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Impact of information technology in rural development: An analytical study in Allahabad District

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Abstract
After Independence, we have travelled down the old age or low technology to modern age of satellite technology. The country has been witnessing a revolution in communication technology. Now-a-days information need to all those places, which are in the ways of growth and development. In India, more than 68 percent of the population reside in villages and rural areas. All those people need the appropriate information about agriculture and allied sector for uplifting our living standards and it is possible only through information technology. The government is also making continued efforts to provide equitable growth opportunities to rural communities by the ways of empowerment and upgrading the information infrastructure in rural and remote areas.
The aim of the present study is to investigate the awareness and use pattern of information technology by the people of rural community with reference to access to electronic information in digital environment.

Keywords: information needs, rural community, information technology, rural development

1. Introduction
Indian economy is a developing economy, where almost, 68 percent of population lives in the villages. Rural sector play an important role in Indian economy, because most of the raw material for industrial sector as well as agricultural and food grains product are arise from rural sector. It is also known as back bone of Indian Economy. Consequently, it is not improper to suppose of rural developing. Where infrastructure and regular changes has not extensioned till now. In this way, rural economy which effects the Indian economy, and the importance of information technology increases more in the glance of rural developing. Information technology is itself a fundamental structure because without progressing information technology, it is not possible for any types of a whole progress. Either it is Indian economy or it rural developing in particularly form. Information technology has become a major source of the income for the Indian economy. So it is clear that in the progress of India, there is an important role of the information technology. It affects every field, progress and extend of rural developing, either it is in agricultural field or business or in the field of service, all types all progressing paying an important role, can increase the income of the nation. In this way information technology not only purpose of progress in the field of economy, it gets progressing. In which income of the nation and G.D.P increases.
Now-a-days, in the life of human, in every field, the use of information technology is being done successfully. At the present, the information technology plays and important role in every progress and extension, the construction of modern society like education, health, agriculture, rural development, medical, engineering, business etc. In this way, the information technology has been changed the glance at the life of human. It has gained particularly position in the business and commerce. In the age of economical magnanimous, in what way, globalization to the whole economics, a new economy has arisen in the form of E-commerce.
The present study is, in the different villages of Allahabad district. Allahabad is the metropolitan city in north-Indian state of Uttar Pradesh in India. It is 7th most populous city in the state, 15th in the Northern India and 36th in India as per census 2011. In 2013, Allahabad is the third most livable city in the State after Noida and Lucknow and 29th in the country. It is also known as Prayag. In Allahabad district, there are more than 70% population live in rural areas. According to census 2011, Allahabad district had total population of 5,954,391 of which male and female were 3,131,807 and 2,822,584 respectively. But the out of total population, where reside in rural areas is 4,481,518 (75.26% of total Population) of which males and females are 2,340,959 and 2,140,559 respectively. Literacy rate in rural areas of Allahabad district is 68.76 % of which male and female literacy stood at 80.97% and 55.46% respectively. Allahabad District is divided into 20 blocks and 8 tehsils, which are Phulpur, Sadar, Soraon, Karchhanna, Karaon, Meja, Handia, Bara [1, 3].

2. Importance of Information Technology in Rural Sector
There are many ways in which Information Technology can be used to exchange the information about one person to another. It is not provide services only exchange information but also provide effective communication to expert groups, which provide not only the basic information but it also help in determining marketing information, fluctuation, better strategies for improving agricultural productivity as well as crop management information. There are several information and communication tools are as follow:

(a) Kisaan SMS Portal: In the rural area, farmers are not much aware of the latest technologies developed

for the improvement of the agricultural productivity. In this portal farmer get relevant information in their own or regional language.

(b) Kisan Call Centre: It is an expert advisory system, which help the farmers to provide appropriate information about agricultural activities. The farmers need to call toll free number 1800-180-1551 to seek expert advice to related agricultural activities.

(c) Kisan Vikas Kendras: It is form the backbone of information and technology dissemination in India. At present, around 630 KVKs are in operation whereas several new ones are being established. These KVKs work as a link between scientific community and the Indian farmer by demonstrating new technology at district level. The present Government has asked KVKs to use more and more ICT tools in their work to reach the remotest farmer. Generous funding is being provided for this [2].

(d) e-Nam: It is a big electronic market platform about agricultural product. This includes commodity arrivals & prices, buy & sell trade offers, provision to respond to trade offers, among other services. It provide the transparency on sale transactions and price discovery initially in regulated markets.

(e) e-Governance: It is also known as electronic governance. It is an application of information and communication technology for exchange information for government to our citizens. With the help of this, the government services or administration will be made available to citizens in a convenient and transparent manner.

