IMPACT OF MOBILE PHONE ON AGRICULTURAL INFORMATION AMONG OTUKPO FARMERS.

A STUDY OF AGRICULTURAL INFORMATION DISSEMINATION AMONG FARMERS IN OTUKPO TOWN, OTUKPO LOCAL GOVERNMENT AREA OF BENUE STATE

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MC/2007/179

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IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE (B.SC) DEGREE IN MASS COMMUNICATION.
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APPROVAL PAGE

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This work has been read and approved as meeting the requirements for the award of Bachelor of Science (B.Sc) degree in Mass Communication.

…….	…….
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……

External Examiner

DEDICATION

This work is dedicated to God Almighty who gave me the courage, strength, patience and inspiration to make it through this project.

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TABLE OF CONTENT

CHAPTER FIVE – Summary, conclusion and recommendations

Abstracts

The study "The Impact of mobile phone on Agricultural Information among Otukpo Farmers". A study of Agric information dissemination among Otukpo farmer, Otukpo Local Government Area. Using a survey of five villages in Otukpo town, Otukpo Local Government Area of Benue State, the researcher found that Otukpo farmers has adopted the impact of mobile phones in getting agric information due to the benefits derives from it such as enabling verification/discussion with chief farmers and extension workers, facilitating communication and saves transportation cost, institution relationship with agricultural extension officers, helps to obtain information on price of goods and services. This research also finds that the following problems are associated with the use of mobile phones - poor network services, high charges, network congestion, power failure and reduction interconnectivity. The study is anchored on the diffusion of innovation theory which excludes that mobile phone have generally improved farmers in the farming system. It recommends that Nigeria communications commission should set a standard for the mobile phone operators in Nigeria with regards to signal strength, voice quality, successful recharge and balance inquiry call centre operations and call success rate to improve services. This study recommends that the chairman of Otukpo local government area should provide frequent power supply for the Otukpo town, also the extension workers should pay serious attention to the information needs of the farmers

CHAPTER ONE

INTRODUCTION

Communication which is so much a part of us, sees to be everywhere at the same time, it is central to all human interactions. It is the most basic and one of the earliest activities of human beings. Communication as an integral part of our existence for there to be any meaningful development, there has to be communication between initiator of the developments process and the target audience of these development project. All development depends on knowledge and this knowledge is a function of the amount and quality of facts at ones disposal. The farmers needs information on possibilities that exist for improving on their lot and how to effect the necessary changes. They also need specific information on how to do things that will result in an improvement of their farming yield.

Agreeing on the role of communication, Ebo (1999:24) observes that communication in development can teach new skills act as multiplier of resources, raise levels of aspiration as incentive

for action, raise level of people, help to find new norms and harmony in periods of transaction change the structure in a society by knowledge to the mares, create sense of nationality and led to increased political participation, promote people need in satisfying developments projects and making economic, social and political development a self perpetual process.

Due to this important role of communication, mobile phone have been given a prominent role in communicating development messages to the people. In a similar view Abiri (2011:1) says that today's world seems to be dominated by improved technology has made much impact in communication, mass communication in particular. Improved technology has greatly increase the efficiency of communication to the extent that the process can send and receive messages around the world and into space with maximum speed and efficiency.

The point of the matter here however is on the telecommunication industry. Technological revolution has impacted so much on telecommunication sectors to the extent that it becomes of the fastest growing industries in the world. Efficient

telecommunication services play vital role in modern societies of money developed and developing nations. In Nigeria, the first national development plan (1963 – 1968) identified the need for rapid development of telecommunication sector.

Commenting on telecommunication Ndula (2002:5) asserted that today the growth of telecommunication has been accompanied with significant advances in technology research. One of the latest in modern telecommunication, central to information technology is the mobile phones. Today the much anticipated system of mobile communication recently introduced in Nigeria has brought about a total revolution in the history of telecommunication development in Nigeria.

The importance of mobile phones among farmers cannot be overemphasized as it makes it very easy for farmers to interact with ease and immediacy. Farmers operators use mobile phones to make speedily appointments, quite clarification and instant reply of the messages.

Mobile phones have gone through a long process of evolution and all through about six decades of continuous evolution, the mobile phone has retained its relevance to the life of the modern man. At every stage in his growth curve, it has undergone metamorphosis, adding features and functionalities that make it even more indispensable. It started as an extension of the landline, a bridge between the home and office landlines. It found relevance in the need of the modern professional to remain in communication in and out of home or office, at lay in the car, at lauch and anywhere else. The mobile phone has since moved up from this sophistic role to become more actually involved in the way modern business are educated. Apart from, being a tool for mobile voice communication, mobile phones today are a hybrid of personal computers and a communication device. They come with screens, miniky boards storage for personal information such as contacts, email, documents, the ability to play video files, games and a communications capacity. With these features and functionality. Come a wide range of other uses, a mobile phone can put into a business or work environment apart from the

traditional voice communication. Now mobile phone makes it possible for a busy executive to work from any part of the world. He can access the treats critical emails sent to him regardless of how far way from the office her or she works. All he needs to do is to access the internet via his or her mobile phone.

What promises to be a killer application in mobile services in a short while is mobile television. This service will enable mobile phone subscribers watch television programmes on the mobile phones. Imagine driving on your car to your office and watching amplitude modulation express on Nigeria television authority on your mobile phone or wanting at the airport for a flight and catching up with your favourite comedy series on a local television station. Imagine sharing your television experience with your friends and family and receiving advertising targeted to your needs. These are all possibilities that mobile television offered.

It was in this regard that Comer and Howthon (400:11) says communication is essentially a social affairs man has evolved a lost of different systems of communication which render his social life

possible and not in the sense of living a packs for hunting or making war, but in a sense unknown to animals.

1.1 STATEMENT OF RESEARCH PROBLEMS

i. Farmers in Otukpo finds it difficult to get adequate agric information from extension workers.

ii. Most of the Otukpo farmers do not make frequent use of their mobile phone due to power failure in Otukpo.

iii. Farmers in Otukpo do not know the alternative source of power for changing their mobile phone in order to get adequate agricultural information.

1.2 OBJECTIVE OF THE STUDY

i To find information on alternative ways of getting agric information outside the extension workers

ii To identify major solution to the problems facing farmers in Otukpo in getting agric information easy.

iii To find information on the alternative sources of power for charging their phones in order to get adequate agricultural information.

1.3 RESEARCH QUESTIONS:

i. What alternative source do farmers in Otukpo use to get agricultural information aside extension workers?

ii. What kind of problem do farmers in Otukpo encounter using mobile phone?

iii. What alternative source of power do Otukpo farmers use to charge the mobile phone?

1.4 SIGNIFICANCE OF THE STUDY

The significance of this study are as follows:

i. The study will provide information on the alternative source of information for Otukpo farmers, out side agric extension workers.

ii. The study will provide information on solutions to problems of GSM phones used by Otukpo farmers

iii. The study will also provide information on alternative source of charging their mobile phone.

