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A Study on Mass Media Literacy among Indian Farmers with Special Reference to Chhattisgarh

***Uaday Kumar Watti and **Brajesh Tiwari**

*****Research Scholar, Deptt. of Library and Information Science, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.); Email: ukwatti2007@rediffmail.com

******Associate Professor, Deptt. of Library and Information Science, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.); Email: brajeshtiwari65@gmail.com

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Abstract

The study aims at exploring the extent of mass media literacy among farmers in the Chhattisgarh state. The analysis of the survey shows that farmer's usage different sources and media for access to such information. Chhattisgarh state having 27 district and out of 9 districts was undertaken to understand their socio-economic status; mass media channels used for utilization of the information. Snowball sampling technique was used to select sample from population. Findings show that the majority of the respondents are matured and majority have completed at least primary and middle education. There are various types of mass media channels for access information such as Kisan Call Centre(KCC), Short messages services (SMS) to farmers, Radio programme, Television programme and Internet. Farmers were access information from KCC only 12.5%, through SMS 50.75%, Radio 25%, Television 81.75% and 6.25% respondents are access internet. Results shows that television is best sources, but others sources are still important, therefore awareness, motivation and extension programme should be organised to improve mass media literacy among farmers.

Keywords: Information Literacy; Mass media; Chhattisgarh; farmers.

Key Words: Information Literacy, Farmers Literacy, Information sources for Formers.

1. Introduction

India is a fast developing country. The man occupation of Indian people is agriculture. Therefore is playing an important role in Indian economy and its allied sectors. The practice of agriculture has been carried out from ancient period. The main food for human beings comes from agriculture sector. Therefore, agriculture is an important part of human beings. About 70% of its population lives in rural areas (census 2011). Agriculture is the main source of livelihood and more than 58% of the Indian population are directly or indirectly depend on agricultural activities. Agriculture provides the bulk of goods required by non-agriculture sectors and the raw materials for the industrial sectors. The contribution of agriculture on GDP in the year 2013-14 was 13% whereas it was 30% in 1990-91. (Ministry of Agriculture, Govt. of India, 2014-15)

Chhattisgarh is newly crafted state of Indian Union. It was established on 1st November 2000. The total geographical area of Chhattisgarh state is 1, 35,191sq K.M. Out of total geographical area of Chhattisgarh, 47.75 lakh hectares are used for agricultural purpose and 63.53 lakh hectares is covered with forest. Chhattisgarh is known as the rice bowl of India. The major crops in the state are paddy, wheat, corn, soybean, sugarcane, millets, pulses and oilseeds *etc*. The productivity of various crops in Chhattisgarh is less as compared to the Nation. Therefore it is necessary to aware the farmers to adopt scientific methods in agriculture sector to increase the production and productivity of major crops. (Ministry of Agriculture, Govt. of Chhattisgarh, 2015)

Mass media channels are those means of transmitting messages that involve mass medium such as radio, television, internet, newspapers and so on. It is approach to large number of audience at a time. Mass media are playing an important role to develop knowledge, entertainment and source of information to various activities.

2. Objectives

The present study carried out under the following major objectives

- To study the socio-personal characteristics of the farmers.
- To study the frequency of accessing information through Kisan call centre.
- To find out accessibility of farmers to the SMS services.
- To explore the accessibility of information by farmers through mass media.
- To explore the accessibility of information through Internet.

3. Methodology

The Chhattisgarh state is mainly divided into 3 Agro-climatic zones - the Baster Plateau, Northern Hilly Region and Plains of Chhattisgarh. The state has 27 districts, out of which 1/3 districts, i.e. total nine districts were selected for the study. The selected districts were two districts from the Baster Plateau - Baster and Kanker, two from Northern Hilly Region – Sarguja and Koriya and 5 districts from Plains of Chhattisgarh - Dhamtari, Mahasamund, Baloda Bazar-Bhatapara, Bilaspur and Rajnandgaon**.** These districts were chosen from 3 agro-climatic zones because the population of this region is primarily consist of farmers. Snowball sampling technique was used to select sampling population. Yamane (1967) provides a simplified formula to calculate sample sizes. Thus 400 farmers were selected as sample size according to Yamane formula. Survey method was used to collect the data and Interview Schedule was used as research instruments for this study. Result was analyzed quantitatively by using appropriate statistical tools and presented in tabular format.

