Assessment of Radio Broadcasting inAgricultural Transformation: A Study of NAERLS Radio Programme, *Noman Zamani* among Giwa Farmers in Kaduna State

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Abstract
The study assesses the impact of Noman Zamani agricultural radio programme on Giwa farmers. In order to effectively assess this programme, a number of researeh objectives were drawn up to find out the following: the extent to which fanners adopt the technologies aired and the difficulties encountered in understanding the radio programme, Noman Zamani. Quantitative researeh using a survey method (descriptive survey) was adopted for the study. Thepopulation of study includes farmers in Giwa area of Kaduna State and 238 respondents constituted the sample size of the study. However, the findings indicate that 84% of the respondents adopted the technologies and strongly agreed that the programme had impacted positively on them. Moreover, 77% of the farmers are of the opinion that the content of the programme is rich and majority 84% of the respondents agree that they had benefited from the questions asked during the programme. They also attested that the airing time and the mode of presentation of the programme is not appropriate and these constituted the main obstacles to assessing the programme. The researeh recommend that the airing time of the programme should be changed to between 7:00pm - 11:00pm as suggested by 67% of the sampled population; the mode of presentation of the programme needs also to be improved on as some of the respondents complained of difficulty in terms of presentation.

Keywords: Assessment, Agricultural Transformation, Radio Broadcasting, Noman Zamani. Farmers.

Introduction

Mass media are those institutions which use the increasingly sophisticated technological development for communication of ideas for the purpose of information, education, entertainment and persuasion to a large scale of heterogeneous audience. Mytton (1983), cited in Benjamin and Richard (2007:213), defines mass media as the device or means of communication which include the mass circulation press, radio, television, books, audio cassette, video, music, drama, film and the internet. The broadcast media (radio) can effectively reach large number of people with convincing development messages. However, experience from both developed and developing countries, indicates that mass media, especially radio, can influence not only knowledge and attitude but also behaviour (Jimada 1999, cited in Adamu, 2007).

The introduction of radio broadcasting in Nigeria has brought about profound changes in society through agricultural broadcasting (Adamu, 2007). Moreover, most communication scholars believe that radio is one of the most effective communication media for promoting African's socio-political and economic development. Radio is by far the dominant communications medium in Africa and in fact, in most part of the continent, there are millions of people living in areas with no access to newspapers and television [Alumuku 2006]. Several factors have contributed in making radio very suitable for African communities. Radio is a cheap and suitable medium of communication to the broadcaster and the audience, relative to other media, both its capital cost and its running expenses are small (McLeish, 1994 cited in Mohammed, 2009).

Radio broadcasting commenced in Nigeria in 1932, and continued to grow rapidly into a social and political force. In 1978, the Federal Radio Corporation of Nigeria (FRCN) was launched with three (3) national broadcasting stations in three geopolitical zones namely: Kaduna, Enugu and Ibadan, and Lagos as the National Headquarters (Mohammed).

Since agriculture plays an important role in the economy of any nation, the mass media, especially radio, is used for agricultural and rural development due to its capacity to reach audience very fast. According to Aboyade (1990), cited in Salau (2007:17), about 75-80% of Nigerians who live in the rural areas are still engaged in agriculture and other activities. He also acknowledged agriculture, especially food production, as the starting point of rural transformation. Soola (2002:27) stresses further that "agriculture, including crop production, livestock rearing and fisheries, are credited for poverty reduction, as the majority of the poor are engaged in these activities".

The National Agricultural Extension and Researeh Liaison Services (NAERLS) a Researeh Institute at Ahmadu Betlo University, Zaria in the North West Zone of Nigeria has been transmitting agricultural radio programme *Noman Zamani* [Modern Farming Techniques] for over 30 years through the FRCN in an effort to educate and enlighten all farming communities and towns on new farming innovations. *Noman Zamani* is a 30 minutes programme that discusses issues on how livestock, fisheries, crops, beekeeping, soil, water conservation, irrigation etc., can be improved in Nigeria. NAERLS, since its inception in 1963, has been making a significant contribution to Nigeria's agricultural development. It has the national mandate to coordinate researeh and extension linkage activities and also to collate, evaluate and disseminate agricultural technologies to fanners and other interested end-users.

Since radio is one of the channels used in promoting development within any society. This study assesses the impact of this radio programme among the farming communities of Giwa Area of Kaduna State.

