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PRESENT AND PREDICTED LITERACY RATE IN MADHYA PRADESH

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ABSTRACT:

Literacy is a key for socio-economic growth of any state. Being lierate is mandatory for human character, social and economic development. Modern meaning of literacy is to use language, numbers, images, computers, and other basic means to find out and achivement useful knowledge. Education includes new ideation for a better building of the society and their personal life style. This paper studies the growing pattern of literacy in Madhya Pradesh State of India. It's planted on secondary sources of Census data (1991-2011). The basic unit of study is State level. The Madhya Pradesh State literacy rate has grown to 70.6% (2011) from 8.53% at the end of 1961. The 2011 census, however, indicated a 2001–2011 decadal literacy growth of 6.9%, which is 12.1 points lower than the growth seen during the previous decade. The average growth rate was 1.29% per year. Maximum growth rate 19% was recorded in 1991-2001. There is inconsistency in the distribution of literacy rate. It is predicted that if the growth rate of literacy will increased at the rate of 6.91%/decade, than the state will be under 100% literacy up to 2071 in the Madhya Pradesh.

KEY WORDS: - *Literacy, Growth, Madhya Pradesh, Demography, Predicted.*

INTRODUCTION

In India, Literacy is one of the important indicators in a society and play a central role in human development that impacts overall social-economic development. Development of human utilization is related to literacy which emulated in any state still to day. Literacy is a key for socio-economic growth of any state. The State is about in which literacy in very low. Not only this, literacy is also closely related to other condition of demography ie.birth rate, death rate, migration, urbanization and occupational structure.

In today's perspective, literacy does not mean about the writing and reading capabilities only. It has gained a broader meaning. It claims to guide people towards awareness and the change which is needed in order to achieve a better way of living. The National Literacy Mission was set up by Govt. of India on May 5th, 1988 with the aim to eradicate illiteracy from the country.

According to Census of India, a person aged seven and above, who can both read and write understanding in any language, is evalute as literate. Modern meaning of literacy is to use language, numbers, images, computers, and other basic means to find out and achivement useful knowledge. Children in the age group of 0-6 are treated as illiterate. Here an attempt has been made to briefly the district level literacy data based on 2011 Census.

STUDY AREA

Madhya Pradesh is a heart state and wild life state in central India. Its capital is Bhopal. Madhya Pradesh, called the "Heart of India" not only for its geographical location in India, but more so for its unique

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cultural history and its rich natural resources. Madhya Pradesh is the second largest state of the country. State lies between latitude 21° 6'and 26° 54'N and longitude 74° and 82° 47'E. It covers a geographical area of 308,245 sq. km which is about 9.38% of the total area of India. The State is land - locked and at no point is the sea less than 300 kms away. Uttar Pradesh, Chhattisgarh, Andhra Pradesh, Maharashtra, Gujarat and Rajasthan surround it.