4. Review of Literature

Akanda and Roknuzzaman (2012) study shows that the farmers often rely on radio (59.4%), television (53.1%) and internet (6.3%) as a means of getting information. Moreover, the farmers depend sometimes on mobile (51.3%) and Internet (37.5%) in order to get information. whereas (25%) respondents' access information very often through television and 53.2% were rarely or never access to internet. Television and radio was sources of information but internet access was low to access information. Mashroofa and Senevirathne (2014) found that the format of information received by farmers such as radio and television (8.89%), telephone (2.22%) and use of computer (17.8 %) comparatively less likeliness to other information sources. Majority preferred verbal communication, print sources. The use of computer and internet is reported poor. Even the radio, television, telephone is also less used. Parvathamma and Pattar (2013) study shows that the respondents prefer television and radio for agriculture-related information namely, seeds, weather, cultivation methods, and market rates of agricultural produce. Television, mobile phone, and radio are the preferred channels for agricultural information. Nwankwo and Orji (2013) observed that 50 respondents (83.33%) had access to radio, 40 respondents (66.67%) utilized the technology obtained through it. 45 (75%) respondents had access to television and 40 (66.67%) utilized the technology obtained through it. The least accessed and least utilized method was the internet. While only 7 respondents accessed internet services, only 4 respondents utilized the technology so obtained through it. Sokoya and other (2014) observed that there is much room for continuity and improvement on farmer's information literacy. Media channels should be explored to create awareness in local language to encourage understanding and implementation of ideas and programs in the easiest ways for farmers. Zhong (2013) found that when asked to the farmers how they solve the problems in production and daily life,17.3% of new farmer generation choose to read related books, 33.6% of them choose to search resources from internet, while the rest of them mostly depend on consulting others to solve problems. Jiaoping and

others (2009) study shows that most of the farmers get their needed information from TV news broadcastings (61.2%), cell phone(42.7%),magazines (38.8%) and their relatives and friends(31.4%), not limiting to only one channel.

5. Information Literacy

Information literacy is one of the necessary skills for an individual to function in a modern economy of the 21st century. It follows that the information skills of farmers cannot be ignored and left behind due to the information dependency based rural development today. As information literacy is an important indicator to the level of accessing information. Agricultural information literacy is a skill in which all stakeholders in the agricultural professions at all levels must acquire, but farmers must learn how to learn for putting agricultural knowledge to practice. Having knowledge and competency of how to effectively search and profitability use of information is important therefore we must have, quality filters, best information resources that can ensure appropriate positive actions. In addition to knowledge resources pertaining to state-of-the-art agricultural technologies, databases of best practices, lessons learned, success stories and other similar content may be created (Malhan,2015).

Information literacy is the solution to Data Smog. It allows us to cope by giving us the skills to know when we need information and where to locate it effectively and efficiently. It includes the technological skills needed to use the modern library as a gateway to information. It enables us to analyze and evaluate the information we find, thus giving us confidence in using that information to make a decision or create a product (American Library Association, 1989).

6. Challenges of Indian Agriculture

Today Indian agricultural sector is facing several challenges, such as increase in temperature and soil salinity, continuous lowering down of ground water level, increasing pollution in rivers and waterways, decreasing size of land holdings, conversion of fertile farm land into urban areas, and increasing cost of agricultural inputs. Beside crop damage by national disasters, enormous quantity of food grains and horticulture product is also wasted every year because of the lack of adequate storage and food processing facilities. Food grain production in India per hectare area and milk production per animal is quite low as compared to a number of other countries mainly because of knowledge gaps of global best practices.