1.5 RESEARCH HYPOTHESIS

H_0: Farmers in Otukpo do not use alternative medium to get agric information

H_1: Farmers in Otukpo use alternative medium to get agric information

H_0: Farmers in Otukpo do not encounter problems using mobile phones to get agricultural information

H_2: Farmers in Otukpo encounter problems using mobile phones to get agricultural information

H_0: Power failure does not affect farmers in Otukpo in getting agric information with their mobile phone

H_3: Power failure affect farmers in Otukpo in getting agric information with their mobile phone

1.6 DEFINITION OF TERMS

CONCEPTUAL DEFINITION OF TERMS:

Mobile phone: Mobile phones are electronic devices used to make mobile telephone calls across a wide geographical areas.

Impact: This refers to the powerful effect that something has on somebody or something.

Farmers: A farmer is a person who own or manage a farm.

Agriculture: This refers to the science or practice of farming.

Information: This refers to facts or details about somebody or something.

Communication: These is the method of sending information, especially telephone, radio and computer.

G.S.M: Means global system for mobile

OPERATIONAL DEFINITION OF TERMS:

Mobile phone: This are phones carried about and are use to send and get information from one person to another by Otukpo farmers from January – August 2012

Impact: This is the power of mobile phone on agric information used by Otukpo farmers from January – August 2012

Farmers: Otukpo people who have farm or manage a farm with the use of mobile phone to get agric information. from January – August 2012

Agriculture: Planting of croups and rearing of animals in Otukpo community from January – August 2012

Information: Sending of idea, feelings, messages, culture from one place to another or from one person to another among Otukpo farmers from January – August 2012

Communication: This is the process of sending messages, idea and feelings from one person to another by use of mobile phone by Otukpo farmers from January – August 2012.

1.7 ASSUMPTIONS

The following assumptions were made:

i. That an average farmer in Otukpo uses mobile phone.

ii. That farmers in Otukpo receive and make call twice or more in a day.

iii. That most of the farmers in Otukpo own mobile phone.

iv. That farmers in Otukpo believes in information from mobile phone.

v. That farmers in Otukpo makes use of information from mobile phone.

1.8 LIMITATION OF THE STUDY

This study is limited to the impact of mobile phone on agricultural information among Otukpo farmers, from January – August 2012.

These study would have extended to all the farmers in Benue State but due to time factor and financial problems, the researcher is compelled to limit its focus on only Otukpo farmers, of Otukpo town in Otukpo local government area of Benue State.

CHAPTER TWO

2.0 REVIEW OF RELEVANT LITERATURE

2. SOURCES OF LITERATURE

The review of literature for the purpose of this research work came from published works such as journals, text books, newspapers, the internet and magazine.

They are also sourced from Encarta and Wikipedia, free encyclopaedia. The researcher also consulted books in libraries: such as Benue State University library and Caritas University library to effectively carry out this study, and similar works done by other researchers in the field of mass communication was also used.

2.1 LITERATURE REVIEW

Since the introduction of mobile phone in Nigeria economy, it has had tremendous impact on so many businesses transactions. Farmers and farming activities in Otukpo like the rest of the Nigerian nation have had their benefits of using mobile phones.

Mobile phones have improved the telecommunications industry in Nigeria. In the "dark age" when fixed analogue lines were the only telephones available in Nigeria, people had to endure many hardships. Apart from epileptic services the Dilling procedure was controversial. However, with the advent of prepaid billing plans with mobile phones, much of these problems are averted. Mobile phones have obliterated public pay phones in Nigeria. Rather, road side commercial call operators have spring up providing services and creating jobs in the industry. The advert of the global system of mobile communication in Nigeria is a welcome development.

The impressive success, which mobile phone networks have in Nigeria is a lesson worth of note as regards the adoption of information communication technology in developing countries can catch up with the rest of the world in ICTs cynics are quick to identify factors, which prevent the proliferation of ICTs in developing context but a lot is possible even in the face of numerous problems.

The telephone industry in Nigeria has moved from its bleak past of scarcity, epileptic services, controversial billing procedure and epileptic services due to vandals and natural phenomena, to a new down with the proliferation of mobile phones and increased networks coverage and connectivity in both urban and rural areas. As network coverage enjoys a boost, villages benefit and are included in the "mobile phone" as mobile networks includes major cities in the coverage area. Cities and towns are interspersed by villages, thus network coverage meant for the urban areas inevitably comes these impoverished settlements.

It was in this light that Agbanu (2006:122) also corroborates the fact that communication support services has always been adjunct of virtually all the pasts and present agricultural development programmes in Nigeria. This is because of the realization that communication plays a key role in enabling the various programmes to reach farmers or end users of agricultural development schemes, it will be difficult for them to accomplish their mandate without an effective communication programme the audience they are meant to serve cannot be easily reached and

networking with them will be impossible. The basic information and guidance which farmers needs to be able to embrace the idea of development is achieved through mobile phones.

2.2 USE OF MOBILE PHONE AMONG FARMERS TO GET AGRIC INFORMATION

The application of GSM technology in the farming system seems to be moving gradually towards making the work of farmers effective and efficient. Problem faced by farmers in getting agric information have been made easier, cheaper and faster by the use of mobile phones. Bako (2007:17) states that GSM makes it easier to get access to certain information without going to the site of event. GSM is used both in sending and receiving of information. Farmers in Nigeria today use mobile phone to ensure speedy appointments, with extension workers, quick clarifications confirmations, reminders and even have meetings with them in order to get agric information.

Atala (2006:150) says that GSM use in Nigeria farming system facilities easiest means of communication between farmers

and the extension workers. GSM has eventually created the desirable habit of time management in farming.

The use of GSM by Nigerian farmers is fast gaining ground and is beginning to take a stronger hold. Farmers in the contemporary Nigeria are supposed to be well versed in the operations of different types of mobile phones to enable them cope with the challenges posed by GSM technology in farming field.

Due to the numerous advantages of GSM use in farming process, Ebo (2002:33) advices that:

> If you are good in the art of graphics, concentrate, on that. If it is colour separation, make your name from that and if it is the area of printing with direct imaging, let people know you by that

Knowing how to operate this modern telecommunication technology gadget (GSM) can go to keep you employed. In a null shell, because of the noticeable use of GSM by farmers in the process of farming, the system is now faster and saves cost. All

practicing farmers are urged to acquire knowledge and skills to enable them use mobile phone effectively in carrying out their functions.

2.3 IMPORTANCE OF MOBILE PHONE ON DEVELOPMENT OF NIGERIA FARMER

The advent of mobile phone in Nigeria has brought about several benefits to the country. Since the coming of mobile phone the communication industry witness an impressive growth and expansion.

Nkianga (2007:27) says that outstanding growth rate of mobile phone is expected to hit five million the connections of over two billion currently recorded. This he adds is in line with the United Nations Millennium Development Declaration in September, 2000 that half of the worlds population should be connected by 2015.

This mobile communication technology is no doubt the cornerstone of the digital world and its tremendous growth is still

unrelenting and on going with a million connections said to be made every minute.

Maximus (2002:14) notes that mobile technology in Nigeria has created jobs directly and indirectly, strengthened the small and medium scale enterprises in the nation and made so many mini business owners to pay their bills and send their children to school.

This unrelenting growth rates of mobile technology is of particular relevance to Nigeria farmers as it makes their work easier. For instance mobile technology has brought about certain key services such as browsing for information on a mobile phone instead of wasting time going to cyber rate of source for such information, viewing of television programmes on the GSM phone and so on.