Physiologically, the state can be divided into four regions, viz. the low lying area of north and North West of Gwalior, Malwa plateau, Satpura and Vindhyan range known as wild life cultural heritage of Madhya Pradesh. River Narmada runs nearly 1077 kms; it's an important river of the state. The highest point is at Dhupgarh near Pachmarhi in Hoshangabad district, at 1,350 m.
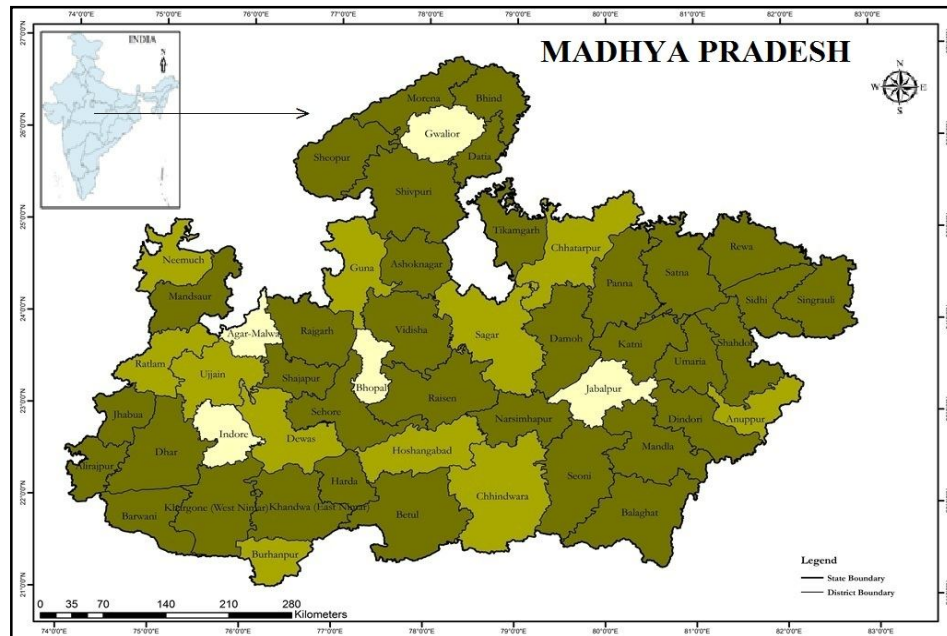

Fig. 1 Location of Madhya Pradesh

OBJECTIVE

The basic aim of the study is to analysis the changeable pattern (1991-2011) of Literacy rate and predicted Literacy rate in Madhya Pradesh.

METHODOLOGY

Present study is based on secondary sources of Census data (1951-2011). The District has been taken as a basic unit of the study. Total 51 districts in Madhya Pradesh analysed with coding system on GIS environment. Results and data have been expressed with maps, diagrams and tables adopting computer cartographical techniques. Following demographic parameters are interpreted in the present study area.

LITERACY

Literacy data can be measure by census in India. Literacy particularly in the mountains depends upon the physiographic setup. Demographic parameters depaends upon the heterogencity of environment, Topography, altitude, slope and climate are the major physical factors which are responsible for the uneven distribution of literacy in the state. Out of the physical factors sow of socio-economic factors like culture, society, and means of communication are also influence the rate of literacy in the state.

According to the 2011 census, it has a population of 72 million with a population density of 236 persons per sq.km. In spite of impressive progress of literacy during the recent decades, Madhya Pradesh lies