7. Result and Discussion

Table: 1. Distribution of Respondents on the Basis of Age (n=400)

S. No.	Age Group	Frequency	Percentage
1	Up to 20 years	03	0.75
2	20-30 years	32	8.00
3	31-40 Years	107	26.75
4	41-50 Years	130	32.50
5	51 & Above	128	32.00
	Total	**400**	**100**

A perusal of table 1 indicate that nearly two third of respondents were in age group of 41-50 years and 51 years & above with 32.50% and 32.00% subjects constituting these groups. Entries also indicate that 26.75% respondents were in 31-40 years age group followed by 8% respondents belonging to 20-30 years age group. It was also noticeable that only 0.75% respondents were below 20 years of age. Involvement of respondents over 31 years in farming is not surprising because they are more mature and have to bear the burden of looking after their families.

Table: 2. Distribution of Respondents on Basis of their Educational Status (n=400)

S. No.	Educational Status	**Frequency**	Percentage
1	Illiterate	42	10.50
2	Primary School	121	30.25
3	Middle School	91	22.75
4	High School	53	13.25
5	Higher Secondary	57	14.25
6	Graduate	25	6.25
7	Post Graduate & Above	11	2.75
	TOTAL	**400**	**100**

The educational status of the selected respondents was not found to be very good. 10.50% of the subjects were totally illiterate, 30.25% of the subjects had only primary level of education, 22.75% had middle school level of education, 13.25% and 14.25% respectively had high school / higher secondary level of education, while only 6.25% population had college level of education. Only 2.75% of the total selected subjects were post graduate or degrees higher than that. The frequency distribution quite clearly showing that majority of the respondents did not pursue education at higher level.

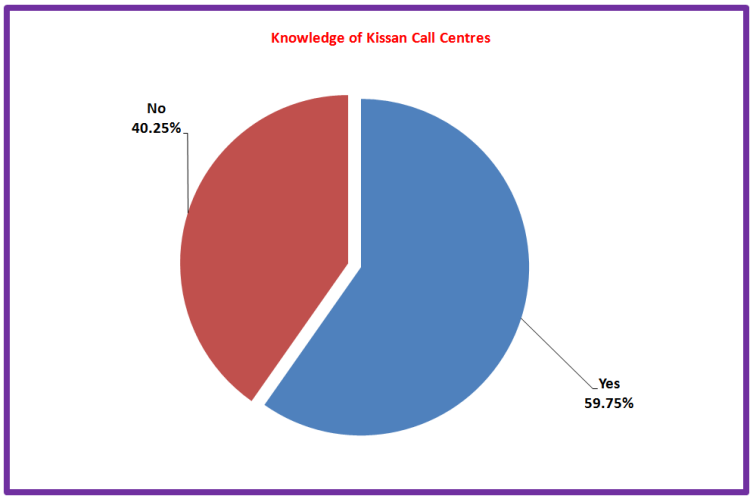
Table: 3. Knowledge Regarding Kisan Call Centres among Selected Respondents

(n=400)

S.No.	Knowledge of Kissan Call Centres	Frequency	(%)	
1.	Yes	239	59.75	$\chi 2(df=1)=15.21$, $p<.05$
2.	No	161	40.25	
Total		400	100	

Table 3 reveal that 59.75% respondents are well versed with Kisan Call Centre whereas 40.25% respondents do not know about it. Hence it can be said that majority of the respondents are well aware of Kisan call centre at .05 level of statistical significance.

Figure 1
Knowledge Regarding Kissan Call Centres among Selected Respondents



On the basis of obtained data shown in table 3 and figure 1 it can be said that Still work needs to be done in this area so that more and more farmers become aware of this facility to call and collect information which can solve their agriculture related issues and problems.

The opinion of the respondents was also obtained on having knowledge regarding toll free the telephone number of Kisan call centre. The same are depicted in table 3.1.

Table: 3.1.Response Related with Kissan Call Centre (KCC) Toll Free Number

(n=239)

S.No.	Knowledge of Toll Free Number	Frequency	(%)	
1.	Yes	67	28.03	$\chi 2(df=1)=46.13$, $p<.05$
2.	No	172	71.97	
Total		239	100	

The table expresses that majority of respondents i.e. 71.97% don't know the toll free number of Kisan call centre, while 28.03 per cent respondents know about toll free number of kisan call centre. It shows that respondents are not aware of KCC service which refrains them to access information through KCC at .05 level of statistical significance.