***Noman Zamani* Radio Programme at a glance**

Noman Zamani is a radio magazine programme. A magazine is a programme which includes different kinds of items and formats such as interviews, hews, live discussions, packages etc. It is a programme which incorporates a range of items and presents a variety in content, tone and pace (Wale, 2006). Thus, McLeish (2005:160) affirms this point when he says "A magazine is usually designed with a specific audience in mind and tightly structured with the emphasis on content".

However, the format of *Noman Zamani* radio programme is consistent but the content varies from one edition to another. This is to ensure that the programme present various issues and events that require farmers' understanding. The main features that make the programme format consistent since inception are:

- The programme title- *Noman Zamani*
- The transmission time - it is transmitted twice a week for 30 minutes on Monday from 5:00pm to 5:30pm and a repeat broadcast on Thursday from 11:30am to 12 noon
- Production language- Hausa
- The signature tune - A traditional farming drum that depicts the communal farming system (Noman Gaiya) among the Hausa settlement.
- The Information content - It includes creating awareness, enlightening and persuasion of farmers to adopt new fanning techniques Interviews - Interviews with subject matter specialist, target audience (farmers) and policy markers
- Music - a traditional farming song is used as a bridge after discussing a particular enlightenment issue.

Problem Statement

The use of radio broadcasting for educating farmers on improved and mechanized farming, as well as what is happening around them becomes imperative because most agricultural communities live in rural areas. Therefore, the link between radio and agriculture cannot be over emphasized. This is because radio has from time immemorial had the interest of the farmers as a cardinal point of duty to highlight most of the development in the agricultural sector. This is made possible by the ability of the radio medium to bring messages clearly not only to the farmer's home, but also to the farmer who is busy tilling his vast agricultural land.

Also, agriculture contributes greatly to the growth and development of any society by providing food, shelter, job opportunities and clothing, which are the basic necessities of life. Due to the increase in population and shrink in arable land, the need for high demand for food calls for improved farming technology and radio has been proved by various researehes to be effective in disseminating agricultural information, but whether *Noman Zamani* radio programme has any impact on farmers in Giwa farming communities is what this study is set to investigate. Also, to be investigated is how the study population perceives the radio programme. This researeh, therefore, assesses the impact of *Noman Zamani* agricultural radio programme on Giwa farmers.

Objectives of the Study

The broad objective of this study is to assess the impact of *Noman Zamani* radio programme of NAERLS in transforming agriculture in Giwa area of Kaduna State.

The specific objectives are to:

i. examine the extent to which farmers adopted the technologies aired
ii. determinethe extent to which farmers encounter any difficulty inunderstanding the programme in the study area

Theoretical Framework

This study is anchored on the Diffusion and Adoption of Innovation Theory. The theory was propounded by Ryan and Gross in 1943 and modified by Everett Rogers in 1960. Baran and Davis (2003:161) say that the theory is propounded in order to study the flow of information and personal influence in several fields such as rural agricultural extension work.

Hence, Defleur and Dennis (1996:55) noted that the diffusion of innovation theory is a very important theory in studying mass communication issues because each of the major mass media was originally an innovation that came to be adopted and widely used and the media are often largely responsible for bringing new items to the attention of people who eventually adopt them.

According to Rogers (1995) cited in Anaeto et al (2008:117), the premises of the adoption theory were based on five (5) stages: knowledge, persuasion, decision, implementation and confirmation. This is to say that the farmers require knowledge about innovation or new development initiative from the mass media. McQuail (1994:71) asserts that "the media have brought messages of what is new and fashionable in terms of ideas, techniques and values from city to country". However, the comprehension of the media messages on innovations and development initiatives is influenced by some antecedent in the social system of the audience in the society.

The information received from the mass media about development initiatives will persuade the target audience to develop favorable or unfavorable attitude toward a particular innovation. Jibril (2005:50) describes persuasion as "the deliberate attempt to change other people's attitude, beliefs, values and actions through the transmission or exchange of some messages with the expressed intention of the communicator to accomplish a desired goal". Also, in development communication process, persuasive messages must be designed in a strategic form where the "persuasion can be viewed from two message designs: credible information packaging and motivational information packaging" (Yahaya, 2003).

This is why persuasive information on the innovation is believed to motivate the target audience (farmers) to take decision whether to adopt or reject the innovation. Moemeka (1989:64) says "this involves the continuing process of writing carefully worded statements of desired outcomes which are based upon identified problems which are probably achievable by available strategies and operation within existing resources and which may be appealing to audience". This information enhances the perception of individuals about innovation.

