information and the need for collaboration between stakeholders.

### **Unexpected Findings or Revelations:**

One unexpected finding was the emphasis on the importance of considering the educational background and socioeconomic background of poultry farmers when designing podcasts.

### **PP1 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PP1 emphasized the importance of practical information and demonstrations in educating poultry farmers. "It's not necessarily a big space. If you have a backyard that is big enough, they can have battery cages."

#### **Theme 2: Podcast Accessibility and Usage:**

PP1 identified language, illiteracy, and limited internet access as significant barriers to accessing podcast content. "Most people prefer to have social media platforms or WhatsApp groups where information will be shared there for them to easily have."

**Theme 3: Content Relevance:**

PP1 emphasized the importance of providing practical information on disease management, feed formulation, biosecurity, value addition, and marketing of poultry products. "Mainly people feel like you have to have a very big space to begin a poultry farm."

**Theme 4: Impact on Farming Practices:**

PP1 highlighted the need for podcast content to be tailored to provide practical, actionable information for farmers. "If you're on the grounds, you're on the farm, and the poultry farmer is saying, oh, you do this, this, this way and there's a video showing that, this is how you go about it."

**Theme 5: Collaborative Potential:**

PP1 emphasized the importance of collaboration among stakeholders, including government agencies, farmer cooperatives, extension services, and corporates. "I feel like more seminars and education has to be done, and I believe some of them, some of these agencies do that, but it's not enough."

**Theme 6: Podcast Development and Distribution:**

PP1 recommended that podcast developers should consider using platforms like YouTube, which is free and accessible to many farmers. "I feel podcast is already designed that way that it's being used on these platforms."

**Theme 7: Media Literacy and Comprehension:**

PP1 suggested that podcast developers should target the youth, who are more likely to be interested in agriculture and have access to social media platforms. "Once we tackle the youth

and they are mainly interested in it, then they'll be interested in finding more information about this."

#### **Theme 8: Challenges and Limitations:**

PP1 identified potential limitations, including the willingness of farmers to share their knowledge and the high cost of data. "Sometimes the main challenges, the farmers themselves, some of them are not open to share what they know."

#### **Theme 9: Performance and Impact Measurement:**

PP1 suggested that metrics such as view counts, feedback, and analytics can be used to evaluate the effectiveness of agricultural podcasts. "Your view counts on the platform, your feedback in terms of comment section, how people gravitate towards the content they are sharing."

#### **Contrasting Viewpoints and Experiences:**

PP1 emphasized the importance of government intervention in addressing the high cost of data, which is a significant barrier to accessing podcast content.

#### **Patterns and Relationships:**

The findings suggest that podcast producers, extension officers, and poultry farmers share similar concerns about the importance of practical information, collaboration, and addressing technological barriers.

#### **Unexpected Findings or Revelations:**

One unexpected finding was the emphasis on the importance of considering the educational background and socioeconomic background of poultry farmers when designing podcasts. "You

have to consider the language, the educational background, and then the socioeconomic background."

## **PP2 Findings**

### **Theme 1: Content and Relevance:**

PP2 emphasized the importance of sustainable farming practices and tailoring content to address specific knowledge needs and challenges of poultry farmers. "I think understanding the audience would be good... engaging with local farmers, one, by conducting surveys or interviews to identify the specific challenges they face."

### **Theme 2: Technology and Accessibility:**

PP2 recommended using platforms like WhatsApp, Facebook, and SMS to reach poultry farmers, considering potential limitations in digital technology access. "WhatsApp is widely used in Ghana here now... creating WhatsApp groups... can help people to join or create groups for poultry farmers to share information."

### **Theme 3: Media Literacy and Comprehension:**

PP2 suggested structuring podcast content to support farmers with different levels of media literacy and educational backgrounds. "We can segment it, then use simple language to introduce the topic and also highlight."

### **Theme 4: Podcast Development and Distribution:**

PP2 identified agricultural industry associations, government agencies, and educational institutions as key stakeholders in developing and distributing agricultural podcasts.

"Agricultural industry association too... government agencies and even educational institutions too."

**Theme 5: Delivery and Engagement:**

PP2 recommended podcast formats and lengths of 15-20 minutes, using storytelling techniques to create engaging content. "Through storytelling."

**Theme 6: Performance and Impact Measurement:**

PP2 suggested evaluating the effectiveness of agricultural podcasts through metrics like farmer feedback, surveys, and interviews. "Per the feedback that you get from the farmers... conducting surveys."

**Contrasting Viewpoints and Experiences:**

PP2's responses highlighted the importance of understanding the target audience and tailoring content to address specific knowledge needs and challenges.

**Patterns and Relationships:**

The findings suggest that podcast producers share similar concerns about the importance of content relevance, accessibility, and engagement.

**Unexpected Findings or Revelations:**

One unexpected finding was the emphasis on the importance of using simple language and avoiding jargons and technical terms to ensure content accessibility.

**PP3 Findings**

**Theme 1: Content and Relevance:**

PP3 emphasized the importance of addressing specific challenges faced by poultry farmers in Accra, such as difficulty in getting land, high cost of feed, and theft. "Some of the issues in Accra is the difficulty in getting land... high cost of feed."

**Theme 2: Technology and Accessibility:**

PP3 recommended using platforms like WhatsApp, TikTok, Facebook, and Twitter to reach poultry farmers, considering potential limitations in digital technology access. "The platforms that I will recommend to you as a content creator will be my number one, then I'll go for TikTok."

**Theme 3: Media Literacy and Comprehension:**

PP3 suggested structuring content to address the needs of farmers with different levels of media literacy and educational backgrounds. "Their content should address their needs... if the content doesn't really solve any problems for them, I don't think they will have any use for it."