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at the bottom of literacy rate in the country. The overall literacy rate of Madhya Pradesh is 70.6%. The literacy rates of male and female in Madhya Pradesh are 80.5% and 60.0% respectively (Table 1). During the last decade the rise in literacy rate of Madhya Pradesh is 6.9 % points. In Census 2001, Madhya Pradesh stood 24th in the country in literacy whereas in 2011 it has slipped to 28th position, same as in female literacy rate (Fig. 2).
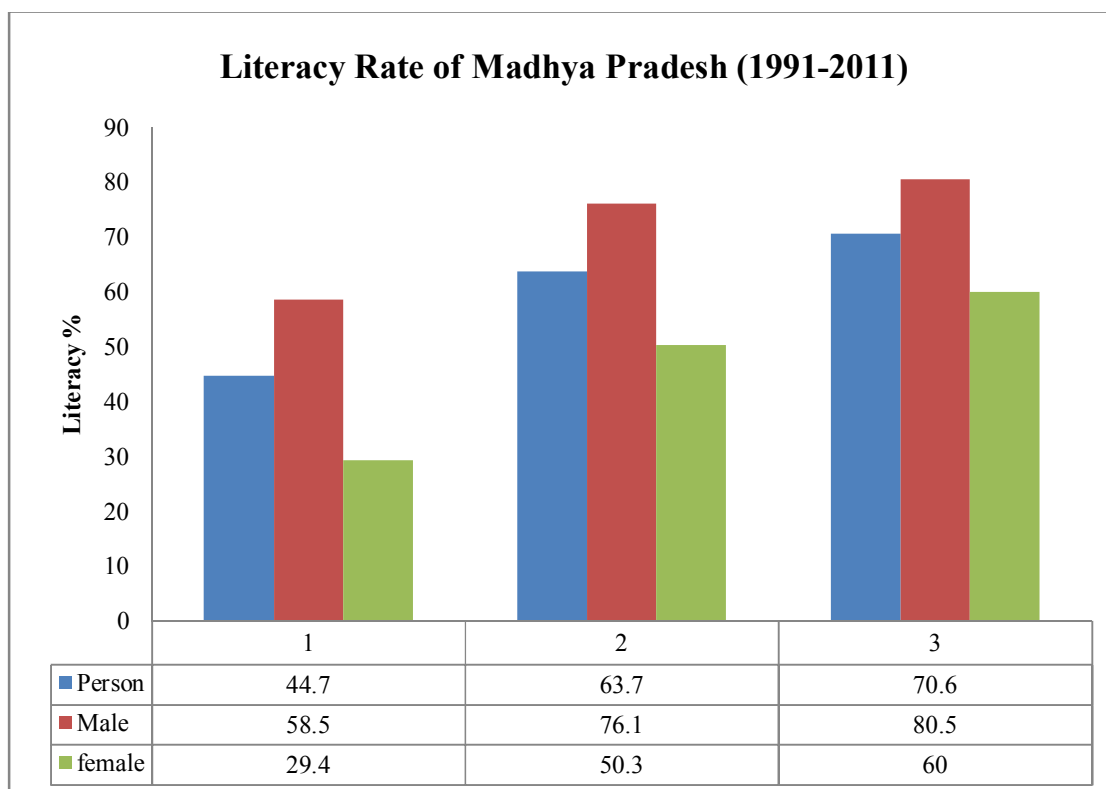
Literacy Rate of Madhya Pradesh (1991-2011)

	1	2	3
■ Person	44.7	63.7	70.6
■ Male	58.5	76.1	80.5
■ female	29.4	50.3	60

Fig. 2 Literacy rate of Madhya Pradesh State (1991-2011)

Growth Rate of Literacy

This paper has been discussed the literacy level and its growth pattern at the state and district level. The male-female differentials in literacy rates are examined in some details..The Madhya Pradesh society has been a male dominated society since time immemorial and hence the number of literate women in the state had always been low (Fig.2). As shown in Table 1, there has been a significant increase in literacy rate in the last two decades.

Table 1: Comparative Literacy Rate

Comparative Study of Literacy Rate (1951-2011)							
Unit	1951	1961	1971	1981	1991	2001	2011
India	18.33	28.3	34.45	43.57	52.21	64.84	74.04
Madhya Pradesh	13.16	21.41	27.27	38.6	44.6	63.7	70.6

Source: Census of India 1951-2011.

Literacy rates in this table for the census year 1951, 1961, 1971 relate to the population aged five years and above whereas for census year 1981 to till date relate to the population aged seven years and

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above. Results of census year 1991 showed efforts of the Mission in terms of improvements to marginal extent. As the following Table 1 shows, reveals that, in 1951 census literacy rate of the Madhya Pradesh was only 13.16% which 5.17 points less than whole India literacy.

The total literacy rate has grown from 44.6% in 1991 to 63.7% in 2001 and finally to 70.6% in 2011. The literacy rate increase by 8.25% during 1961, 5.86% during 1971, 11.36 % during 1981. 6.04% during 1991, recorded a sizeable improvement of 19.07 % during 2001 and 6.89 % in 2011(Table 1). The literacy rate of the population in twentieth century has shown a gradual increasing trend in India since 1951 except some marginal improvements in the Censuses of 1981, 2001 and now 2011. As obvious, the increase in literacy rate was medium in Madhya Pradesh than in the country as a whole.

Literacy rate is increasing is the result of opening a large number of schools with the help of different agencies like UNICEF, Private societies and government policies towards the universalisation of education. The launch of "Literacy Mission" has been one of the most significant steps in the field of literacy. Despite recent increase of literacy, the state still records high percentage of illiterates in the villages.