(f) e-Choupal: e-Choupal is an initiative of ITC Limited, a conglomerate in India, to link directly with rural farmers via the Internet for procurement of agricultural products. It tackles the challenges posed by Indian agriculture, characterized by fragmented farms, weak infrastructure and the involvement of intermediaries. The programme installs computers with Internet access in rural areas of India to offer farmers up-to-date marketing and agricultural information [3].

3. Review of Literature

Rao, T.P. Rama (2004) [4] studied that the rural e-Governance applications in the recent past have demonstrated the important role the Information and Communication Technologies (ICT) play in the realm of rural development. Several e-Governance projects have attempted to improve the reach, enhance the base, minimize the processing costs, increase transparency, and reduce the cycle times. Under this paper presents a brief review of the technologies, the rural ICT projects and the issues associated with the use of ICT for rural e-Governance applications.

Reddy, P. Krishna (2004) [5] stated in this paper, studied that an effort to present a solution to bridge the information gap by exploiting advances in Information Technology (IT). We propose a framework of a cost-effective agricultural information dissemination system (AgrIDS) to disseminate expert agriculture knowledge to the farming community to improve the crop productivity.

Sharma, Parveen (2011) [6] studied that the examines of several ongoing projects that aim to provide IT-based services to rural populations in India. These projects are distinguished by the goal of commercial sustainability, which supports scalability and, therefore, more widespread benefits. How can information technology (IT) impact on rural economy and life of rural India to rural development? What are the channels through which impacts can be realized, and what are the practical means for realizing potential benefits? We cannot make India economy better unless we not understand the importance and strength of economy of rural sector.

Boateng, M.S. (2012) [7] has stated Information and Communication Technologies (ICTs) hold tremendous potential for rural development in Ghana in the areas of agriculture, health, Micro and Small Enterprises (MSEs), and education. Using the theoretical sampling method,this paper takes a closer look at the ICT scene in Ghana from 2000 to 2011 with emphasis on the role of ICTs in rural development. The paper also draws attention to the efforts made by past and present governments of Ghana to solve the major problems facing ICTs development in Ghana. Investigations from the study revealed that ICTs play major roles in the socio-economic development of rural areas in Ghana with a huge potential for accelerated development in these rural areas.

Patel, Sami and Sayyed, I.U. (2014) [8] studied that, many ways in which Information Technology can be used to exchange the information rather effective communication like information kiosks which provide not only the basic services like email, helps in education, health services, Agriculture and Irrigation, online trading, community services etc., expert systems which helps in determining marketing alternatives and optimal strategies for producers, integrated crop management systems for different crops, Farm-level Intelligent Decision Support system developed to assist in determining optimal machinery management practices for farm-level system. Information technology helps to predicts the results related to the agriculture specially plant physiology. Leaf protein study is an important study which helps to solve protein deficiency and malnutrition. Present study deals with role of IT in Agriculture.

Matto, Asra (2015) [9] studied that the Information Technology is the buzz technology now-a-days and is helping to exchange the information in fast and easier way at the right time. Information Technology is taking lead in all the agricultural activities of a nation and has transformed the whole world into a global village with a global economy. Information technology has played a significant role in improving the quality of life in rural areas and helped an average Indian farmer to get relevant information regarding agro-inputs, market support, management of farm, agri business, agro finance, crop production technologies and agro processing.

From the literature, it is define that the information technologies role in the rural sector and its importance to agriculture as well as rural development. Now-a-days with the advancement of ICT applications, Information Technology became a part of day today life of all the

people. The review of studies shows that the awareness of rural people about role of information technology in Allahabad District.

4. Objectives of the study

The main object of the present study work is to investigate the present status of awareness and usage of information technology in the rural areas. The objectives of the present study are as follows -

- To determine the awareness about information technology in rural areas.
- To identify the importance of Information technology is to helpful in the growth of agriculture.
- To know the impact of information technology in the development of rural activities.
- To find out awareness of digital resources used by rural people.
- To identify the level of usage of technology in agricultural activities.

5. Research Methodology

This study is based on a questionnaire based survey of the rural people in the villages of Allahabad District. Those rural people who had the age between 18 upto 35 year old and they got minimum qualification High-school and the maximum is found Post-Graduate or higher. This studyis, studing only the behalf of information technology. So that the conclusion can appear clearly that what is the importance of information technology in progress of rural areas.

A structured questionnaire was designed for collection of data or by observations of 05 villages, which were selected randomly out of the blocks, of Handia and Bara Tehsil in Allahabad District. A total number of 500 questionaries were distributed among the people of rural areas randomly in the month of May to June 2016. The collected data analysed by appropriate statistical method.

6. Analysis of Data

6.1 Gender –wise Distribution

The researcher had distributed 500 questionnaires amongst rural people randomly in the selected villages viz. Birapur Kasaudhan, Siya Dih, Bala, Bundwan and Nauriha Tarhar. To selected only 40% of respondent(200) out of total number of Questionnaires(500), according to the age limit and youths under the selected villages in the Allahabad District. In this study, there are Male consisting of 170(85%) as well as Female are 30(15%). It shows that the response received from male are higher than the female in numbers.

