



## SPATIO-TEMPORAL TREND IN LITERACY LEVELS IN PALGHAR DISTRICT

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### Abstract

The significance of literacy lies in reading and writing effectively with acquiring the basic math skills to carry out the normal and simple transactions and communication required by an individual in any society. Literacy is critical to economic development that is associated with an individual and community wellbeing in any nation. Literacy is one of the most importance skills when it comes to our personal growth, culture and development. It is one of the major indicator of changing economy and society. Literacy helps in acquiring skills that promotes development and confidence in individual. In the era of globalization where most of the transactions and working are becoming highly digitalized literacy forms the basic to every individual and organization. Thus literacy is one of the most challenging aspects of human life, society and nation in the contemporary era of a digitized world. Keeping this aspect in view the present study focuses on the status of literacy levels in the newly formed Palghar district of Maharashtra state which is largely dominated by tribal population. The present work is an attempt to study spatio-temporal trend in literacy levels at taluka level in Palghar district based on census data of India from 1991 to 2011. The male- female literacy levels has been worked out. The total literacy rate of Palghar district was 66.65% percent and male and female literacy rates is 72.23 % and is 59 % respectively in 2011. Gender gap in literacy reveals lower gap in urbanized tehsils having lower concentration of scheduled tribe population while it is high in rural tehsils with concentration of scheduled tribe population in Palghar district.

**Keywords:** Scheduled tribe population, Literacy rate, Gender Gap, digitalized literacy.



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### Introduction:

Literacy is one of the prime indicators to measure human development index at international, national and regional levels. "Literacy for all" has always enlightened the human beings in our present society. The high rate of literacy will always ensure and increase the progress of any modern society. According to The United Nations Educational, Scientific, and Cultural Organization (UNESCO) literacy is the aptitude to recognize, comprehend, understand, produce, communicate, compute and use printed and written materials related to

varying context. According to the census of India, a person who can both read and write with understanding in any languages is taken as literate.

Availability of Educational institution form competent tools to generate higher educational status and literacy rate and is a good measure of human progress toward modernization. It is inevitable truth that higher the educational facility, better the literacy rate and lesser the education facility, lower the literacy rate. Literacy levels of males and females are also important in any society as they two form the wheels of a chariot. However, it is observed that in many societies the problems of gender inequality and discrimination start with access to schooling itself. Once girls are able to get enrolled in school, they are rather more likely than boys to continue their education with more success. Much of the improvement in literacy in the less developed countries, which are lagging behind, depends largely upon availability and accessibility of amenities for getting educated. There exists a positive correlation between the literacy rates and the degree of availability of education institution.

### **Review of Literature:**

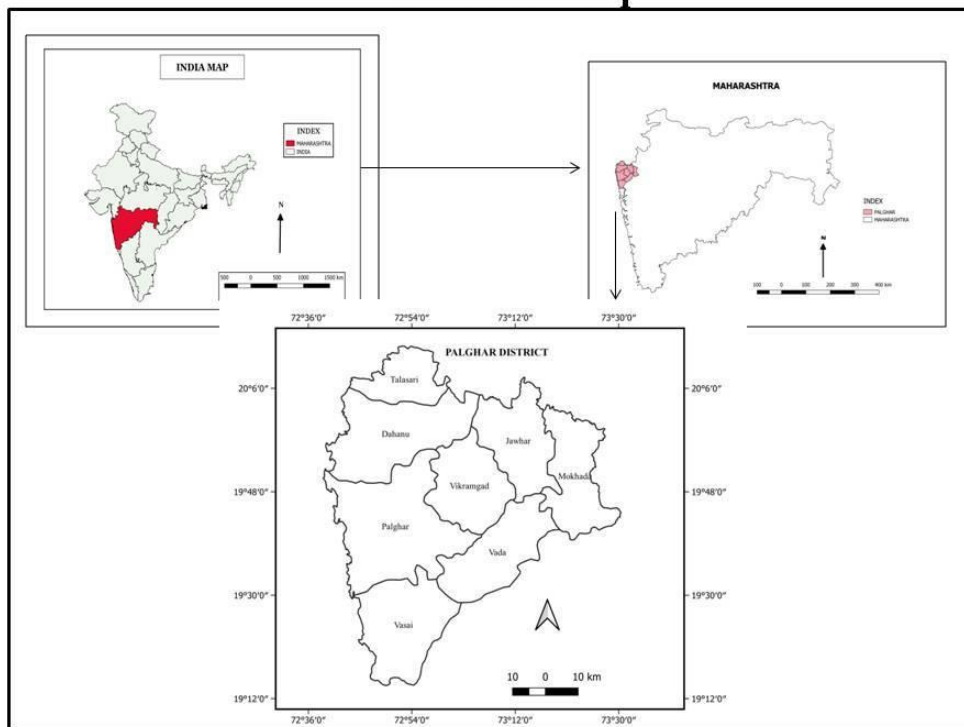
Review of literature provides an insight of various studies undertaken by the scholars on the subject undertaken for research by a scholar. It helps to know the suitable techniques of analysis adopted by them and the interpretation of the results arrived for the same. It also provides the nature of conditions existing in the said region related to the topic undertaken for study. Based on this few literature review undertaken for this paper are quoted here. According on King and Golledge, (1978) 'higher the number of literate and educated people, the better a country is in a position to utilize modern resource techniques'. Migration of literate persons from rural to urban areas in search of jobs result in increase in the number of literates in urban areas while decrease in rural literate population (Krishan and Chandna,1974). Colonial era of Britishers concentrated on promoting educational facilities in urban areas and paid little attention for the welfare activities in rural areas (Ojha, 1966). Post independence with concerted planning measures to improve living standards, improved technology and communication means, focused policies for uplifting of downtrodden, increasing social and functional value of education particularly in rural areas helped in reducing the rural-urban disparity index in the country (Sagar, 1990). The general poverty and low level of female participation in workforce also cause male-female differential in literacy (Singh, 1998). While progress in primary education accounts for overall increase in