Madhya Pradesh has been a land of ancient tradition of literacy and education, In Madhya Pradesh population has been marked with an abysmally low level of literacy ever at the time census operations began in the state. In spite of impressive progress of literacy during the recent decades, Madhya Pradesh lies at the bottom of literacy rate in the country especially in the villages.

Districts & Divisions wise distribution of Literacy

The four BIMARU states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh is suffering form the crisis of education with 445.1 million of India's 1.2 billion populations and some of the lowest literacy rates in the country while Kerala has a literacy rate of 94%, the highest in the country.

According to 2011 census, distributional pattern of literacy is also appraised in different 51 developmental districts and 10 divisions in the Madhya Pradesh. The largest division are Jabalpur division which have seven Districts and the smallest division in MP are Narmadapuram division which has three Districts. Agar Malwa District became the 51st district of Madhya Pradesh on 16 August 2013. It was carved out of the existing Shajapur district.

Table 2: District & Division Level Literacy Pattern (2011)

Literacy Rate 2011				
Sl. No.	Range of Literacy Rate	No. of District	Division	Total Literacy
1.	< 40	1	Chambal	71.7
2.	40 - 45	1	Gwalior	70.1
3.	45 - 50	0	Sagar	69.4
4.	50 - 55	1	Rewa	70.5
5.	55 - 60	1	Shahdol	67.7
6.	60 - 65	7	Ujjain	71.2
7.	65 - 70	12	Indore	64.4
8	70 - 75	18	Bhopal	73.5
9.	75 - 80	6	Narmadapuram	73.1
10.	80 >	4	Jabalpur	75.8
	Total	51	Madhya Pradesh	70.6

Source: Census of India 2011

As the Table 2, reveals that across divisions the highest literacy has been achieved by Jabalpur division (75.8%) while Indore division (64.4%) has the lowest literacy rate. The following statement gives the decadal variation in literacy rates of the divisions of Madhya Pradesh. The literacy rates of 51 districts of

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Madhya Pradesh are above the national average (2011). Out of 51 districts, 28 have literacy rate higher than state literacy rate (70.6%) whereas 23 districts have literacy rates lower than the state literacy rate.

Since 1991 to 2011 comparison, distribution of literacy patterns growth of male-female literacy percentage shown in Table 3. Madhya Pradesh's literacy rate has witnessed aloft tendency and it was 70.6% as per Census 2011. The male literacy rate was 80.5% however the female literacy was 60%. In the year 2001, Madhya Pradesh's literacy rate was 63.7% out of which the male literacy stood at 76.1% and female literacy at 50.3%. **High Literacy rate of Madhya Pradesh as per Census 2011 are Jabalpur 82.5%, Indore & Bhopal 82.3%, Agar Malwa 80.3% and Balaghat 78.3%.** Alirajpur district has the lowest number of literate persons (37.2%) with 43.6% males and 31% females (Refer Table 3).

Madhya Pradesh has 60.0 percent female literacy rate and it varies from highest in Bhopal (76.6 %) to the lowest in Alirajpur (31.0%) district. The spatial patterns of very high female literacy rate in five districts as: Bhopal (76.6%), Gwalior (68.3%), Indore (74.9%), Jabalpur (75.3%) and Balaghat (69.7%) district in the state. High and moderate female literacy rate are a broad region of the state and low and very low female literacy rate in two small regions, one lies in northern part and second lies in south western part of the state. (Refer Table 3).

State has 80.50 percent male literacy compare to 82.14 percent Indian male literacy rate. The district wise spatial pattern of male literacy rate in Madhya Pradesh is not uniform. It varies from 89.2 percent in Indore district to 43.6 percent in Alirajpur district. (Refer Table 3).

The State literacy rates of the 4 District which was crossed more than 80% in 2011. In 2001 Census, 39 districts reported literacy rates less than 70%.whereas in 2011 Census, the number of districts with literacy rates less than 70% has reduced to 23. In 2001 Census, 11 districts reported literacy rates of 70% or more whereas in 2011 Census, the number of districts with literacy rates 70% or more has gone up to 28. (Refer Table 3).