However, the individuals (farmers) will implement the innovation and continue to seek for confirmation and clarification about the decision they have made about the new innovation from the facilitators. Moemeka (1989:65), added that:

> Those in charge of planning development communication must be those who understand the social structure (those who have entered into the socio - cultural contexts of the people) and how change can take place in it-not merely how development messages can be disseminated.

Also, the media enhance the clarification of various issues to the audience. McQuail, (1994:64) affirms this point when he says that "the information, images and ideas made available by the media may, for most people be the main source of awareness of a shared past time and of a present social location".

Literature Review

The Nigerian Agricultural Sector

The Vision 2010 Committee (1997:66), gives a clear picture of the agricultural situation in Nigeria. It states that the agricultural sector in Nigeria is composed predominantly of small holder subsistence farmers with only a small number of commercial farms. According to Vision 2010 Report (1997:66):

> Farms below 10 hectares account for almost 95 percent of the total agricultural production. In 1996, the sector accounted for 30.1 percent of Nigeria's GDP. Approximately two thirds of the Nigerian population earns a living from the sector. Output from this sector has been extremely erratic in the last three and a half decades and the sector has been plagued by fundamental problems.

Consequently, the fundamental problems which have constrained the development of agriculture in Nigeria can be understood to be the following: weak and poor funding, shortage of appropriate communication media, lack of trained personnel to carry out agricultural extension, poor infrastructure, including the absence of road networks to move goods to the market, Substantial rural-urban migration which robbed agriculture of virilemanpower and failure to transfer technology to the sector brought about low productivity and low income growth.

Similarly, Akwa Ibom State Economic Empowerment and Development Strategy (AkSEEDS) (2004:50) mentions other problems that face agriculture to include low levels of fertilize use, concentrating on agricultural activities within the raining season, and low levels of knowledge of pest and disease control strategies. In addition, traditional agricultural practices such as bush burning, single crop cultivation, manual weeding (as against the use of Herbicides), over-grazing of lands and the use of tiny fishing nets have tended to hamper agriculture in Nigeria.

The Role of Communication in Agriculture

Agriculture is a critical sector in any country's economy. Even the developed countries of Europe and America, continue to pay serious attention to their agriculture (Salau 2007). However, about 75-80% of Nigerians who live in rural areas are engaged in agriculture and without formal agricultural knowledge. The need to receive appropriate information on improved farming methods becomes imperative.

Adeyanju and Mbibi (2005:99), note that "the productive level of the Nigerian farmer depend on the kind of information available to him". Hence, information is a critical corporate resource. Gans (2003:98), affirms that getting relevant information or messages to farmers will not only create awareness but also foster in them the right kind of attitude through knowledge acquisition. However, to communicate the right information to a farmer, Yahaya (2003:84), says "three elements are vital for success in communicating with agricultural workers: These include: visit-farmer orientation; serial targeted change and integrated media network".

Visit-farmer orientation: In communicating with farmers, the agricultural communicator must use a vocabulary that presents issues and problems from the farmer's point of view. This hastens the process of integrating an innovation into a farmer's view of how to solve a problem.
Target change: means that information must reach the farmer when he needs it in order to reinforce a new behaviour. This becomes part of his routine practice. Hence, it calls for a comprehensive communication strategy that accounts for the unpredictable factors farmers confronted throughout a production cycle.

Media network: deals with the media groups (broadcast, print and interpersonal) selected carefully and then integrated in a way that builds upontheir unique advantages so that a "multiplier effect" is achieved. This can be accomplished by using channel strategies that are based on pre-programmed researeh to determine where and how people get information.

Communication forms substantial part of agricultural development. Umar (2005:120) says, "it is important for extension agents to acquire communication skills that would enable them to effectively share ideas and information which may influence the decisions of the farmers on a given subject matter". He added that extension workers should present technical information in simplified manner that farmers may easily understand, remember and apply.

Communication is the cement that holds the society in place. Yahaya (2003:103), states that "for over two decades, purposeful application of media and communication has played vital role in rural development". Food and Agricultural Organization refers to it as the systematic utilization of appropriate communication channels and techniques to increase people's participation in development and to inform motivate and train rural populations, mainly at the grass root levels. The use of the media to assist in Third World development came out of researeh findings aimed at reaching people at the village level. Prior to this time, the only link between development in agriculture and rural adopters was the extension workers. The challenges that came with these include: limited number of workers, transportation difficulties, and poor training of illiterate farmers. Moreover, the use of media can accelerate awareness of, and adoption rates towards recommended technologies through targeted information, motivational messages and training.