Table 1: Gender –wise

	Gender	Respondent	Percentage
1	Rural Male	170	85%
2	Rural Female	30	15%
		200	100%

6.2 Information technology is became helpful in the growth of agriculture in rural areas

When I had collecting the data from villages and asked to rural people, is there information technology is become helpful in the growth of agriculture, then the 35 percent of maximum respondents are goes to the side of, it is more helpful in the growth of agriculture, which are assistance to enhance the agricultural productivity, 25 percent people goes to in favour of medium helpful and the 5 percent of rural people are make acceptance about the information technology is less helpful in the agricultural development. On the other side 15 percent respondents are clarify that the element cannot be considered more helpful and the 10-10 percent of respondent are not accept, it is medium as well as less helpful for the agricultural development.

Table 2.1: Information technology in Agriculture and Rural Development

Respondent Reaction	Yes	No	Total
More Helpful	70	30	100
Medium Helpful	50	20	70
Less Helpful	10	20	30
	130	70	200

Table 2.2: Calculation of Expected Frequencies (f_e)

Respondent Reaction	Yes	No	Total
More Helpful	65.0	35.0	100
Medium Helpful	45.5	24.5	70
Less Helpful	19.5	10.5	30
	130	70	200

***Formula*:** (130*100/200=65)

The Significance level is become .05 and .01, and the degree of freedom (df) = (r-1)(c-1) = (3-1)(2-1) = 2, therefore df = 2, then X^2 .05 = 5.991 and X^2 .01 = 9.210 is a significance level.

Table 2.3: Calculation of Chi-Square (X^2) Statistic

Observed Frequency (f_o)	Expected Frequency (f_e)	(f_o-f_e)	(f_o-f_e)^2	(f_o-f_e)^2/f_e
70	65.0	5.0	25.00	0.38
50	45.5	4.5	20.25	0.45
10	19.5	-9.5	90.25	4.63
30	35.0	-5.0	25.00	0.71
20	24.5	-4.5	20.25	0.83
20	10.5	9.5	90.25	8.60
N = 200	N = 200			15.60

Therefore X^2 = 15.60, it is the greator value as compare to the significance level (.05 and .01) which is 5.991 and 9.210. So it is not free and therefore the relation are exist between of them. So the information technology is become helpful in the growth of agriculture.

6.3 To identify the level of usage of information and communication technology in agricultural activities

In the study to find out the usage of information technology and their level of knowledge in the rural people (respondents), which is helps them to access the information of current schemes, policies, rebate and relief etc. provided by the government in agriculture and allied sector.

Table 3: Usage of information technology as well as equipments in agricultural activities.

Respondent Reaction	No. of Respondents	Percentages
Yes	126	63%
No	74	37%
	200	100.00%

As shown in the table out of 126 respondents who are using information technology applications, internet, communication technology and others technological equipments for accessing information as well as improvements for productivity in agriculture and allied sectors. On the other side, rest of those 74 respondents are does not have appropriate knowledge about information technology as well as communication and other technological equipments in the which is used in the agricultural activities.

6.4 Access the information technology in corruption control and rural development

The study aimed to find out the awareness of information technology for rural development as well as to access the corruption control in rural areas. It is helpful to collect the resource of digital information about all scheme to rural people in rural areas and also create a connectivity between government and rural peoples without any broker and intermediaries. It also create a transparency about the collected data in the rural sectors.

Table 4: To access the information technology in corruption control

Respondents Reaction	No. of Respondents	Percentages
Yes	139	69.50%
No	61	30.50%
	200	100%

As per table, out of 200 respondents, the majority of rural respondents 139 (69.50%) are accepted the information technology is helpful in corruption control in rural areas and rest of them 61 (30.50%) doesn't favour in the corruption control through information technology.

7. Conclusion and Suggestion

The study shows that the priority need of the information technology is essential to all rural people for our basic growth and development. This study is doesn't focus only the development of rural economy but also focus on self-development. Now-a-days with the advancement of ICT applications, Information Technology has become a part of day today life of all the people. It can raise the living standard in the society. The government also introduces several schemes and programme in rural sector for growth, development and may focus on the improving the basic needs of infrastructure in rural areas for connectivity to information technology.

Today, country needs trained manpower for to modernize and better technological inputs in agricultural sector. In the study, most of the rural people of the villages are known about the benefits of information technology, its role and its impact for agriculture as well as rural development but can't use in proper way because lack of knowledge about using in to its proper way. The coaching and such type of training center should be opened by the government, which can grow the importance of information technology as well as technological equipments in rural sector.

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