The reason for state high literacy rate may be: Availability of the tertiary activities and all kinds' better educational facilities in the centers of district headquarters.The greater functional necessity of literacy for employment and lesser utility of children for parent's occupation in areas.Some private fourms and central and state educational departments can be enchance the level of literacy in Madhya Pradesh.people are aware about literacy and the merits of literacy.

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S. N.	Name of District	1991			2001			2011		
		T. Lit.	M. Lit.	F. Lit.	T. Lit.	M. Lit.	F. Lit.	T. Lit.	M. Lit.	F. Lit.
1	Sheopur	27.5	40.7	12.3	46.4	61.8	29.1	58	70.3	44.5
2	Morena	45.9	63.5	23.8	64.7	79.9	46.2	72.1	84.2	57.6
3	Bhind	49.2	66.2	28.2	70.5	83.2	55.2	76.6	87.2	64
4	Gwalior	58.4	70.9	43.1	69.4	80.4	56.4	77.9	86.3	68.3
5	Datia	44.5	61.8	23.9	71.3	83.9	56.6	73.5	85.2	60.2
6	Shivpuri	33	47.5	15.7	58.8	74	40.7	63.7	76.2	49.5
7	Tikamgarh	34.8	47.5	20	55.7	68.7	41	62.6	73.3	50.7
8	Chhatarpur	35.2	46.9	21.3	53.3	65.3	39.3	64.9	74.2	54.3
9	Panna	33.7	46.3	19.4	61.4	73.3	48	66.1	75.6	55.6
10	Sagar	53.4	67	37.8	67.7	79.4	54.4	77.5	86.3	67.7
11	Damoh	46.3	60.5	30.5	61.8	74.7	47.3	70.9	81	59.9
12	Satna	44.7	60	27.8	64.6	77.1	51.1	73.8	83.4	63.4
13	Rewa	44.4	60.7	26.9	62	75.6	47.6	73.4	83.7	62.5
14	Umaria	32.6	46.8	17.4	59.1	72.9	44.5	67.3	78.1	56.1
15	Neemuch	50.3	69.3	30	66.2	82.5	49	71.8	85.9	57.3
16	Mandsaur	47.7	67	27.2	70.3	85.2	54.7	72.7	86.8	58.3
17	Ratlam	44.2	58.4	29.1	67.2	79.5	54.3	68	79.4	56.5
18	Ujjani	49.1	64.3	32.6	70.9	83	57.9	73.6	85.2	61.4
19	Shajapur	39.2	57	19.8	70.9	83.3	57.4	70.2	83.2	56.4
20	Dewas	44.1	61.1	25.6	60.9	75.7	45	70.5	82.1	58.3
21	Dhar	34.5	47.6	20.7	52.5	65.7	38.6	60.6	71.1	49.7
22	Indore	66.3	78	53.3	75.2	84.6	64.8	82.3	89.2	74.9
23	Khargone	41.2	55.4	26.1	63	74.7	50.6	64	74	53.7
24	Barwani	28.2	36.9	19.1	41.7	51.1	32	50.2	57.3	43.1
25	Rajgarh	31.8	46.7	15.6	53.7	69.1	37.1	62.7	75.1	49.8
26	Vidisha	44.1	58	27.8	61.8	74.2	47.4	72.1	81.4	61.7
27	Bhopal	64.3	73.1	54.2	74.6	81.9	66.4	82.3	87.4	76.6
28	Sehore	40.4	56.9	22	63.1	77.3	47.4	71.1	82.4	58.9
29	Raisen	40.8	54	25.5	72.2	81.6	61.3	74.3	82.5	65.1
30	Betul	45.9	57.4	33.9	66.4	76.8	55.6	70.1	78.4	61.6
31	Harda	48.8	62.5	33.8	66.5	77.9	54.1	74	83.1	64.3
32	Hoshangabad	54.1	67.2	39.3	70	80.8	57.8	76.5	85.2	67
33	Katni	47.8	64	30.5	63.6	77.9	48.2	73.6	84.2	62.5
34	Jabalpur	64.6	75.6	52.2	75.7	84.6	65.9	82.5	89.1	75.3
35	Narsimhapur	55.6	68.4	41.6	77.7	86.1	68.5	76.8	85.2	67.6
36	Dindori	32.6	47.5	17.4	54.2	70	38.2	65.5	77.6	53.5
37	Mandla	40.4	55.3	25.4	59.6	73.7	45.5	68.3	79.5	57.2
38	Chhindwara	44.9	56.6	32.5	65.8	76.4	54.6	72.2	80.8	63.4
39	Seoni	44.5	57.5	31.1	65.6	77.2	53.8	73	81.8	64.1
40	Balaghat	53.2	67.6	38.9	68.7	80.6	57.2	78.3	87.1	69.7
41	Guna	32.5	45.7	17.3	57.6	72.1	41.2	65.1	76.6	52.5
42	Ashoknagar	37.3	53.1	19	62.3	77	45.2	67.9	80.2	54.2
43	Shahdol	37.2	50.4	22.7	57.6	70.3	44.2	68.4	78.3	58.2
44	Anuppur	33	46.8	18.5	60.2	73.8	46.1	69.1	80.1	57.9
45	Sidhi	32	46.5	16.2	55.3	69.3	40.3	66.1	76.5	55.2
46	Singrauli	26.1	39.8	10.7	49.2	65.4	31.5	62.4	73.8	49.9
47	Jhabua	21.4	29.6	12.9	41.4	53.9	28.6	44.5	54.7	34.3
48	Alirajpur	15.9	21.9	9.6	31.1	40.2	22	37.2	43.6	31
49	Khandwa	41.2	58.5	29.1	62.8	76	48.6	67.5	77.9	56.5
50	Burhanpur	47.3	58.5	35.6	59.9	69.9	49.5	65.3	73.1	57.1
51	Agar Malwa	-	-	-	-	-	-	80.3	75.3	62.5
	Madhya Pradesh	44.7	58.5	29.4	63.7	76.1	50.3	70.6	80.5	60