Table: 3.2. Response Related with Frequency of Telephone Calls Made to Kisan Call Centre

(n=67)

S.No.	Frequency of Phone Calls to obtain information	Frequency	(%)
1.	Up to 5	35	52.24
2.	6 to 10	10	14.93
3.	11 to 20	2	2.99
4.	More Than 20	3	4.48
5.	Never	17	25.36
Total		67	100.00

The data shows that 25.36% who are aware of telephone number of KCC never made a call to gather agricultural information. Only 4.48% respondents made a telephone call the KCC for more than 20 times while 52.24% contacted KCC for less than five times. It was also found that 14.93% respondents called KCC between six to ten times while 2.99% rang KCC ranging between 11 to 20 times. The figures illustrate that awareness towards the role of Kissan Call Centre in terms of getting information on agricultural issues is significantly low among selected respondents.

During celebrations of 85th ICAR Foundation Day, Hon'ble President of India launched on 16.07.2013 a SMS Portal for Farmers created by the Department of Agriculture & Cooperation, Government of India. SMSs to be sent to the farmers can be broadly classified into three categories, viz. information, services and advisories. The content may include information about the schemes, advisories from the experts. Market has been grouped based on the State, District, Block and the Crops/Activities selected by a farmer. The messages sent through KMS are in regional languages also.

The knowledge of respondents towards SMS service for farmers was also explored and the gathered data is presented in table no.4

Table: 4. Knowledge of SMS Service for Farmers among Selected Respondents

SMS services for farmers **(n=400)**

S.No.	Knowledge of SMS Service	Frequency	(%)	
1.	Yes	217	54.25	$\chi 2(df=1)=2.89$, $p>.05$
2.	No	183	45.75	
Total		400	100.00	

A perusal of statistical analysis of data reveal that 54.25% are aware of Kisan SMS Service while 45.75% opined they are not aware about any such services. The $\chi 2(df=1)=2.89$ which did not met the criteria of statistical significance clearly indicate not every selected farmer know about the Kisan SMS Services.

To have in depth analysis of responses, the respondents were asked about registering for KMS. The data is depicted in table 4.1.

Table: 4.1. Information Regarding Registration in Kisan Message Service (n=217)

S.No.	Registered in KMS	Frequency	(%)	
1.	Yes	207	95.39	$\chi 2(df=1)=2.89$, $p>.05$
2.	No	10	4.61	
Total		217	100.00	

On the basis of data presented in table 4.1 it can be said that majority i.e. 95.39% respondents are registered users while 4.61% did not registered their mobile number in KMS.

Table: 4.2. Frequency of accessing Information through Kisan Message Service (n=207)

S. No.	Frequency of Reading to Access Information	Frequency	%
1	Regularly	153	73.91
2	Sometimes	50	24.15
3.	Never	4	1.93

Data presented in table 4.2 shows that 73.91% respondents regularly read message from KMS while 24.15% sometimes read it. Only 1.93% respondents who are registered at KMS did not read the messages sent by KMS.

To give information about various techniques and advancement in agricultural techniques, radio and television plays its part. Various programmes are being aired or shown in radio and television regarding this. Various radio programmes concerning agricultural activities which the respondents have shown their interest, are being presented in table no.5

Table: 5. Number of Agricultural Related Radio Programs Listen in by Selected Respondents (n=400)

S. No.	No. of radio programme	No. of Respondents	%
1	1	17	4.25
2	2	31	7.75
3	3	18	4.50
4	4	34	8.50
5	Never	300	75.00
TOTAL		400	100

A perusal of table 5 indicate that 4.25% listen to one radio program related with agriculture, 7.75% listen two programs, 4.50% listen three programs and 8.50% listen four programs related to agricultural information. Majority i.e. 75% respondents did not listen any of the radio programmes on agriculture. It shows that radio programme do not attract farmers to gather information on agriculture.