Mobile technology has also opened up the country and brought in foreign direct investments running into millions of dollars.

Uwaje (2002:9) says that Nigeria though an emerging player with less than six years on the playing filed her hit 34 million subscribers mark from less than 400,000 which was like a form in the ocean in 2001. He adds that Nigeria is expected to provide more than 20 percent of the African growth rate and is expected to hit 50 million subscribers base by the end of the year 2007 especially with the efforts of stake holders to ensure that every rural part of Nigeria is covered by mobile phone services.

This rapid growth rate of mobile phone has brought about significantly on farmers in Nigeria with mobile phones, it becomes easier for farmers to keep in touch with another farmers anytime, anywhere. Farmers on the other hand use the opportunity to fix appointment with agricultural extension workers or even farmers that are of high level to discuss important issues for greater productivity.

2.4 HISTORY OF MOBILE PHONE IN NIGERIA

According to Rom Abiri (2001:2) says telecommunication arrived in Nigeria over one hundred years ago. At independent in

1960, the country only have about 18,724 phone lines for use by a population of roughly 40million. From independent, various governments made several attempts to increase the number to telephones lines to Nigerians. However, these attempts failed woefully due to certain reasons, chiefly among these are monopoly of his sector by the country's public utility, Nigerian telecommunications Plc, and its indept and corrupt management. By the beginning of 1999, there were roughly 500,000 lines available for a populations of ground 120million Nigerians.

The Olusequn Obasanjo administration successful bought a deregulated telecommunications sector by auction ion 3 global system for mobile (GSM) licenses in January 2001 for & 285million each and further reserved a license for Nigeria telecommunication limited.

The administration succeeded where others before it had failed. In the end only two out of the three companies at the auction, MTN communication and ECONET wireless and NITEL were awarded full GSM licenses. The third successful company at

the auction communications investment limited (CIL) was refused a license on the ground that it did not meet payment deadline.

However, August 2001 was a pivotal date in the history of Nigeria. That was when the first global system for mobile phone communications call was made. This event heralded the dawn of a new era of GSM technology, which has completely charged the face of doing business in Nigeria. Four years after the first GSM call was made, the GSM industry in Nigeria has changed a lot competition for subscribers to getting fierce. Operators have resorted to "price wars" to win subscribers.

Subscribers on the other hand have more choice than ever, regarding which GSM operator to use. To attract maintain and move subscribers to high value services such as voice, network operator must provide an unprecedented quality of services. Providing quality services will require monitoring and quality assurance with a view to optimising the network.

By 1996, Nigeria's teledensity ratio was a mere 0.36. it rose slightly to 0.4 by 1999, according to the Nigeria communication

commission (NCC) Nigeria's teledensity is a far cry from the African coverage of 1.67. each the NCC admits that Nigeria has had a very limited telephone network for many years and the waiting list is estimated at over 10 million people, who have applied to the incumbent monopoly, Nitel established in 1985 Br services.

However, with the liberalization of the telecommunication industry in 2001, the story changed dramatically. The teledensity radio had tripled with in just one year of GSM operation.

Similarly, earnest Ndukwe (2006:5) says, by May 2005 Nigeria, with an estimated population of 128,771,988 had more than 9million GSM subscribers, making the country. The fastest growing GSM market in the world. At the moment there are 11 GSM operators in Nigeria: MTN, Glo Mobile, Zain now Airtel, Etisalat, Visa phone, Nitel, Starcom, Multilinks, Zoom mobile, Redlel, EWTS NGA.

Econet wireless now known as airtel was the first GSM net work to give line in Nigeria, but now MTN enjoy, the greatest

patronage with 123 million subscribers followed by Etisalat with 80 million subscribers.

Four years after the start of the GSM rera in Nigeria, the focus is gradually shifting from providing coverage to providing quality services. The euphoria of owing a phone set is gradually giving way to complaints of dropped calls and congestion. The operators are fast realising that they are in a highly competitive environment were subscribers can make or break them.

Brief assessment of Agricultural marketing and Otukpo people and their life style.

Agricultural marketing covers the service involved in moving an agricultural product form the farm to the consumer. Most interconnected activities are involve in agric marketing, such activities are planning production, growing and harvesting, grading packing and tre-sporting, storage, agro and food processing, distribution, advertising and sales. Agricultural market can't take place without exchanging information.

Marketing system are dynamic they are competitive and involves continuous charges and improvement. Marketing information services to farmer, but there have tended to experience problems of sustainability. Moreover, even when they function, the service provided is often insufficient to allow commercial decision to be made because of time log between modern collection and dissemination.

Modern communications technologies open up the possibility for market information services to improve information delivery through SMS on mobile phones and the rapid growth of mobile phone in Nigeria.

However, problems associated with the cost and accuracy of data or information collected still remain to be addressed ever when they have access to market information, farmers often require assistance in interpreting that information.

Otukpo is town in Otukpo local government area of Benue State. It has a land mass of 390 square kilogram and a population of 261,666. It is located between the five speaking area of Benue

State and Kogi State. It is the headquarter of Idoma province and remain an important town in Idoma land. Otukpo is one of the oldest local government area at Benue State.

Otukpo is the native authority of Idoma land, the king of the whole Idoma (the Ochi'doma) lives in Otukpo and the national open University of Nigeria is located in Otukpo town. It com prices of twenty two (22) villages. The people of Idoma are predominately peasant farmers growing cash crops, food crops and commercial crops.

The people of Otukpo grow are crops such as guinea corn, cassava, maize, soya beans, millet, pepper, bennie seed and some other food crops like, okro, vegetables, fruits such as orange, mango, cashew, banana, plantain etc. Otukpo has many functioning bank and few community bank where farmers get loan and safe their money.

The agricultural department in the local government secretariat secretariat contribute a lot to the farming activities by

borrowing laid to poor farm to farm on and giving them fertilizer every planting season to improve and increase their product.

The chief farmer of own town also listen and help his fellow farmers to increase and improve on their produce.

2.5 UPGRADING MOBILE PHONE SERVICE IN NIGERIA

Mobile phones have been presented as being able to make people to communicate with each other on real time basis saving time and money other convinces facilitating access to update information to support real time decisions, increase efficiency in environmental monitoring, disaster control and emergency management system.

Elegbelete (2005:196) says that the GSM operators in Nigeria have been able to make all these advantages of GSM a dream come true. They have also been able to improve the living conditions of Nigerians by creating better employment opportunities. Gross competition has also been noticed country which has led to the acquisition of modern technologies in order to

be at a higher advantage over the other. Thus need for upgrading GSM companies in Nigeria has emerged.

The role of telecommunication in Nigeria remains an indispensable factor in the development of the country. Olise and Igun (2007:18) reports that there was a rating of mobile phone services provides in Nigeria in 2006 by the IT edge intelligence unit. The survey research published in the March – April (2006) edition of the IT edge, a reading IT/Telecom news magazine report that globacom was the fastest growing telecommunication network in the upgrading. Globalcom had overall score 34 out of the maximum 45 points. Mobile now Airtel has 32 points, MTN 31 and Nitel 25 points 2007.