Radio and Its Impact on Rural Farmers
Radio as a medium of electronic mass communication has the potential to meet the information needs of the various segments of the rural farmers. Soola (2002:291), acknowledges this fact among other functions of radio in development communication, thus "radio is an important mechanism for rapid diffusion of development information in diversity of languages and to a widespread often remote geographical mass". World Bank Report on World Development Indicators (WDI) (2004:295), ranked radio as the most widely used information technology in

Nigeria. Moreover, Omenesa (1992:23) also says that "various studies have shown that radio is a very effective channel of communicating agricultural information to farmer".

Atte and Emakpore (2006:1) assert that:

> Radio does not require additional efforts such as the literacy or regular expenditure needed for the print. It is the combination of these advantages that makes radio the most potent means of information dissemination and reception, the best vehicle for enabling the individual to share and contribute to the best of his ability, to the World around him.

According to Giles (1996:62), Agricultural Radio Broadcasting began in 1952 with the Nigerian Broadcasting Services (NBS) and followed by the Broadcasting Corporation of Northern Nigeria (BCNN) in 1962. Yahaya's study (2002:100-112), on Gender Consideration in Radio Option for Development Support Communication: Empirical Evidence from Northern Nigeria" shows that high radio ownership amount to (92.8%) and listeners (78%) among women farmers in Northern Nigeria. While Mdaihli and Ibeun (1994:182-189), in their researeh "On Media of Communication among Fishermen around Kainji Lake Basin" report the preference of radio to other mass media as information sources by majority (80%) of fisher folks around Kainji Lake Basin.

Rao (1980) cited in Imoh (2007:198), asserts that radio has been used in several countries to create awareness and impart skills to fanners. Hall (1978:62), further observes that:

> Radio is popularly used in rural agricultural communication because it can be used in areas where there are no electrical outlets. It has been used in different ways in reaching both literate and non-literate farmers of all ages, sexes and religion to convey messages to farmers in the form of "Radio farm forums""listening groups" and "open broadcast".

The foregoing assertions explain the importance of radio to rural fanners. This is also attributed to its merits such as: affordability, low cost of maintenance, portable medium which allows the user to perform other activities while listening. Others are: ease of operation, wider reach, availability and localization of programme. According to Usher and Garfaith (1997:301), promotion of information is the activity of making potential users aware and increasing its accessibility. Imperial evidence of radio promotion that brought progress in agriculture exist in Philippine, India, Malaysia. Thailand, Mali. Ethiopia, Mozambique and Ghana, thus, acting as a catalyst for community mobilization for increased production through adoption of technologies (Yahaya 2002, Chapman, et al. 2003 and Cleaver, K. 2004).

Empirical Review

This researeh did a review of some studies done by others scholars on the impact of radio programmes on listeners and findings are presented herewith.

Pate's study (2006:26 27) on Assessment of Radio Broadcasting in Nigeria: Gaps and the Need for Community Radio Broadcasting", establishes that radio is understandably, the most

patronized means of mass communication in Nigeria. For example, the National Demographic and Health Survey in 1999 found out that 62% of households in Nigeria own one radio set. Those who do not have radio sets listen from sets of friends or colleagues. He buttress further that radio transcends the barriers of cost, educational attainment and to some extent, linguistic boundaries. Similarly, Akinlabi et al (2007) in their study "on media and behaviour change: a Midline case study of British Broadcasting Corporation World Service Trust's 'Stop HIV' in Nigeria" found that radio reached the widest audience (70% in the northern states and 60% in the southern states). This shows that radio outputs had a strong reach across Nigeria. However, the study reveals that radio has the potential to contribute to actual change behaviour, as well as gains in knowledge and shifts in attitudes.

In Tanzania, Mrutu (2003:12) in his researeh on a radio programme titled "Man is Health" found that the programme created a communal atmosphere that fostered learning and action by Tanzanians concerning their health. Moreover, Ojebode (2002:87) set out to determine among other thing, the effectiveness of radio jingles that carried development messages rendered in the indigenous language. He discovered that listeners easily understood the messages of the radio jingles, remembered it and found the messages credible.

Dimelu and Anyanwu (2004:30-33) in their study "Importance of Radio-rural Forum (listening group) as an Extension Strategy in Nigeria" established that radio is a powerful mechanism for providing information sources cheaply to those who need them most to improve their livelihood and that this radio rural forum encourages discussion, attention andpromote understanding. Also Okwu et al (2006:9-17) in their study, "Mass Media Usage in Agricultural Extension in Benue State of Nigeria", explain that 66.77% use radio to obtain agricultural information. Thus, the study shows that radio in the most popular mass medium used by farmers and this could be due to its attributes such as easy availability/accessibility and language comprehension since agricultural programme in radio Benue are broadcast in English language as well as indigenous languages. Moreover, the study reveals that radio offers immediacy and provides the warmth of the human voice which ties into the strong oral traditions of the communities.