Source: Census of India 1991-2011.

Predicted Literacy Rate of Madhya Pradesh State

Literacy prediction gives a picture of what the future literacy may look like, based on the past. Literacy projection is estimates of the literate population for future dates. They are typically based on an estimated literate population consistent with the most recent decennial census and are produced using the

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Clarke method (1972). Projections are based on assumptions about future literacy trends. Projections or prediction make assumptions about what literacy trends will be in the future. The base literate population is advanced each year by using projected survival rates. Each year, a new literate is added to the population by applying the projected literacy rates. For a more detailed explanation of following methodology used for present study.

$$P = Lp \left(1 + \frac{r}{100}\right)^{n}$$

Where

P = Predicted, Lp = Literate population
r = Growth rate, n = Time

So, that

$P = 70.6(1+ 6.9/100)^{1 \text{ decade}}$
$= 70.6(1.069)^{1}$
$= 70.6(1.069)$
= 75.47% (predicted literacy rate in 2021)

Table 4: Predicted Literacy Rate (2021-2071)

Literacy Rate of Madhya Pradesh				Remark
Year	Person	Male	Female	
1991	44.7	58.5	29.4	Real
2001	63.7	76.1	50.3	
2011	70.6	80.5	60.0	
2021	**75.47**	**84.04**	**65.82**	Predicted
2031	**80.67**	**87.73**	**72.20**	
2041	**86.24**	**91.60**	**79.20**	
2051	**92.19**	**95.63**	**86.89**	
2061	**98.55**	**99.83**	**95.32**	
2071	**105.35 (100)**	**104.23 (100)**	**104.56 (100)**	