Recently, from research made 50 far, MTN has the widest coverage in the country while in terms of internet assess etisalat offered the best quality services. Airtel is the cheapest in term of call charges and good net work access and stable network. Glo mobile that use to be the best GSM operator in the country has fall and Airtel has taken its place, for Nitel is nowhere to be found in the battle of these GSM operators due to the fact that it is still

waiting for a buyer to revive it. At of all the eleven mobile operators in Nigeria Etisalate is the fastest growing network in the country, (just within 4 years of operation it has 80 million subscribers). This noticeable gross competition among the various mobile operators in the country has led to reduction of east of GSM services in Nigeria.

The remarkable story of GSM use in this field is based on the fact that its use by both farmers and extension workers across the country has created avenue for quite contact which ensures horrification and dissemination of agricultural information.

2.6 MOBILE PHONES AS A TOOL FOR DEVELOPMENT

In the study mobile phones as a tool for development.

Muhammad (2001:6) seek to find out who mobile phones has become widely accepted that communication has a very important role to play not only farming, but also result to greater productivities.

According to Mohammad (2001:9) for meaningful development in the rural areas, the mobile phones should not be

concerned with merely providing information on development activities.

He argues that:

> Besides creating opportunity for the people to know about the technical nature of new ideas and on how the work and with what effect, the mobile phones of communication plays the more important role of creating an atmosphere for understanding how these new ideas fit into the real social situation in which the people operate.

Against this background the use of mobile phones speed the process of information dissemination and farming development, through targeted information motivation and training.

Mobile phones use in Nigeria is new and unique to the prevailing economic situation. Mobile network operators recognize this phenomenon and tailor their marketing/place strategy to fit the existing st-tue que. The mobile usage pattern has ensured the creation of jobs and nullified the myth that technology always

renders human labour redundant. Roadside mobile operators have gradually replaced phone booths users of pay phone do not slot a coin into a machine but interact with a human vendor and calls charged per minute. The booster cards sold by most mobile network companies makes the services roadside mobile phone operators cheaper than even calling from a personal mobile phones. However, such practice raises questions of privacy, calls are made in open and discussion is heard by any one close by. Most mobile phones retain numbers after calls are made, thus conmen have fertile opportunity. Using survey method this study will conclude that mobile phones have penetrated deep into the African ward due to improved policy and regulation.

2.7 REGULATING THE PRICE OF MOBILE TELECOMMUNICATION SERVICE: THE ROLES OF NIGERIAN COMMUNICATION COMMISSION

According to Oki (2007:34 – 43) seeks to find out if the current prices of telecommunication in the country are justifiable using survey method, he observed that the Nigerian communications commission is in undated with various complaints

from the consuming public concerning the current state of telecommunication services in the country, particularly, the frustrating problems of how services quality and excessive and user prices.

Oki (2007:37) again observes that the current prices are not justifiable prices in a competitive telecommunication industry prices would inevitably be reviewed downwards, not by regularly intervention but by national competition and free market forces. He further notes that the observable reduction in current mobile phone acquisition cost is really pointed out and celebrated by the Nigeria communications commission in justification of its position on the matter of de-regulation of price in the sector. The Nigerian communication commission (NCC) stands on competition and price regulation in the mobile sector, therefore appears to mean that price regulation is not considered necessary in view of the competition evident in that section. He notes further that (Oku) ideally, a competitive environment is one where there are a large number of service providers as well as a large number of potential consumers, such that no single service provider can arbitrary fix

and sustain the price without reference to the consuming public, or without serious regard to the prices offered by other competitor providing similar services within the same industry. The regulation of prices of mobile phone has made easier to farmers or on average farmer in Otukpo to be able to own and operate a phone in order to get agricultural information.

2.8 ANALYSIS OF THE COMMUNICATION PATTERNS OF MAJOR MOBILE COMPANIES IN NIGERIA

The analysis of the communication pattern of the major mobile companies in Nigeria is to seek or find out which communication work or company has been providing quality services, using survey method, it was observe that Nigeria is a nation which was behind in the use of mobile communication even till the north country, because prominent then was the use of the Nigerian telecommunication limited (NITEL) landlines.

It was also observed that MTN have the widest network coverage in the country. Interm of internet asses and stable network etisalat is the best, then in terms of cheap call rate and

easy network asses airtel is better. Nitel is still try to get a buyer that will revive it and glomobile has fall on unlike years age when it was the best net work in the country. Using survey method the find out that mobile communication is one of the vital tools on which the human race exist. According to Oyelede (2005:21) the advent of GSM in Nigeria has helped to reduce the pressure on postal, agencies transportation risk and landline communication which were prevailing cases in the 19th and 20th centuries. Consequently MTN, ETISALAT and AIRTEL, GLOMOBILE etc. easily agues the communication networks available in the past pushing down the barriers of item and distance.

The fastest growing network is not determined by its time of emergency. Obviously etisalat which is one of the lest networks to emerge is seen as the fastest growing networks in terms of their technological advancement. However, from all indications, all the global system of mobile communication networks or companies operating in the country are unique in their own ways. Nigeria farmers therefore choose any of the network based on the kind of task they perform in their various information needs.

2.9 THEORETICAL FRAMEWORK

The researcher use diffusion innovation theory of communication. The diffusion of innovation theory best explains the study because the theory is concerned with new ideas like mobile phones and how people accept them. This study focuses on mobile phones and its impact on their agricultural information need.

DIFFUSION OF INNOVATION THEORY

The diffusion of innovation theory was propounded by Euerrelt Rogers in 1940 to describe the stages which are essential in the adoption of an innovation. Diffusion refers to the spread of information, cultural practices, new ideas, technology or innovations among a group of people in society or from one society to the other, one culture to another the spread of information through different channels in the society.

Diffusion involves the transference of a value from a point where it exist to a point where it does not exist. Diffusion occurs

when the innovation is channeled to place where it did not exist before. Rogers (1962:23) defined diffusion as the communication process by which a new idea posses through definite channels over a period of time among the members of the social group. Defluer and Dennis (1994:553) that the theory postulate that communication influence social charge by bringing innovations whether borrowed or invented to. The attention of the potential adopters who often in turn take up and begin to use cultural items on the basis of the information that is supplied.

Commenting on the theory Aina (2003:190) says

> The discovery of the multi-step model as against the two step flow afforded researchers new spread among people. The theory unlike the two step flow focuses on what individuals do with information received about new ideas. It is concerned with whether the ideas are finally rejected or adopted.

The relevance of this diffusion theory to this study is the fact that mobile phones came in as a new technology and innovation

and was adopted at various stages by various people, particularly mobile phone got to Otukpo much later than it got to Abuja and Lagos, however the eventual access to the technology by the farmers in Otukpo and the subsequent gratification they derive as a result of using mobile phones to get agricultural information. It also emphasis on advertisements, sales, people and contact with early adopters to seek social and economic changes of information through mobile phones.

Despite the fact that Defluer and Dennis (1994:553) says that the theory of diffusion of innovations was formulated by sociologist and widely applied to several fields. They pointedly assert that:

> The theory is particularly important to this study of mass communication because communications are largely responsible for bringing items to attention of the people who eventually adopted them.

This theory is relevant to this study because the theory is concerned with new ideas like mobile phones and how people

accept them. This study focuses on the impact of mobile phones on agricultural information among farmers of Otukpo town. In otukpo local government area of Benue State.