Suleman's study (2002:173-177) "on the role of media in creating environmental awareness" reveals that radio remains the only widely accessible medium of communication and that it is the only medium that offers immediate contact with the rural populace. She recommends that radio should be used as a tool for creating environmental awareness. Also, Iman study's (1992) "on women and the mass media in Africa" establishes that 98% of all households in Kano/Jigawa metropolitan have access to radio sets. However, since radio can shape thoughts, mould attitudes and influence behaviour it should be used to create awareness on Health issues to women at home.

EI-Nafaty (1999:94-96) in his work "The impact of radio in mobilizing Nomads toward the Nomadic Education Programme", reveals that 83% of the respondents said that it was the radio programme that encouraged them to enroll their children in Nomadic schools. He notes that it is through the radio programme that the Nomads were able to understand that their schools hours were made flexible unlike in other formal schools. Also, in a similar study by Mohammed (2009:66-88) "on the Perception of Dan Makiyaya a Ruga by the Fulbe Community in Giwa Area", found that 79.3% of the respondents know the programme through the radio medium. He

affirms that 96.8% and 67.5% of the Nomads were aware of HIV/AIDS and animal diseases and vaccination through the radio programme. However, he recommends that the National Commission for Nomadic Education (NCNE) should create a segment in "Don Makiyaya a Ruga" to provide more enlightenment on public health issues and HIV/AIDS.

All these findings ranked radio as the most widely used information technology in Nigeria. Thus, Soola (2002:291), acknowledged this fact among other functions of radio in development communication; he notes that "radio is an important mechanism for rapid diffusion of development information in diversity of languages and to a widespread often remote geographical mass".

Methodology

A survey of farmers in Giwa area of Kaduna State was carried out. It represents and possesses the characteristics of an average fanning environment in Nigeria. All the districts in Giwa area were picked for the survey composed of literate, semi-literate and illiterate people, predominantly farmers. The districts have electricity, schools and some social infrastructure. They also have easy access to extension workers services because many agricultural institutes are relatively close to them.

Sampling Techniques and Sample Size

The population of this study is the entire farmers in the eleven (11) districts within Giwa area of Kaduna State. Since all the farmers in Giwa area of Kaduna State cannot be studied, the researcher used probability sampling in order to have adequate representative of the population. In order to arrive at the sample population, all the districts in the entire Giwa area were selected. A simple random sampling was used to choose 15 houses in each of the eleven (11) districts of Giwa area of Kaduna State. In each house a multi-stage sampling were used to choose two (2) units of the samples, i.e. the first eldest male and second eldest person who can be male or female were selected. This would make a total of thirty-two (30) units of the sample to be drawn from each of the eleven (11) districts of Giwa area of Kaduna State. The sample population size for this study is 330 samples. That is 30 multiplied by 11=330.This was used in cognizance of the fact that in Hausa Fulani settings, eldest male has absolute control and authority in the family. Also, in each house the family members abide by the views and opinion of the eldest male (Mohammed, 2009:54).

Data Gathering Instrument

In order to get a uniform response from the respondents, the questionnaire was used to gather data. However, in administering the questionnaire the researehers took into consideration the time of the day to get the farmers at home. Thus, the questionnaire was administered in the afternoon when the farmers are back from the farm.

Data Analysis and Discussion

Table 1: Distribution of respondents on technologies received from*Noman Zamani* radio programme

Variables (Technologies)	Frequency	Percentage (%)
Crops		
Weed control	12	5.0
Tillage practice	8	3.4
Amount of fertilizer use	13	5.5
Seed variety	22	9.2
Fertilizer application	20	8.4
Fisheries		
Feeds production	15	6.3
Fish preservation	13	5.5
Fish medication	8	3.4
Fingerlings production	5	2J
Livestock		
Quail farming	26	10.9
Guinea Fowl farming	6	2.5
Vaccine administration	25	10.5
Hatchery technology	18	7.6
Keel production	15	6.3
Brooding technology	20	8.4
Irrigation		
Surface irrigation	5	2.1
Sub-surface irrigation	4	1.7
Underground irrigation	3	1.3
Total	**238**	**100.0**

Table 1 shows the type of technologies received by the respondents from *Noman Zamani* radio programme. The various technologies broadcast in the programme are: weed control, tillage practice, amount of fertilizer use, seed variety, fertilizer application and feeds production. Others include, fish preservation, fish medication, fingerlings production, Quail farming, Guinea Fowl farming, vaccine administration, hatchery technology, Keel production, brooding technology, surface irrigation, sub-surface irrigation and underground irrigation. It could be deduced that the respondents under studyreceived most of the technologies from *Noman Zamani* programme which if properly used will boost their agricultural practices.

