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Millennium Development Goals: Information and Communication Technology in Rural Chhattisgarh

ORIGINAL ARTICLE


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Abstract

Information is the key to democracy. Information empowerment is an instrumental for a successful democracy. Further the introduction of information technology (IT) has nurtured the swift emergence of a global "Information Society" that is changing the way people live, learn, work and relate. In order to achieve the Millennium Development Goal of; having the number of people living in extreme poverty by the year 2015 which is a mile away, information and communication technology has been more emphasized. Everyone, the Governments, civil society, and private sectors have a vital stake in fostering digital opportunity and putting ICT at the service of development. Thus, the objectives of the present paper are to analyse the access to communication technology in rural Chhattisgarh, to analyse the access to information technology in rural Chhattisgarh, to find out the gender-based access to ICTs in rural Chhattisgarh and to suggest measures for future implications. The primary and the secondary data has been used for the study and the findings shows that all the 80 (100%) sample respondents are not having access to telephone facility in their locality but they are having access to mobiles. All the 80 males and 80 females have their own personal mobiles. Further, 42.5% male respondents are having access to internet through mobile while only 37.5% female respondents are having access to it. Also, the Gender based Information and communication Technology Index (GICTI) in Rural Chhattisgarh. reflects that Gender based use of information and communication technology is maximum in Mahasamund districts (0.65); and the tribal district of Uttar Bastar Kanker has a least score of 0.62. However, the district wise comparison shows that in both the districts there is a strong positive gender-based information and communication technology index. Thus, the study concludes that providing accessibility of digital services in the rural areas is necessary. Also, there is an urgent need to implement effective policies and programmes for the promotion of the millennium development goals in the rural Chhattisgarh, which further strengthens the sustainable development targets.

Key Words

Information and communication technology, Rural Chhattisgarh, Millennium development goals.

Introduction

Information is the key to democracy. Information empowerment is instrumental for a successful democracy (Sriginidhi,2009). Further the introduction of information technology (IT) has nurtured the swift emergence of a global ''information society" that is changing the way people live, learn, work and relate. ICTs refers to a wide range of services, applications and technologies using various types of hardware and software, often running over telecommunication networks. The services include well-known telecommunication services such as telephony, cell phones, facsimiles and other services like e-mail, file transfer, internet, etc., that use telecommunications services in conjunction with computer hardware and software. In order to achieve the Millennium Development Goal of; having the number of people living in extreme poverty by the year 2015 which is a mile away, information and communication technology has been more emphasized. So, it has been incorporated under Goal 8 by the UNDP. Everyone, the Governments, civil society, and private sectors have a vital stake in fostering digital opportunity and putting ICT at the service of development (Olusola,2013). We all know the very fact that information and communication technology is very essential element of our lives. It has a widespread, long term, positive impact on well-being and development as well. However, in the prevalent gender norms, the ways in which women and men gets exposure to the ICTs; lead to social inequalities and an imbalance between both the gender especially in the rural segments of the society. In this regard the present study focuses on analysing the access of information and communication technology in rural Chhattisgarh and suggest concrete measures so as to make it reach at the grass root level in the long run.

Research Gap

On the basis of the literatures reviewed from the year 2000 to 2022 it has been found that ample research works has been done with respect to information and communication technology. But no such work has been witnessed with respect to both the gender especially in Chhattisgarh. The gaps in the earlier works led to an urge of doing research in the present topic.

Objectives of the Study

(i) To analyse the access to communication technology in rural Chhattisgarh.
(ii) To analyse the access to information technology in rural Chhattisgarh.
(iii) To find out the gender-based access to ICTs in rural Chhattisgarh.
(iv) To suggest measures for future implications.

Methodology

The present study is based on pilot survey and is descriptive in nature, thus, inculcates both the primary and the secondary data to achieve the aim of the study. The two-phase sampling techniques that are stratified random sampling and simple random sampling without replacement have been adopted to draw a sample of rural households. Further, the respondents were selected from two geographical division of Chhattisgarh state between which one is the tribal district. A total of 80 respondents were selected from 2 villages of 2 blocks of Chhattisgarh state. The study areas were selected based on rural households from Mahasamund and Uttar Bastar Kanker and from each block two villages were selected using simple random sampling.