2.10 SUMMARY OF LITERATURE REVIEW

The content of this chapter show that the mobile phone has tremendous impact on agricultural information among farmers in Otukpo. This is due to the fact that mobile phone is capable of giving information on every agric information the farmers require at any time or place. The capability and importance of mobile phone makes farmer in Otukpo to adopt it fastly and easily. The theory explain how mobile phone has impact on agricultural information among farmers in Otukpo. Modern communication technologies like mobile phone makes it possible for market information of service to improve information delivery through sanding of short messages on mobile phones to various markets and sellers.

Farmer in Otukpo knowing and accepting mobile phones in their farming activities has render many helped to them by helping them find out actual market days, the types of crops needed in the market and if there is increase or decrease in price of goods and services in the market.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 RESEARCH DESIGN

The researcher uses the survey research method. This is found to be most appropriate for this study. As the aim of this study is to know the impact of mobile phone on agricultural information among Otukpo farmers. Survey research is one that studies both large and small population by selection of sample, chosen from the population in order to discover vital fact from people on their belief, opinion and attitudes. The research method to be use in this study is the survey research method. Questionnaire is necessary because the population to be studied is large to be observe directly. It is also suitable method to use to collect a vast number of data because it makes data arrangement and computation easy.

3.2 AREA OF STUDY

The area of this research's study as the title of the study says is in Otukpo town in Otukpo local government area of Benue

state. Therefore, proper attention will be paid on distribution of questionnaire in Otukpo local government area, Benue state.

3.3 POPULATION OF THE STUDY

Population refers to the total number of people living in a giving place performing an activity individually or collectively. The population of this study is on farmer of Otukpo town local government area. Otukpo is the headquarter of Idoma land in Benue State. The population of the study is 261,666.

3.4 SAMPLE TECHNIQUES/SAMPLE SIZE

The sample technique used in this study is purposive sampling technique.

In Otukpo town, of Otukpo local government area of Benue state, there are 22 villages that constitute the town.

They are; Upu, Abologba, Ekete, Ikobi, Otukponobi, Otarda, Asa, Amula, Otukpicho, Edikwu, Akpachi, Emichi, Akpagede, Ogome, Obagaya, Ogbehe, Okpo Beka Otobi, Akpa-Otobi, Entina village.

Using purpose sampling out of this 22 villages 5 will be purposively selected for this study. This five villages will be selected because they are the largest villages in Otukpo town and they harbour more farmers who can provide answers to the questions raised.

These villages are: Upu, Otukponobi, Otukpicho, Asa, Edikwu in each of the 5 villages, in order to identify respondents, the study will only focus on those above the age of twenty one (21) and above will be sampled because the study is dealing with adults. Therefore 80 adult each who can read and write will be chosen for this study.

The researcher will visit each of the villages from one household to another at early hour and evening when the farmers goes or comes back from their farmers and distribute the questionnaire to each farmers found in this villages. This is done to give every farmer in the sample an equal opportunity of being chosen as a respondent. The research is also accompany by the chief farmer in the town in distributing the questionnaire copies to the farmers.

3.5 INSTRUMENT FOR DATA COLLECTION

The research instrument used in data collection was questionnaire. The questionnaire contained twenty 20 close ended questions drawn and administered to (400) four hundred respondents in the five villages.

The research instrument was divided into two parts. Part one which concerned with personal data and item such as age, marital status and educational qualification while part two will contained general formation items relating to the study.

The questionnaire was administered by researcher and the chief farmers assistants and monitor with definite instructions to the respondents by the researcher. The questionnaires will be completed and collected from the 400 respondents.

3.6 VALIDATION OF THE INSTRUMENT

The instrument for the study was critically examined by the researcher supervisor to ensure the items validity in terms of clarity and relevance to the study. The supervisor endorsed the instrument as valid.

3.7 METHOD OF DATA COLLECTION

The primary and secondary sources will be employed in collecting data for the study, the questionnaire represented the primary source of the data, while library materials and internet materials and text books formed the secondary sources.

3.8 METHOD OF DATA ANALYSIS

All data collected are analyzed using Simple percentages of frequencies was use in relating to questions asked.

Responses of farmers was carefully collected and tabulated. The percentages was analyze based on the tabulated responses of the individual farmers.

The main techniques employed to analyze data were the use of chi-square (X^2).

chi-square (X^2) is a measure of discrepancy existing between the observed frequencies and the expected frequencies of one, two, more variables or chi-square is frequently used in testing hypothesis concerning the differences between asset of observed frequencies of a sample and corresponding set of expected frequencies.

The formula for finding chi-square (X^2) is statistically stated as: -

$$X^2 = \frac{\sum(O - e)^2}{E}$$

Where X^2 = Chi-square

O = Observed frequency

e = Expected frequency.

∑ = Summation

The above mentioned method were used by the researcher to collect data from respondents.

Decision:

The data collected used chi-square (X^2) test of independence to validate statistical hypothesis at 5% level of significance. To drive at a decision, the researcher used the decision rule.

Decision Rule: - Reject Null hypothesis (H_0) if the calculated frequency is greater than the tabulated otherwise accept.

CHAPTER FOUR

4.0 PRESENTATION AND ANALYSIS OF DATA

In presenting primary data generated from the field, the researcher choose to apply simple percentage tabular presentation mode. This is for convenient, clarity and for better understanding. The researcher presented all the questionnaire items, contained in the questionnaire that would provide answers to the researcher's identified problem. All the presentations shall be according to questionnaire items and responses. In this study, four hundred (400) copies of questionnaire were administered to respondents. Two hundred and thirty five (235) copies (59%) returned their copies of the questionnaire. However, 100 copies was not retuned which is (25%) and 65 copies which is (16%) was wrongly filled and was discarded. Therefore, the analysis in this chapter is based on 235 copies of questionnaire.

Again, this chapter featured the use of the chi-square goodness of fit for testing of hypotheses. The table will be used in analysing the data and will be reduced to percentages.

4.1 ANALYSIS OF RESEARCH QUESTION

Table 1: Gender of the respondents

Gender	**Frequency**	**Percentage**
Male	148	63%
Female	87	37%
Total	235	100

Table 1 present a distribution of respondent according to their sex. 148 respondents (representing 63% if the total population) are male while 87 respondents (representing 37% of the total population are female.

Most respondents (by 63%) are male while few respondents (by 37%) are females. Majority of the respondents are male, this however does not affect this study because it is not a gender issue.

Table 2: Marital status of respondents

Marital status	**Frequency**	**Percentage**
Single	58	25%
Married	126	54%
Divorced	11	5%
Separated	10	4%
Widowed	30	12%
Total	235	100%

Table 2: presents a distribution of respondents according to marital status 58 (25%) are single, 126 (54%) are married, 11 (5%) are divorced, 10 (4%) are separated, while 30 of the respondents are (12%) are widowed.

Table 3: Age distribution of respondents

Age	**Frequency**	**Percentage**
21 – 30	45	19%
31 – 40	60	26%
41 – 50	50	21%
51 -60	47	20%
61 and above	33	14%
Total	235	100%

Table 3: presents a distribution of respondents according to age. 45 respondents (representing 19% of the total population are between 21-30 years of age, 60 respondents (26%) are between 31-40 years of age, 50 respondents (21%) are between 41-50 years of age, 45 respondent (20%) are between 51-60 years of ages and 33 respondent (14%) are between 61 and above years of age.