Results also indicate the adoption level of the technologies aired among the respondents. Majority (84%) of the respondents adopted the technologies while some did not adopt the technologies. These facts show that the frequency at which the farmers of Giwa area of Kaduna State adopted the technologies from *Noman Zamani* programme is very high compared to the other respondents. Table 2 below presents the adoption of the technologies aired by the respondents.

Table 2: Respondents' view on adoption of technologies aired

Variables	Frequency	Percentage (%)
To a very high level	200	84
High level	Nil	Nil
Moderate level	Nil	Nil
Not at all	38	16
Total	**238**	**100**

Table 3: Distribution of respondents on frequency of using the technologies aired on the programme

Variables	Frequency	Percentage (%)
Very often	99	41.6
Often	90	37.8
Not often	11	4.6
Not at all	38	16.0
Total	**238**	**100.0**

Table 3 indicates how frequent the respondents used the technologies aired from *Noman Zamani* programme. The majority of the respondents 41.6% used the technologies very often. While those that used the technologies often came second with 37.8% of the respondents. Also, those that used the technologies not often are the minority with only 4.6% of the respondents. However, 16% of the respondents said not at all. These facts show the frequency at which the farmers of Giwa used the technologies aired from *NomanZamani* programme is very high. This is because the majority of the respondents used the technologies aired in their farming practices.

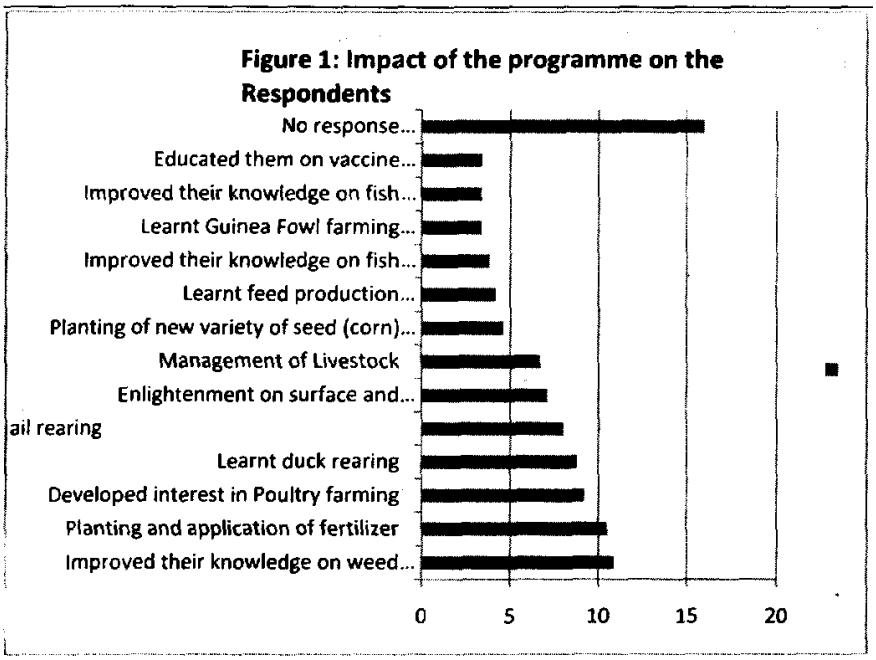


Figure 1 reveals the impact of *Noman Zamani* on the respondents. However, 10.9% said it improved their knowledge on weed control, 10.5% on planting and application of fertilizer, 9.2% developed interest in poultry farming as a result, 8.8% learnt duck rearing, 8% learnt Quail farming, 7.1% enlightenment on surface and underground irrigation and 6.7% management of livestock. Increased their knowledge on planting of new variety of seeds 4.6%, learnt feeds production of fish 4.2% and its improved their knowledge on fish fingerlings 3.8%. Also, learnt Guinea Fowl farming and Keel technology, improved their knowledge on fish preservation and educated them on vaccine administration both have 3.4% each. These facts show the frequency at which the farmers in Giwa area of Kaduna State have learnt from *Noman Zamani* programme. This is because majority of the respondents strongly agreed that *Noman Zamanihad* impacted positively on them.