Eligible respondents that fulfilled the inclusion criteria, viz. those households who were living approx. 50- 60 km from district headquarters were selected for sample survey. The household sample size has been determined on the basis of World Health Organization (WHO) methodology which is as follows:

$$n = \frac{[\![z]\!]\_(1)^2 - \propto j2\ P\ (1-P)}{d2}$$

Where: P is anticipated population proportion which is 0.70 (70%)

1 – P is the confidence level which is 95%

d is the absolute precision which is 0.10 (10%)

Further, to study the gender-based access to information and communication technology in rural Chhattisgarh; the Gender based Information Communication Technology Index (GITCI) has been constructed using two broad dimensions with four indicators.

Table No.1: Dimensions of Gender based Information Communication Technology Index

S. No	Dimensions	Indicators
1	Males Information and Communication technology Index (MICTI)	• Males access to mobiles • Males access to internet.
2	Females Information and Communication technology Index (FICTI)	• Females access to mobiles • Females access to internet.

The index of each dimension was constructed where minimum and maximum values were chosen for each underlying indicator. Performance in each indicator is expressed as the minimum and maximum value between 0 and 1 in accordance with the construction method of the Human Development Index (UNDP, 2005). The Gender based Information and Communication Technology Index (GICTI) is then computed in a simple average of five indices according to the formula below:

GICTI = 1/3 (Males Information and Communication technology Index) + 1/3 (Females Information and Communication technology Index).

Results and Discussions

The results of the study have been discussed on the basis of the parameters which are access to telephone (landline), access to mobile, access to internet through mobile etc.

Table No. 2: Access to Telephone (Landline)

Sample Respondents / **Districts**	**Access to Telephone (Landline)**		
	Yes	No	Total
	No. (%)	No. (%)	No. (%)
Mahasamund	0 (0.0)	40 (50)	40 (50)
Uttar Bastar Banker	0 (0.0)	40 (50)	40 (50)
Total	0 (0.0)	80(100)	80 (100)

(Source: Primary Data)

Means of information technology especially communication technology is the need of the hour. In this era of fast-moving economy tele density becomes the part and parcel of every individual. In this context the table No. 2 reveals about the access to telephone (landline) by the sample respondents in rural Chhattisgarh. It shows that all the 80 (100%) sample respondents are not having access to telephone facility in their locality.

Table No. 3: Reasons for no Access to Telephone (Landline)

Sample Respondents / Districts	Reasons for no Access to Telephone (Landline)			
	No outreach of the telephone wires in the area	Cannot afford	Lack of proper knowledge	Total
	No. (%)	No. (%)	No. (%)	No. (%)
Mahasamund	10 (12.5)	23 (28.75)	7 (8.75)	40 (50)
Uttar Bastar Kanker	19 (23.75)	16 (20)	5 (6.25)	40 (50)
Total	29 (36.25)	39 (48.75)	12 (13.25)	80 (100)

(Source: Primary Data)

Table No. 3 highlights that maximum 36.25% sample respondents are not having outreach of the telephone wires in the area followed by 48.75% respondents cannot afford it and 13.25% sample respondents have lack of proper knowledge about the telephone (landline) system respectively. The study further depicts about the district level analysis which shows that around 23.75% sample respondents in the tribal district of Uttar Bastar Kanker and 12.5% respondents in the aspirational district Mahasamund are not having the outreach of the telephone wires in their area followed. Whereas majority 28.75% respondents in Mahasamund urged that they cannot afford it. However, lack of adequate knowledge about telephone landlines are seen in the both the districts.

Table No. 4: Male access to Mobile

Sample Respondents / Districts	Male Access to Mobile		
	Yes	No	Total
	No. (%)	No. (%)	No. (%)
Mahasamund	40 (50)	0 (0.0)	40 (50)
Uttar Bastar Kanker	40 (50)	0 (0.0)	40 (50)
Total	80 (100)	0 (0.0)	80 (100)

(Source: Primary Data)

Use of mobile phones defines the path of development of any state in the field of communication technology. In this parlance the table no. 4 describes about the access to mobiles by the males in rural districts of Chhattisgarh and it shows that all the 80 (100%) males have their own personal mobiles.

Table No. 5: Female access to Mobile

Sample Respondents / Districts	Female Access to Mobile		
	Yes	No	Total
	No. (%)	No. (%)	No. (%)
Mahasamund	40 (50)	0 (0.0)	40 (50)
Uttar Bastar Kanker	40 (50)	0 (0.0)	40 (50)
Total	80 (100)	0 (0.0)	80 (100)

(Source: Primary Data)

The female's access to mobile phones in rural Chhattisgarh are depicted in the table no. 5 and it shows that all the 80 (100%) females have their own personal mobiles.