**Theme 4: Podcast Development and Distribution:**

PP3 identified individuals, farmer cooperatives, and private organizations as best positioned to develop and distribute agricultural podcasts. "I think for government... they should just stick to their job or enact policies and regulate them."

**Theme 5: Delivery and Engagement:**

PP3 recommended podcast formats and lengths of 10-60 minutes, depending on the platform, and using high-quality video and sound to create engaging content. "Engagement is subjective... the video quality has to be high; the sound quality has to be on point."

### **Theme 6: Performance and Impact Measurement:**

PP3 suggested evaluating the effectiveness of agricultural podcasts using metrics like engagement, viewership, likes, comments, and calls from farmers. "When I post a video, I think about 24 hours YouTube is able to give me a lot of analytics."

### **Contrasting Viewpoints and Experiences:**

PP3's responses highlighted the importance of considering the specific challenges faced by poultry farmers in Accra and using platforms that are accessible to them.

### **Patterns and Relationships:**

The findings suggest that podcast producers share similar concerns about the importance of content relevance, accessibility, and engagement.

### **Unexpected Findings or Revelations:**

One unexpected finding was the emphasis on the importance of using simple language and avoiding jargons and technical terms to ensure content accessibility.

## **PP4 Findings**

### **Theme 1: Current Knowledge Sharing Practices:**

PP4 emphasized the importance of understanding the needs and challenges of poultry farmers in Accra. "People want content around best practices, how to prevent diseases...getting started, which is like educational stuff for when they actually get started."

**Theme 2: Podcast Accessibility and Usage:**

PP4 recommended using popular social media platforms like WhatsApp, Facebook, Instagram, TikTok, and YouTube to reach poultry farmers. "Use what people already use...these are all channels, right?" They also suggested that podcast developers should consider the limitations of digital technology access in Accra.

**Theme 3: Content Relevance:**

PP4 emphasized the importance of creating content that is relevant to the needs and challenges of poultry farmers in Accra. "Make it easy to understand...make the content easy to understand...break it down so that people of varying literacy levels, farmers of varying literacy levels can understand what you're trying to say."

**Theme 4: Impact on Farming Practices:**

PP4 suggested that podcast developers should focus on creating content that is practical and actionable for farmers. "Focus on...be straight to the point, take one concept, talk about it in a way that even someone who does not really have any knowledge can understand."

**Theme 5: Collaborative Potential:**

PP4 recommended collaborative strategies to ensure the credibility and reliability of the podcast. "Bringing people who are knowledgeable, who people recognize...that is a level of credibility above, you know, just a couple of random people who nobody knows, just talking."

**Theme 6: Delivery and Engagement:**

PP4 suggested that podcast developers should consider the format and length of podcast episodes. "I'd say, you know, 15 minutes...it's probably a sweet spot." They also recommended

varying the content to keep it engaging. "You can vary the content...for instance, there are podcasts I listen to where the first, they have three episodes in a week."

### **Theme 7: Performance and Impact Measurement:**

PP4 suggested metrics to evaluate the effectiveness of agricultural podcasts. "Things like the number of people that are viewing or listening...you want to see those numbers grow and grow with time."

### **Contrasting Viewpoints and Experiences:**

PP4's responses highlighted the importance of considering the specific challenges faced by poultry farmers in Accra and using platforms that are accessible to them.

### **Patterns and Relationships:**

The findings suggest that podcast producers share similar concerns about the importance of content relevance, accessibility, and engagement.

### **Unexpected Findings or Revelations:**

One unexpected finding was the emphasis on the importance of using simple language and avoiding jargons and technical terms to ensure content accessibility.

### **PP5 Findings**

#### **Theme 1: Current Knowledge Sharing Practices:**

PP5 emphasized the importance of providing relevant and informative content. "My main focus is getting more information for my audience... maybe how to go about farming, is it profitable or something so that at least someone can get more knowledge on this poultry."

**Theme 2: Podcast Accessibility and Usage:**

PP5 recommended using YouTube and TikTok to reach poultry farmers. "I think I recommend YouTube and also... TikTok. TikTok is fast, more than YouTube."

**Theme 3: Content Relevance:**

PP5 emphasized the importance of creating content that is relevant to the needs and challenges of poultry farmers. "By providing the right information... making sure that my video is very informative."

**Theme 4: Impact on Farming Practices:**

PP5 suggested that podcast developers should focus on creating content that is practical and actionable for farmers. "Since mine is video content, I think every action can be seen."

**Theme 5: Collaborative Potential:**

PP5 recommended collaborative strategies to ensure the credibility and reliability of the podcast content. "By inviting maybe someone who is experienced in agriculture... also, by interviewing one important, maybe head of farming."

**Theme 6: Delivery and Engagement:**

PP5 suggested that podcast developers should consider the format and length of podcast episodes. "If you want a detailed video, it should be in a long form... like maybe from 15 minutes to 20 minutes."

**Theme 7: Performance and Impact Measurement:**

PP5 suggested that metrics such as comments, likes, and shares can be used to evaluate the effectiveness of agricultural podcasts. "It's through the comment section... if they don't comment, I won't know."

**Contrasting Viewpoints and Experiences:**

PP5's responses highlighted the importance of considering the specific challenges faced by poultry farmers in Accra and using platforms that are accessible to them. However, their emphasis on using YouTube and TikTok contrasts with PP4's suggestion to use WhatsApp and Facebook.

**Patterns and Relationships:**

The findings suggest that podcast producers share similar concerns about the importance of content relevance, accessibility, and engagement.

**Unexpected Findings or Revelations:**

One unexpected finding was PP5's emphasis on the importance of using video content to show practical actions and demonstrations.