Table 4: The Distribution of the respondents on the content of the programme

Variables	**Frequency**	**Percentage (%}**
Very good	104	44
Good	78	33
Average	16	7
Poor	2	0.8
No response	38	16
Total	**238**	**100.0**

Table 4 shows the rating of the content of the programme. Majority of the respondents 44% and 33% were of the view that the content was very rich for diffusing innovation on agricultural production to fanners. Hence, the table represents 77% of respondents whose views were very positive about the programme content. However, 7% of the respondents said it was average.

From the results it is obvious that majority of the respondents 75.*6%*did not have any difficulty in understanding the programme. Moreover, only 5.4% of the respondents said yes that they found it difficult. These facts show that majority of the farmers in Giwa area of Kaduna State believed that the kind of words used in explaining issues in *Noman Zamani* programme was appropriate to their understanding.

Table 5: Distribution of respondents on the nature of difficulty encountered in understanding the programme

Variables	**Frequency**	**Percentage (%)**
The mode of presentation	20	8.4
The content of the programme	Nil	Nil
The language used	Nil	Nil
All of the above	Nil	Nil
No response	218	91.6
Total	238.	100

Table 5 shows that 8.4% respondents complained on the mode of presentation of the programme. This indicates that the style of the presentation is not encouraging. However, 218 respondents

failed to answer the question. From the results majority of the respondents 84% said that the programme provide solutions to their agricultural needs, while 16% of the respondentssaid no. These facts show that the programme *Noman Zamani* answered the farmers' questions.

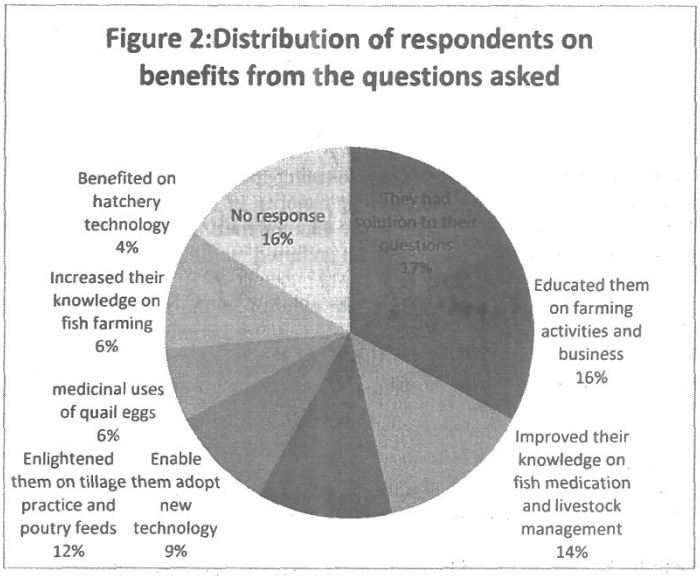


Figure 2 shows how the respondents benefited from the questionsasked on the programme. Seventeen percent of the respondents said they had solution to their questions. However, 16% said it educated them on farming activities and business, 14% said it improved their knowledge on fish medication and livestock management, 12% said it enlightened them on tillage practice and poultry feeds, and 9% said it enable them adopt new technology on fish fingerlings. Also, on the medicinal uses of quail eggs and that it increased their knowledge of fish farming both have 6% each of the respondents respectively. Moreover, 4% benefited on hatchery technology and 16% of the respondents did not respondents to the question. These facts show the frequency at which the farmers benefited from the questions asked on *Noman Zamani* programme.

Table 6: Respondents'preferred listening period

Variables	**Frequency**	**Percentage (%)**
Morning: 9-12 noon	6	2.5
Afternoon: 2-6pm	35	14.7
Evening: 7-1 1pm	159	66.8
No response	38	16
Total	**238**	**100.0**

Table 6 indicates the preferred listening period of *Noman Zamani* programme among the respondents. The majority of the respondents 66.8% preferred evening that is, 7- 11pm. Those that preferred afternoon, i.e., 2-6pm came second with 14.7% while those that preferred morning i.e., 9-12noon are 2.5% of the sampled population.

The outcome of the above shows that majority of the farmers under the study preferred listening to any agricultural radio programme in the evening between 7-11pm. According to most of them

it is when they are relaxing at night after prayers, they would have full concentration on any programme aired on radio.