Table 4: Occupation distribution of respondents

Occupation	**Frequency**	**Percentage**
Teachers	100	43%
Trader	27	11%
Mason	39	16%
Blacksmith	16	7%
Carpenter	53	23%
Total	235	100%

Table 4: present a distribution of respondents according to their occupation aside farming 100 respondents (43%) are teachers, 27 (11%) of the respondent are traders, 39 (16%) of the respondents are mason, 16 (7%) of the respondents are blacksmith, while 53 (23%) of the respondent are carpenters.

Table 5: Educational attainment of respondents

Education	**Frequency**	**Percentage**
Primary	106	45%

Tertiary	45	19%
Secondary	71	30%
Islamic	13	6%
Total	235	100%

Table 5: present a distribution of respondents according to level of education. 106 (45%) of the respondents attended primary school; 45 (19%) of the respondents attended tertiary institution, 71 (30%) attended secondary school. While 13 (6%) of the respondents attended Islamic school.

Table 6: Religion of respondents

Religion	**Frequency**	**Percentage**
Christian	200	85%
Muslims	30	13%
Regans	5	2%
Total	235	100%

Table 6: present a distribution of respondents according to the religion of the respondent. 200 (85%) of the respondents are Christians, 30 (13%) respondents are Muslims, while 5 (2%) of the respondents are pegans.

Table 7: Respondents ownership of mobile phone

Mobile phone ownership	**Frequency**	**Percentage**
Yes	200	85%
No	30	13%
No idea	5	2%
Total	235	100%

Table 7 presents a distribution of respondents according to ownership of mobile phone. 200 (85%) of respondent have mobile phones, 30 (13%) of the respondents have mobile phone while 5 (2%) of the respondent have no idea about mobile phone.

Table 8: Access to mobile phone

Response	**Frequency**	**Percentage**
Yes	230	98%
No	5	2%
Not at all	0	0%
Total	235	100%

Table 8: presents a distribution of respondents according to access to mobile phone. 230 (98%) of the respondents have access to mobile phones, 5 (2%) of the respondents have no access to mobile phone. While 0 (0%) respondent knows nothing about mobile phone.

Table 9: Are mobile phone beneficial to farmers

Responses	**Frequency**	**Percentage**
Yes	200	85%
No	30	13%
No idea	5	2%

Total	235	100%

Table 9 presents the distribution of respondents to whether mobile phones are beneficial to farmers. 200 (85%) of the respondents says that mobile phones are beneficial to them, 30 (13%) of the respondents says that mobile phones are not beneficial to them, while 5 (2%) of the respondents do not agree or disagree or knows or do not know whether mobile phones are beneficial to them.

Table 10: Benefits of mobile phones to farmers.

Response	**Frequency**	**Percentage**
To ascertain availability of farms implement	67	29%
To confirm prices of product	52	22%
To establish contact with markers	35	16%
To verify market days	35	16%
To determined the kinds of	38	17%

production needed in market		
Total	235	100%

Table 10. presents the distribution of respondents on the benefits of mobile phone to farmers. 67 (29%) of the respondents says they derive benefits in form of ascertaining availability of farm implement, 52 (22%) derive benefits of confirmation of prices of product, 35 (16%) says they verify market days, and 38 (17%) of the respondents says they determined the kinds of produced need at the market.

Table 11: Do mobile phone give you problem in getting information

Response	**Frequency**	**Percentage**
Yes	230	98%
No	5	2%
No idea	0	0%
Total	235	100%

Table 11 presents the distribution of respondents which ask them whether mobile phone give them problem in getting agric information. 230 (98%) of the respondents says mobile phone do not give them problem in getting agric information while 0 (0%) of the respondents has no idea on whether mobile phone give them problem in getting agric information or not.

Table 12: The level of problem farmers encounter in mobile phone usage.

Response	**Frequency**	**Percentage**
Reduction in interconnectivity	39	17%
Network congestion	37	15%
Power failure	93	40%
Poor network connectivity	46	20%
High call changes	20	8%
Total	235	100%

Table 12 presents the distribution of respondent on the problems of mobile phone usage. 39 (17%) says reduction in

interconnectivity problems, 46 (20%) of the respondent says network congestion problems, 93 (40%) says power failure problems, 20 (8%) says poor network connectivity problems, 37 (15%) says high call charges problems.

Most respondents (by 20%) attribute the problems of mobile usage in farming activities to poor network connectivity while very few respondents (by 8%) identify high call charges.

Majority of the respondents identify power failure mobile phone as the problem in farming activities. So therefore power failure is the major problem of mobile phone usage among Otukpo farmers

Table 13: The level of power failure that affect the use of mobile phone among farmers.

Response	**Frequency**	**Percentage**
Yes	150	64%
No	75	32%

No idea	10	4%
Total	235	100%

Table 13: presents the distribution of the respondents on whether power failure affect the use of mobile phone among farmers, 150 (64%) of the respondents says yes that power failure affect the use of mobile phone, 75 (32%) says No, that power failure do not affect the use of mobile phone, while 10 (4%) of the respondents has no idea on whether power failure affect the use of mobile phone or not. Most respondents (32%) says power failure affect the use of mobile phone, while few respondents (4%) has no idea whether power failure affect the use of mobile phone or not.

Majority of the respondents says that power failure affect the use of mobile phone (64%).

Table 14:

What alternative source of power do Otukpo farmers use to charge their mobile phone.

Response	**Frequency**	**Percentage**
Electricity	70	30%
Generator	150	64%
Car charger	10	4%
Solar energy	5	2%
Total	235	100%

Table 14: presents the distribution of the respondents on the type of sources of power they use to charge their mobile phones. 150 (64%) of the respondents uses generator to charge their mobile phone, 70 (30%) of the respondents uses electricity (NEPA light) to charge their phones, 10 (4%) uses car charger to charge their phones, while 5 (2%) of the respondents uses solar energy to charge their phones.

Majority of the respondents (64%) uses electricity to charge their phone. So therefore tack of electricity is a problem in Otukpo town.

Table 15:

How often the farmers use mobile phone for agric information

Response	**Frequency**	**Percentage**
Daily	50	21%
Weekly	80	34%
Monthly	50	21%
Quarterly	20	9%
Twice a month	15	7%
One in a month	10	4%
Yearly	10	4%
Total	235	100%

Table 15. presents the distribution of the respondents ask the farmers how often the use of mobile phone for agric information. 50 (21%) of the respondents use mobile phone daily to get agric

information, 80 (34%) use mobile phone weekly to get agric information, 50 (21%) use mobile phone monthly, 20 (91%) use mobile phone quarterly, 15 (7%) uses mobile phone twice in a month to get agric information, 10 (4%) uses mobile phone one in a month to get agric information, while 10 (4%) uses mobile phone to get agric information.

Majority of the respondent uses mobile phone weekly to get agric information.

Table 16:

The level of new farm skills learnt from the use of mobile phones.