Table: 5.1. Regularity by which Agricultural Related Radio Programs Listened

(n=400)

S. No.	Radio Programme	Frequency of listening to access information *					
		Regularly		Sometime		Never	
		Number	%	Number	%	Number	%
1.	Kisanvani	35	8.75	59	14.75	306	76.5
2.	Choupal	27	6.75	53	13.25	320	80
3.	Krishi Charcha	16	4	38	9.5	346	86.5
4.	Hamara Pasudhan	12	3	28	7	360	90
5.	Badi ke Got	0	0	1	0.25	0	0

* Based on multiple responses.

Table 5.1 reveals following facts:

- 8.75% respondents listen of Kisanvani program regularly, 14.75% listen it sometime, but majority i.e. 76.5% never listen it aired on All India Radio.
- 6.75% respondents listen of Choupal program regularly, 13.25% listen it sometime, but majority i.e. 80% never listen it aired on All India Radio.
- 4% respondents listen of Krishi Charcha program regularly, 9.5% listen it sometime, but majority i.e. 86.5% never listen Krishi Charcha aired on All India Radio. 3% respondents are regular listen of Hamara Pashudhan program and 7% sometimes listen it but majority i.e. 90% never listen Hamara Pashudhan aired on All India Radio. Badi ke Got program was sometimes listened by only 01 respondents.

The Result shows that agricultural related informative programs of All India Radio has not been listened by at least two third of respondents to improve their agricultural knowledge. Hence, farmers should be motivated to listen agricultural related radio programs so that they can gather as much information as possible on agricultural related aspects.

Various television programmes concerning agricultural activities which the respondents have shown their interest, are being presented in table no. 6.

Table: 6. Number of Agricultural Related Television Programs Followed by Selected Respondents **(n=400)**

S.No.	No. of TV programmes Watched	Frequency	%
1	1	135	33.75
2	2	121	30.25
3	3	57	14.25
4	4	14	3.50
5	Never	73	18.25
TOTAL		400	100

A perusal of table 6 indicate that 33.75% of respondents watch one television program related with agriculture, 30.25% watch two programs, 14.25% watch three programs and 3.50% listen four programs related to agricultural information. 18.25% respondents never watch any of the television programmes on agriculture. It shows that television programme do attract farmers to gather information on agriculture.

Various agricultural television programs that are being watched and frequency of watching these programs among respondents are also depicted in table 6.1.

The regularity by which these programs are watched by respondents are also depicted in table 6.1

Table: 6.1. Regularity by which Agricultural Related TV Programs are Watched by Respondents **(n=400)**

S.	Programme	Frequency to access information					
		Regularly		Sometime		Never	
		N	%	N	%	N	%
1.	Krishi darshan (New Delhi)	34	8.50	129	32.25	237	59.25
2.	Krishi darshan (Doordarshan Raipur)	77	19.25	237	59.25	86	21.50
3.	Anndata	5	1.25	27	6.75	368	92.00
4.	Bhuiya ke goat	28	7.00	67	16.75	305	76.25

Table 6.1 reveals following facts:

- 8.50% respondents watch Krishi Darshan broacast of New Delhi studio regularly, 32.25% watch it sometime but majority i.e. 59.25% never watch it for agricultural information.
- 19.25% respondents watch Krishi Darshan broacast of Doordarshan, Raipur regularly, 59.25% watch it sometime and 21.5% never watch Krishi Darshan broadcast of Doordarshan Raipur for agricultural information.
- 1.25% respondents regularly watch TV program Annadata and 6.75% sometimes watch TV program Annadata but majority i.e. 92% do not watch TV program Annadata.7% respondents regularly watch TV program Bhuiya ke Goath and 16.75% sometimes watch TV program Bhuiya ke Goath but majority i.e. 76.25% do not watch TV program Bhuiya ke Goath.

Results regarding watching agricultural related television programmes in a group of selected farmers indicate that majority of the farmers prefer to watch Krishi Darshan programme Doordarshan Raipur and few of them also watch other programs such as Annadata, Bhuiya ke Goath etc.