Discussion of Findings

The results of findings are discussed below. according to the specified objectives as follows:
The results are presented according to the specified objectives as follows:

Researeh Objective 1. The extent to which farmers adopted the technologies aired

Findings from the study show that all the respondents received at least one of the technologies aired, such as, weed control, tillage practice, amount of fertilizer use, seed variety, fertilizer application, feeds production, fish preservation, fish medication, fingerlings production, Quail farming, Guinea Fowl fanning, vaccine administration, hatchery technology, Keel production, surface irrigation, sub-surface irrigation and underground irrigation. Also, in Table 2, it could be observed that majority of the respondents adopted the technologies aired. Similarly, it could be observed that majority of the respondents 79.4% used the technologies received from the programme (Table3). Moreover, in Figure 1, it is observed that majority of the respondents 84% strongly agreed that the programme had impacted on them. However, 10.9% said it improved their knowledge on weed control, 10.5% planting and application of fertilizer, 9.2% developed interest on poultry farming, 8.8% learnt duck rearing ... and 3.4% said it educated them on vaccine administration. It could be deduced that Tables 1, 2, 3 and Figure 1 are concerned with Researeh Objective 1. Interestingly, most of the technologies they received were adopted.

Researeh Objective 2. The extent to which farmers encounter any difficulty in understanding the programme in the study area

Findings in the study established that farmers did not encounter any difficulty in understanding the programme. Thus, majority of the respondents 43.7% and 32.8% said the content of the programme was rich. Also, 75.6% of the respondents which served as majority strongly agreed that there was nothing difficult in understanding the programme that is, in term of the content of the programme and the language used for the programme. Moreover, majority of the respondents 84% agreed that the programme provides answers to their questions. In the same vein 84% of the respondents agreed that they have benefited from the questions asked in the following ways: they had solution to their questions, It educated them on farming activities and business, improved their knowledge on fish medication and livestock management, enlightened them on tillage practice and poultry feeds, enable them adopt new technology on fish fingerlings, medical uses of quail eggs, increased their knowledge on fish farming and benefited them on hatchery technology.

However, it was only in Tables 5 and 6 that the respondents identified some difficulties of the programme. Table 5 indicates that 8.4% of the respondents complained on the mode of presentation of the programme. Moreover, Table 6 indicates that majority of the respondents 66.8% and 14.7% indicated that the time of airing the programme was not appropriate, particularly the morning hours. The farmers indicated that as from 6am to 12 noon majority of them are on their various farms. Also, from 2 pm to 6 pm most of them were still on the farm. However, the fanners agreed that 7pm -11pm, according to Table 6 is the most appropriate time for airing agricultural radio programme. From the findings above, it is clear that the farmers have identified two obstacles of the programme that require necessary action.

Conclusion

From the data presented above, the study can safely reach some conclusions thus:

1. That majority of the respondents received at least one of the technologiesaired in the programme. In the same vein, 84% of the respondents adoptedthe technologies, 79.4% percent used it, and 84% percent strongly agreed that the programme had impacted on them.
2. It was also established that 43.7% and 32.8% of the respondents were of the opinion that the content of the programme was rich, 75.6% strongly agreed that nothing was difficult in understanding the programme, and 84% agreed that they had benefited from the questions asked during the programme. However, 66.8% and 14.7% indicated that the time of airing the programme was not appropriate.

Based on the foregoing, it can be deduced that the broadcasting of *Noman Zamani* magazine programme produced by National Agricultural Extension and Researeh Liaison Services (NAERLS) has been adjudged to have made positively impact on the target audience. This is because the respondents rated the programme very high in increasing their awareness and enlightenment on new farming techniques.

Recommendations

1. The National Agricultural Extension andReseareh Liaison Services (NAERLS) should intensify effort to change the time the programme is aired because majority of the farmers 66.8% preferred 7-11pm. This will enable the farmers to listen to the programme more.
2. The mode of presentation of *Noman Zamani* radio programme needs to be improved especially as 8.4% of the respondents complained of some difficulty of presentation.
3. The National Agricultural Extension andReseareh Liaison Services (NAERLS) should endeavor to increase the number of radio stations that broadcast *Noman Zamani* Programme. This willcontribute to the significant increase in the audience reach of the programme among the fanners in different parts of Nigeria. State and private radio stations can also be engaged.
4. The National Agricultural Extension andReseareh Liaison Services should increase the level of audience participation in *Noman Zamani* programme. This can be achieved by engaging more radio listening groups in discussions and interviews. This will make the programme to focus on local activities of the farmers. It will also enable the farmers to interact with the subject matter specialists and producers which should arouse their interests toward the programme.

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