Response	**Frequency**	**Percentage**
How to improve farming method	85	36%
Improve crop species	72	31%
Knowledge of Agric supplements	29	12%
Storage methods and	38	16%

facilities		
Commercial farming	11	5%
Total	235	100%

Table 16. presents the distribution of the despondence of the farmers whether they learn new skill and method from using mobile phone. 85 (36%) of the respondents use the skill and method to improve their farming methods, 72 (31%) of the respondents learn how to improve crop species, 29 (12%) learn how to get agricultural supplements, 38 (16%) of the respondents learn how to store of crops facilities and 11 (5%) of the respondents learn how to get involved in commercial farming.

Table 17:

The level of agric information Otukpo farmers got through mobile phone.

Response	**Frequency**	**Percentage**
Yes	200	85%
No	30	13%
No idea	5	2%
Total	235	100%

Table 17 presents the distribution of the respondents of the farmer on whether they get adequate agric information from extension workers with their mobile phone. 200 (85%) of the respondents says they get adequate agric information from extension workers with their mobile phone, 30 (13%) of the respondents says that they don't get adequate information from extension workers using their mobile phones, 5 (2%) of the respondents says they have no idea.

Table 18:

The level of how useful information gotten from extension workers.

Response	**Frequency**	**Percentage**
Yes	230	98%
No	5	2%
No idea	0	0%
Total	235	100%

Table 18 presents the distribution of the responses of the farmers on whether they find the information gotten from extension workers useful. 230 (98%) of the respondents find the information from extension workers useful, 5 (2%) of the respondents do not find the information gotten from extension workers useful and 0 (0%) of the respondents has no idea.

therefore 98% of the respondents find the information very useful.

Table 19:

The level of mobile phone to make discussion verification of agriculture.

Response	**Frequency**	**Percentage**
Yes	200	85%
No	30	13%
No idea	5	2%
Total	235	100%

Table 19 presents the distribution of the response of the farmers on whether they use mobile phone to make discussion and verification of agricultural implement with their star farmers or chief farmers. 200 (85%) of the respondent discussion and verification of agric implement with their star or chief farmers, 30 (13%) does not make discussion and verification of agric implement with their star or chief farmers while 5 (2%) does not have idea.

Table 20:

What kind of information do farmers get from their star farmers or chief farmer of their various villages.

Responses	**Frequency**	**Percentage**
How and when to reach the agric extension workers	20	9%
Market days	55	23%
Increase in price and how to get loan	80	34%
How to get good seeds and suitable type of fertilizer	80	34%
Total		100%

Table 20 presents the distribution of the response of the farmers on what kind of information farmers get from their star farmer or chief farmer of their various villages, 20 (9%) of the respondents says they get how and when to reach the agric extension workers, 55 (23%) of the respondents say they get the market days, 80

(34%) of the respondents get information on how to increase the price and how to get loan.

Table 21:

The level of the farmers use of alternative sources to get agric information.

Response	**Frequency**	**Percentage**
Mobile phone	200	85%
Radio	30	13%
Television	5	2%
Total	235	100%

Table 21 presents the distribution of the response of the farmer on whether the use alternative source to get agric information expect through agric extension workers. 200 (85%) of the respondent use mobile phone as alternative source to get agric information aside agric extension workers, 30 (13%) of the respondents uses Radio as an alternative source to get agric information aside agric extension workers, and 5 (2%) of the

respondents uses television as an alternative source to get agric information aside extension workers.

Most of the respondents (13%) uses Radio as alternative source aside agric extension worker while few (2%) of the respondents uses Television as alternative source aside extension worker. Majority (85%) of the respondents uses mobile phone as alternative medium to get agric information aside agric extension workers.

4.2 HYPOTHESES TESTING

HYPOTHESES 1

H_0: Farmers in Otukpo do not use alternative medium to get agric information.

H_1: Farmers in Otukpo use alternative medium to get agric information.

Table 22: The level of responses of Otukpo farmers in getting agric information using alternative medium

Responses	Frequency	Percentage

Mobile phone	200	$\frac{200}{235} X \frac{100}{1} = 85.0\%$
Radio	30	$\frac{30}{235} X \frac{100}{1} = 13.0\%$
Television	5	$\frac{5}{235} X \frac{100}{1} = 2.0\%$
Total	**235**	**100%**

Responses	**Fo**	**Fe**	**Fo-Fe**	$(fo - fe)^2$	$\frac{(fo - fe)^2}{fe}$
Mobile phone	200	78.3	121.7	148.1	189.1
Radio	30	78.3	-48.3	2332.8	29.7
Television	5	78.3	-73.3	5372.8	68.6
Total	**235**				**287.4**

Therefore : X^2 = 287.4

Df = k-1=3-1 =2

K = categories/ column

N = Universe =235

Expected frequency = $fe = \frac{N}{K} = \frac{235}{3} = 78.3$

(P) = 0.05

$\therefore$ 2 under 0.05 = 5.991

Table value = 5.991

Since the calculated chi-square value 287.4 and the table value is 5.991, the research hypothesis is accepted while the null is rejected.

Hypothesis 2

H_0: Farmers in Otukpo do not encounter much problem using mobile phone to get agric information.

H_2: Farmer in Otukpo encounter problems using mobile phone to get agric information.

Responses on the kind of problems farmers in Otukpo encounter using mobile phone to get agricultural information.

Responses	**Frequency**	**Percentage**
Network congested	30	$\frac{30}{235} X \frac{100}{1} = 13.0\%$
Reduction in interconnectivity	10	$\frac{10}{235} X \frac{100}{1} = 4.0\%$
Power failure	150	$\frac{150}{235} X \frac{100}{1} = 64.0\%$
Poor network	30	$\frac{30}{235} X \frac{100}{1} = 13.0\%$
High call charge	15	$\frac{15}{235} X \frac{100}{1} = 6.0\%$

Total	**235**	**100%**

Responses	Fo	Fe	Fo-Fe	$(fo-fe)^2$	$\frac{(fo-fe)^2}{fe}$
Network congested	30	78.3	-48.3	2332.89	30.9
Reduction in interconnectivity	10	78.3	-68.3	4664.89	60.7
Power failure	150	78.3	71.7	5140.89	66.5
Poor network	30	78.3	-48.3	2332.89	30.9
High call charge	15	78.3	-63.3	4006.89	51.1
Total	**235**				**213.1**

Therefore : X^2 = 213.1

Df = k-1=5-1 =4

$$fe = \frac{N}{K} = \frac{235}{3} = 78.3$$

(P) = 0.05

$\therefore$ 2 under 0.05 = 9.488

Table value = 9.488

Since the calculated chi-square value 9.488 and the table value is 9.488, the research hypothesis is accepted while the null hypothesis is rejected.

HYPOTHESIS 3

H_0: Farmers in Otukpo do not use alternative source to charge their mobile phone

H_3: Farmers in Otukpo uses alternative source to charge their mobile phone

Response on what alternative source of power Otukpo farmers use to charge their mobile phone.

Responses	**Frequency**	**Percentage**
Generator	150	$\frac{150}{235} X \frac{100}{1} = 64\%$
Electricity	70	$\frac{70}{235} X \frac{100}{1} = 30.0\%$
Car charge	10	$\frac{10}{235} X \frac{100}{1} = 4\%$
Solar energy	5	$\frac{5}{235} X \frac{100}{1} = 2.0\%$
Total	**235**	**100%**

X^2 table for testing hypotheses 3

Responses	Fo	Fe	Fo-Fe	$(fo-fe)^2$	$\frac{(fo-fe)^2}{fe}$
Generator	150	78.3	71.7	5140.89	65.5

Electricity	70	78.3	-8.3	68.89	9.9
Car charge	10	78.3	-68.3	4664.89	60.7
Solar energy	5	78.3	-73.3	5372.89	68.6
Total	**235**				**205.7**

Therefore : X^2 = 205.7

pd = k-1=4-1 =3

df = 0.05

since the calculated chi-square value is 205.7, the table value is 7.815. therefore, the alternative hypotheses is accepted and the null rejected

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS.