Table No. 6: Males Access to Internet through Mobile

Sample Respondents / Districts	Males Access to Internet		
	Yes	No	Total
	No. (%)	No. (%)	No. (%)
Mahasamund	32 (40)	8 (10)	40 (50)
Uttar Bastar Kanker	26 (32.5)	14 (17.5)	40 (50)
Total	34 (42.5)	22 (25.5)	80 (100)

(Source: Primary Data)

The access to internet through mobile by the rural in Chhattisgarh has been shown in the table no. 6. The table shows that 42.5% male respondents are having access to internet through mobile whereas 25.5% male respondents are not having it. The district wise analysis shows that in Mahasamund majority (40%) of the male respondents are accessing the internet through mobile while in Uttar Bastar Kanker only 32.5% respondents having access to it.

Table No. 7: Females Access to Internet through Mobile

Sample Respondents / Districts	Females Access to Internet		
	Yes	No	Total
	No. (%)	No. (%)	No. (%)
Mahasamund	11 (13.75)	29 (36.25)	40 (50)
Uttar Bastar Kanker	19 (23.75)	21 (26.25)	40 (50)
Total	30 (37.5)	50 (62.5)	80 (100)

(Source: Primary Data)

The access to internet through mobile by the rural females in Chhattisgarh has been shown in the table no. 7. The table shows that only 37.5% female respondents are having access to internet through mobile whereas 62.5 % respondents are not having it. The district wise analysis shows that in Uttar Bastar Kanker majority (23.75%) of the respondents are accessing the internet through mobile while 26.25% did not have access to it.

Table No. 8: Access to PC

Sample Respondents / Districts	Access to PC		
	Yes	No	Total
	No. (%)	No. (%)	No. (%)
Mahasamund	0 (0.0)	40 (50)	40 (50)
Uttar Bastar Kanker	0 (0.0)	40 (50)	40 (50)
Total	0 (0.0)	80 (100)	80 (100)

(Source: Primary Data)

The table No. 8 reveals about the access to personal computers by the sample respondents in rural Chhattisgarh. It shows that all the 80 (100%) sample respondents are not having access to personal computers.

Table No. 9: Reasons for no PC

Sample Respondents / Districts	Reasons for no PC			
	No requirement	Cannot afford	Lack of proper knowledge	Total
	No. (%)	No. (%)	No. (%)	No. (%)
Mahasamund	40 (50)	0 (0.0)	0 (0.0)	40 (50)
Uttar Bastar Kanker	40 (50)	0 (0.0)	0 (0.0)	40 (50)
Total	80 (100)	0 (0.0)	0 (0.0)	80 (100)

(Source: Primary Data)

Table No. 9 highlights that all the 80 (100%) samples responded that there is no requirement of personal computers as they are having mobile phones with them.

Table No 10: Gender based Information and Communication Technology Index (GICTI)

Districts	GICTI Score	Range
Mahasamund	0.65	Strong positive GICT
Uttar Bastar Kanker	0.62	Strong positive GICT
Overall Rural CG	0.63	Strong positive GICT

(Source: Primary Data)

The table number 10 highlights the Gender based Information and communication Technology Index (GICTI) in Rural Chhattisgarh. It reflects that Gender based use of information and communication technology is maximum in Mahasamund districts (0.65); and the tribal district of Uttar Bastar Kanker has a least score of 0.62. However, the district wise comparison shows that in both the districts there is a strong positive gender-based information and communication technology index.

Conclusions and Suggestions

Thus, the conclusions drawn from the present study is that providing accessibility of digital services in the rural areas is the necessary. Further, the findings point out that all the sample respondents are not having access to WIFI. The respondents urged that they are having no requirement of WIFI facilities as they are using internet through their mobile. Krishnan & Brahme (2019) opined that, women play an important role in the society; it is the need of the hour to highlight mainstream gender in future efforts to address the goal 8 with respect to information and communication technology. Brahme & Krishnan (2022) further urged that to eliminate the multi-faceted problem like gender inequality, a multi-pronged approached must be adopted; and among the various initiatives, digital literacy of women could act as a catalyst. Also, there is an urgent need to implement effective policies and programmes for the promotion of the millennium development goals in the rural Chhattisgarh, which further strengthens the sustainable development targets.

Hence, the present study comes out with few suggestions for future which are rural households have less in-depth knowledge about the modern information technology. Hence, effective awareness programmes and hand-on-training should be provided to make them empowered, especially the women. Intensive extension programmes such as demonstration, field trips, participatory interaction and discussion should be included. Educating and creating a sound knowledge among the rural folks in the area of digital literacy.

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