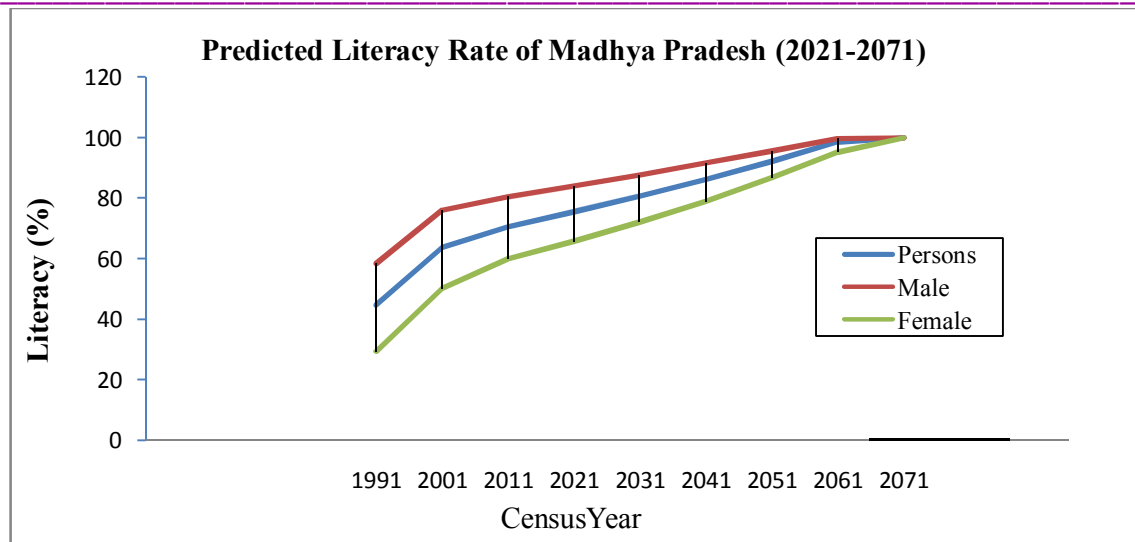*Source:* Census of India 1991-2011.

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Fig. 3 Predicted literacy rate of Madhya Pradesh (2021-2071)

Table 4 reveals that from 1991 to 2011, existed average growth rate of literacy was 12.95/decade in the Madhya Pradesh. Existed growth rate of male and female were 11/ decade and 15.3/decade respectively. For the sake of prediction, 2001-2011 growth rates i.e. 6.9 (total), 4.4 (male) and 9.7 (female) have been taken base for the calculation of future prediction rate. Thus the predicted growth rates are calculated in Table 4 upto 2071. It shows that if the growth rate of literacy will increases on basis of 6.9%/decade, than the state will be under 100% literacy up to 2071. Fig. 3 clearly indicates that all growth curves are joining each other in one point. It is clear that after 2071 the whole state along with male and female will be literate.

CONCLUSION

International Literacy Day is celebrated each year on 8 September with the aim to highlight the importance of literacy to individuals, communities and societies. The right to education is a fundamental right and UNESCO aims at education for all by 2015. The National Literacy Mission, launched in 1988, aimed at attaining a literacy rate of 41 per cent by 2035. The Continuing Education Scheme provides a learning continuum to the efforts of the Total Literacy and Post Literacy programmes in India. The Census 2011 indicated that Madhya Pradesh State has made significant progress in the field of literacy during 1991 to 2011. The literacy rate in 2011 has been recorded at 70.6% as against 63.7% in 2001. In the study area literacy rate during the period 1991-2001, the highest (19.1%) increase in any decade

The National Literacy Mission and state govt. had accepted the literacy campaigns as the dominant strategy for eradication of illiteracy. Therefore, the significant growth rates are observed in not only total but also in female literacy in the state. The Madhya Pradesh female literacy rate has grown to 60% (2011) from 29.4% at the end of 1991. The female literacy rates increased 30.6% during 20 years span of time which shows 1.53% growth per year. It is remarkable that over all and female literacy rates are fastly increased in the districts. On the basis of 2011 literacy growth rate (6.9%/decade), it is predicted that before 2071 the literacy will be 100% in the Madhya Pradesh State of the India.

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