literacy rates, its reach and coverage continues to be inadequate with respect to socially and disadvantaged population (Swati M. and Noorjahan K., 2013)

### Study region:

The topic entitled “spatio-temporal trend levels in Palghar district” of Maharashtra state has been selected for the present study. Palghar district is located in the northern part of Maharashtra state in Western India. Government of Maharashtra has announced the formation of 36 districts on 1<sup>st</sup> August 2014, with a new Palghar district carved out from the old Thane district.

### Location Map



### Map 1

It is comprised of 8 talukas namely, Palghar, Vada, Vikramghad, Jawhar, Mokhada, Dahanu, Talasari, and Vasai. According to 2011 census the tahsils now comprising Palghar district had a total population of 2990116 with an urban population of 1435210 i.e. 48% living in urbanized area of the district. The district is bounded by Thane and Nashik district on the east and northeast, Valsad district of Gujarat state and union Territory of Dadra and Nagar Haveli to the north, Arabian Sea forms its western boundary and Dahisar forms its southern boundary (Map 1).

### Objectives of Study:

- 1) To study taluka wise trend in the levels of literacy in Palghar district.
- 2) To study gender disparity in literacy at taluka level in the study region.
- 3) To suggest measures for increasing literacy levels and reduce gender disparity in literacy in Palghar district.

### Database and Methodology:

The present study is based on census data of two decades from 1991 to 2011. Analysis of data is done using statistical techniques and depicting the same through appropriate cartographic applications for bringing out the nature of spatial distribution and variation in literacy levels and gender disparity with its interpretation.

### Analysis of Result and Discussion:

Literacy is one of the important aspects of development of population in any region. Literacy for all children above 6 years is still an ever moving target. The present study attempts to understand changes in literacy rate of population during the period 1991-2011 of Palghar district given table 1.

**Table 1 Taluka-wise Total Literacy Rate in Palghar District (1991-2011)**

Sr. No.	Taluka	Year		
		1991	2001	2011
1	Talasari	23.72	48.09	57.20
2	Dahanu	37.76	57.02	56.48
3	Jawhar	27.93	44.89	54.28
4	Mokhada	25.63	51.53	56.47
5	Vada	54.26	63.97	73.02
6	Palghar	60.90	74.88	79.65
7	Vasai	72.41	86.00	77.16
8	Vikramgad	-	46.13	63.78

*Source: Based on Census Data*

### Tahsil Wise Spatio-Temporal Trend in Total Literacy Rate in Palghar district (1991-2011):

Total Literacy Rate in the district varies from tehsil to tehsil as well as within tehsil over the period from 1991 to 2011 as observed from census figures given in table 1.

Please note that Vikramgad taluka was came into existence after 1991 and so is depicted from 2001. It is important to note that all the talukas reveal increase in literacy rate over the period from 1991 to 2011 except Dahanu with slight decrease and Vasai taluka to record a decline in the year 2011. It can be attributed to the fact that being in close vicinity to Mumbai Metropolis with better frequency of suburban local railway on western line Vasai taluka is

experiencing a rapid growth in urban population. As a consequence there is need for residential housing and other urban functions. Therefore construction activity is on boom that attracts a large unskilled labor force too for construction work that are illiterate leading to decline in literacy rate in Vasai taluka during 2011.

To get a comparative picture and understand the changing scenario between taluka the Literacy Rate for total, male, female is classified into three class-groups as given in table 2, 4 and 6 and spatial variation is depicted in map 2, 3 and 4 respectively as ‘High level’ with more than 60 per cent; ‘Moderate level’ with 30 to 60 per cent and ‘Low level’ with less than 30 per cent.