5.1 SUMMARY

The study was carried out to find out if the mobile phone has impact of agricultural information among Otukpo farmers.

In carrying out this study, I used the survey research method using the questionnaires as my measuring instrument but before the administration of the questionnaire l had introduced the topic, stated the research objective, the significance of the study, drawing of questions and research hypothesis, made some assumptions, limited my study to Otukpo farmers, defined some terms conceptually and operationally, reviewed relevant literature. The research design, area of study, population of the study, determination of population size, sample size and sampling techniques, instruments of data collection, validity of the instrument methods of data collections and method of data analysis was drawn.

The primary and secondary data collected were analyzed through sorting and grouping data into tables of percentages and frequency distribution. The hypotheses were developed and were statistically tested using chi-square.

The data collected during the study were statically analyzed using table and simple percentage. The hypotheses were tested using the chi-square goodness of fit. At the end of testing the hypotheses we found out that:

Farmers in Otukpo use alternative source to get agricultural information.

Farmers in Otukpo encounter problems using mobile phones to get agricultural information

Farmers in Otukpo use alternative source to power to charge their mobile phone

5.2 CONCLUSION

This study revealed the tremendous impact of mobile phone on agricultural information among Otukpo farmers. It also revealed some problems of mobile phone usage among Otukpo farmers. Mobile phones enables farmers to communicate with colleagues from time to time through mobile phones enhance collaboration efficiency in the farming practices because it gives room for sharing of ideas between chief farmers and star farmers with the use of mobile phone.

Form the research made, the farmers agree that mobile phones have positive impact on their farming activities, methods and systems. This is because mobile phones enable farmers to communicate with other interested parties in the market place to acquire knowledge on how they can carry on their activities in such a way as to save cost and time. Previously inadequate and misleading information from unknown sources near the market place. Mobile phones helps them to overcome this barrier.

The efficiency of mobile phone by farmers is limited by power network services, high charge, network congestion, lack of power supply and reduced interconnectivity. Most time mobile phones hardly connect farmers when they want to verify certain facts about new information on farming practices. It is however not surprising to say that mobile phones have generally made positive impact on the activities of farmers as their promised benefits far out weight the limitations.

5.3 RECOMMENDATION

The Nigeria communication commission saddled with the responsibility of regulating communication activities in the country should set a standard for GSM operators with regards to signal strength, voice quality, successful recharge and balance enquiring, call centre operations, network coverage and all success rate to curb the problem of poor services and increase the efficiency in the use of mobile phones by farmers.

The Nigerian communication commission should stipulate a law compelling GSM operators in Nigeria to extend GSM services to

the rural areas. The rural communities at present enjoy spill over of services from urban centres which is not enough for attractive interaction with their counter parts.

The ministry of agriculture in Benue should pay good attention to agric information needs of the farmers and their extension workers should always given adequate information to the farmer and the chief farmers of every village in Otukpo town should act as a good link between the farmers and extension workers in telling the farmers how and when to get in touch with extension workers with their mobile phone.

Due to the limitation in the area of fund, time and scope, I could not cover all the areas of Otukpo local government area of Benue state. This research covered only Otukpo town (farmers). Any interested researcher who desire to conduct studies on the impact of mobile phone on farmers should widen their scope aside Otukpo town. That he or she should cover more town in Otukpo local government area.

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Appendix I

Department of Mass Communication
Caritas University,
Amorji-Nike
Enugu State.
25/05/2012

Dear Sir/Madam

I am a final year student of the above named institution, carrying out a research on the impact of mobile phone on agric information among farmers in Otukpo town.

An assessment of agric information dissemination among farmers in Otukpo town of Otukpo local government area of Benue State. This research work is for academic purpose and your responses will be treated confidently. Thanks.

Yours faithfully

Adah Esther E.

Appendix II

SECTION A:

Personal Data

Mark X in the appropriate box provided.

1. Sex:

   Male ☐ Female ☐

2. Age:

   21 – 30 ☐ 31 – 40 ☐ 41 – 50 ☐ 51 and above ☐

3. Marital Status:

   Single ☐ married ☐ divorced ☐ widow ☐

4. Educational Attainment

   Primary ☐ secondary ☐ tertiary ☐ Islamic ☐

5. Occupation aside farming:

   Teachers ☐ carpenter ☐ trader ☐ blacksmith ☐

   Mason ☐

6. Religion:

Christians ☐ Muslims ☐ Pagans ☐

SECTION B

1. Do you have a mobile phone set?

   Yes ☐ No ☐

2. How often do you use mobile phone to get agric information?

   Daily ☐ weekly ☐ quartile ☐ monthly ☐ yearly ☐

3. How often do you have access to network?

   Frequently ☐ once in awhile ☐ seasonal ☐

   No idea ☐

4. What alternative source do farmers in Otukpo use to get agric information aside extension workers?

   Radio ☐ T V ☐ mobile phone ☐

5. Is this alternative medium beneficial to you?

   Yes ☐ No ☐ No idea ☐

6. Do you encounter problem using mobile phone?

   Yes ☐ No ☐ No idea ☐

7. What kind of problems do you encounter using mobile phone?

   Network congest ☐ Reduction in intercom ☐

   power failure ☐ poor network service ☐

   high call charge ☐

8. Do lack of electricity affect your phone?

   Yes ☐ No ☐ No idea ☐

9. What alternative source of power do you use to charge your mobile phone?

   Generator ☐ electricity ☐ solar energy ☐

   car charger ☐

10. Do you use your mobile phone to ascertain availability farm implements or equipments?

    Yes ☐ No ☐ No idea ☐

11. Do you use mobile phone to establish contact with your chief farmer to verify market days?

    Yes ☐ No ☐ No idea ☐

12. Are the information gotten from extension workers useful to your farming activities?

    Yes ☐ No ☐ No idea ☐

13. Are mobile phones beneficial to your farming activities?

    Yes ☐ No ☐ No idea ☐

14. Do mobile phone have impact on your agricultural activities?

    Yes ☐ No ☐ No idea ☐

15. Are the chief and star farmers in your villages active?

    Yes ☐ No ☐ No idea ☐

16. Do you find the mobile phone useful?

    Yes ☐ No ☐ No idea ☐

17. Do farmers get adequate agric information from extension worker with mobile phone?

    Yes ☐ No ☐ No idea ☐

18. Do you learn new skill and method from using mobile phone.

How to improve farming method ☐

Improve crop species ☐

Knowledge of Agric supplements ☐

Storage methods and facilities ☐

Commercial farming ☐

19. What Benefits does mobile phones have to your farming activities

To ascertain availability of farms implement ☐

To confirm prices of product ☐

To establish contact with markers ☐

To verify market days ☐

To determined the kinds of production needed in market ☐