Internet is a powerful medium in the modern world to get information. The use of internet by respondent was also explored in the present study and the data pertaining to it is presented in table 7.

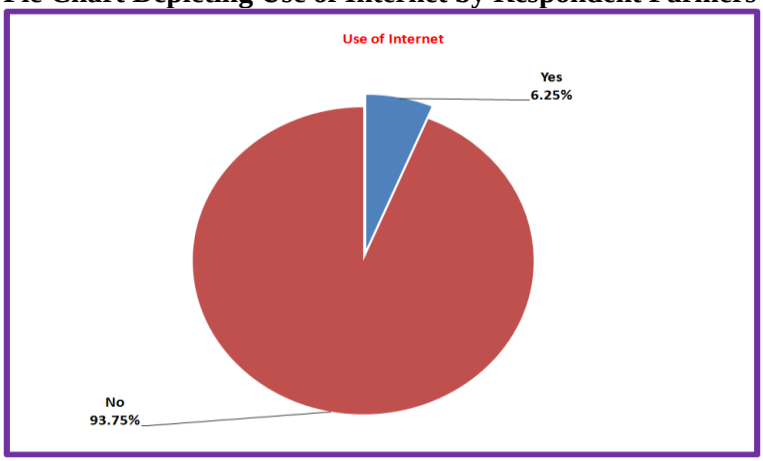
Table: 7. Depicting Use of Internet by Respondent **(n=400)**

S.No.	Using Internet to access information	Number	(%)	
1.	Yes	25	6.25	$\chi 2(df=1)=306.25$, $p<.05$
2.	No	375	93.75	
Total		400	100.00	

On the basis of data presented in table 7 it can be said that majority i.e. 93.75% of respondents do not use internet as compared to 6.25% internet users in a group of selected farmers. The calculated $\chi 2(df=1)=306.25$ statistically prove that majority of the respondents are not internet savvy.

Figure 2

Pie Chart Depicting Use of Internet by Respondent Farmers



The place from where respondent are internet savvy, operate computer and internet is depicted in table 7.1.

Table: 7.1. Place of Using Internet by Respondent Farmers (n=25)

S. No.	Place	Frequency *	%
1.	Home	12	48.00
2.	Nehiobur	00	0.00
3.	Friends	01	4.00
4.	Relatives	01	4.00
5.	Government provided any place	01	4.00
6.	Cyber café	01	4.00
7.	Own Mobile phone	14	56.00

*Multiple responses

Table 7.1 indicate that majority i.e. 56% respondents operate internet from their mobile phones,48% from home followed by 4% from cyber cafe, friends place, relatives house and facility provided by the government.

The respondents' usages different medium for searching agricultural information. The pattern of searching agricultural information on internet has been depicted in table 7.2.

Table: 7.2. Preferred Medium to Search Internet for Information (n=25)

S.No.	Medium	Frequency *	%
1.	Through Search engine	25	100.00
2.	Through Agriculture department website	11	44.00
3.	Through Agriculture University websites	09	36.00
4.	Any other websites …….	02	8.00

*Multiple responses

All respondents i.e.100% prefer search engine, 44% prefer agricultural department website, 36% prefer agriculture university websites & 8% prefer other useful sources for searching agriculture information.

The result reveals that 93.75% of the total selected farmers do not use internet. Hence, farmer primary occupation in agriculture should be individually taught how to use internet and computers as a medium to improve their agricultural practices and use the technological advancement to the best of their interests.

8. Conclusion

The study explored mass media channels relating to access agricultural information by farmers. The result shows that most of the farmers did not acquainted high level of education; As a result their accessing level of information was not so high. The information received by farmers through different mass media indicated that, it is not up to the mark. Therefore, it is concluded that government and agriculture department, KVK, NGO should be develop the new services. Government should be established digital village knowledge centres, Community information centre, training centre to promote digital literacy at every block, appropriate extension programme, awareness programme to mass media etc. Information and communication systems should be facilitate the villages' farmers to access relevant agricultural information, which help to farmers' to improvement of their agricultural knowledge and skills.

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