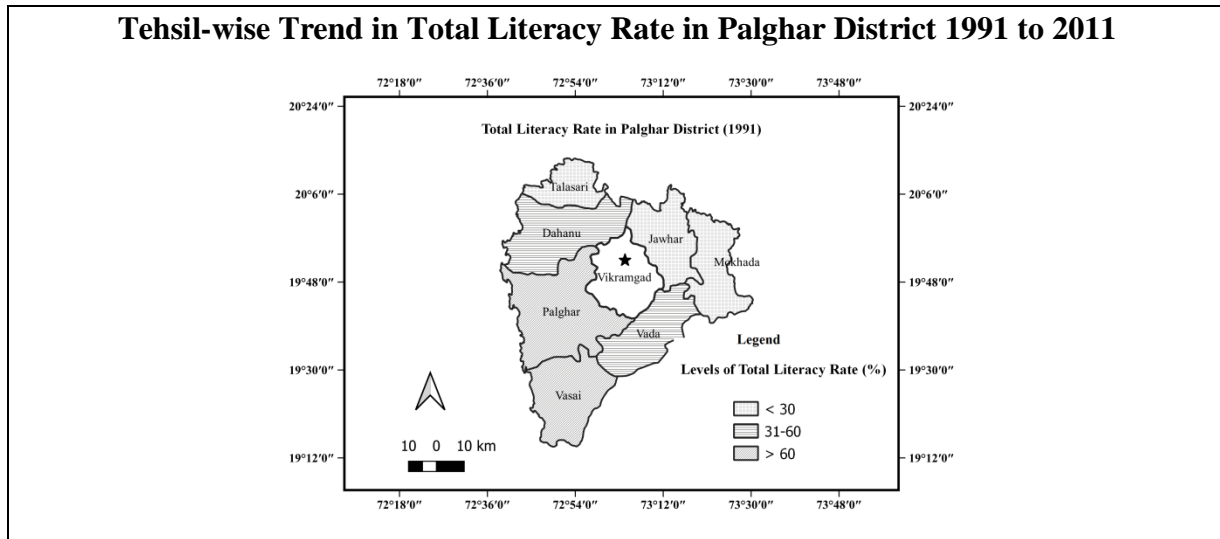
The trend in total literacy from table 2 and map 2 reveals that the talukas of Palghar and Vasai have recorded high levels of total literacy ( more than 60 per cent) throughout the period under study. This is largely because they better connectivity with Mumbai metropolis as located on the western railway main route and accessible with national highway and presence of main ports due to maritime location. Besides the distance from Mumbai Metropolis of Vasai and Palghar is approx.70. km and 130 km respectively. This provides easy access to higher educational institutions of Mumbai metropolis to result higher levels of literacy. Another major factor is these tehsils are also growing in urban population due to industrial growth and people employed in Mumbai commute to work from here as residential areas are comparatively cheaper, spacious and affordable to stay.

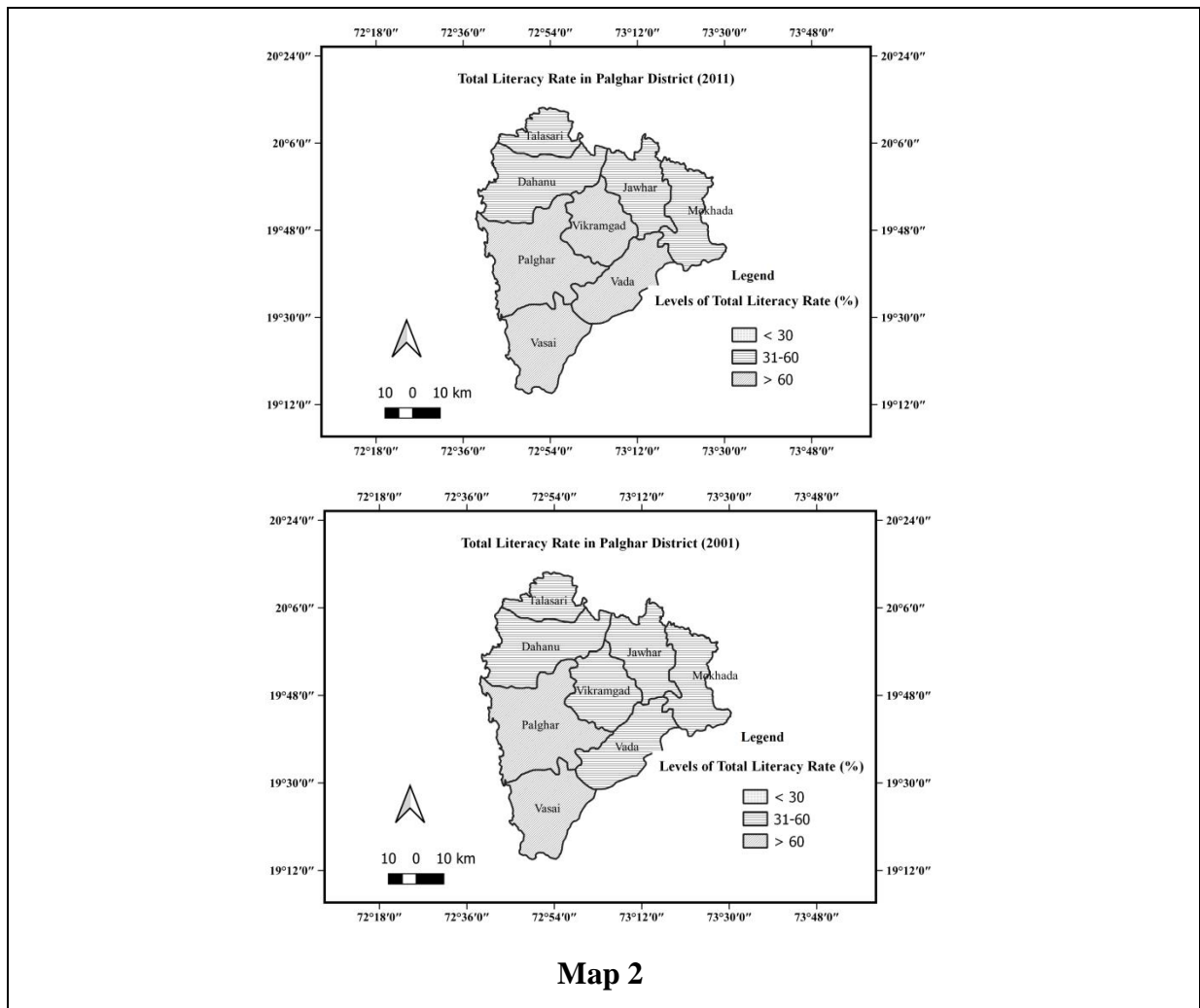
**Table 2 Classification of Levels of Literacy Trend at Taluka level in Palghar District**

Sr. No.	Levels of Literacy	Literacy Class-Group	Year 1991	2001	2011
1	High	> 60 %	Palghar Vasai	Palghar Vasai	Palghar Vasai Vada Vikramgad
2	Moderate	30 – 60%	Dahanu Vada	Talasari Dahanu Vada Vikramgad Jawhar Mokhada	Talasari Dahanu Jawhar Mokhada
3	Low	< 30 %	Talasari Jawhar Mokhada	-	-

*Source: Compiled by Researcher*

The taluka of Vada and newly formed Vikramgad taluka has increased in literacy levels to record from moderate level (between 30 to 60 per cent) in 2001 to high levels in 2011. This is probably because Vada has developed small industrial estates after 2001 while Vikramgad was given the status of taluka attracting higher order administrative and urban functions, besides provision of hostels with educational facilities for tribal children for higher education. In case of Talasari, Jawhar and Mokhada taluka the total literacy levels were low in 1991 (less than 30 per cent). However during 2001 their literacy rate increased to moderate levels and remained same in 2011. These talukas being remotely located with hilly region and dense forest cover lack accessibility and so depict slow change in total literacy levels from low to moderate level from 1991 to 2011.





**Tahsil wise spatio-temporal trend in Male Literacy Rate in Palghar district (1991-2011):**

Table 3 depicts wide variation of 44.15 per cent in male female literacy rate during 1991 between the talukas of Palghar district where the lowest level is 35.50 per cent of Talasari and a highest of 79.65 in Vasai tehsil.

**Table 3**

**Taluka-wise Total Male Literacy Rate in Palghar District (1991-2011)**

Sr. No.	Taluka/Year	1991	2001	2011
1	Talasari	36.61	64.01	69.37
2	Dahanu	48.10	68.86	66.75

3	Jawhar	38.29	54.87	<b>62.65</b>
4	Mokhada	<b>35.50</b>	62.70	65.49
5	Vada	66.10	76.98	80.91
6	Palghar	71.45	83.33	<b>86.36</b>
7	Vasai	<b>79.65</b>	90.84	84.12
8	Vikramgad	-	60.25	72.91

Source: Based on Census Data

However by 2011 the picture is more satisfactory where the variation among male literacy between the talukas has reduced considerably to 23.87 per cent with highest at 86.36 per cent by Palghar tehsil and lowest of 62.65 per cent in the tehsil of Jawhar. Thus lowest male literacy rate has come down drastically from 35.50 per cent in 1991 to 62.6 per cent in 2011.

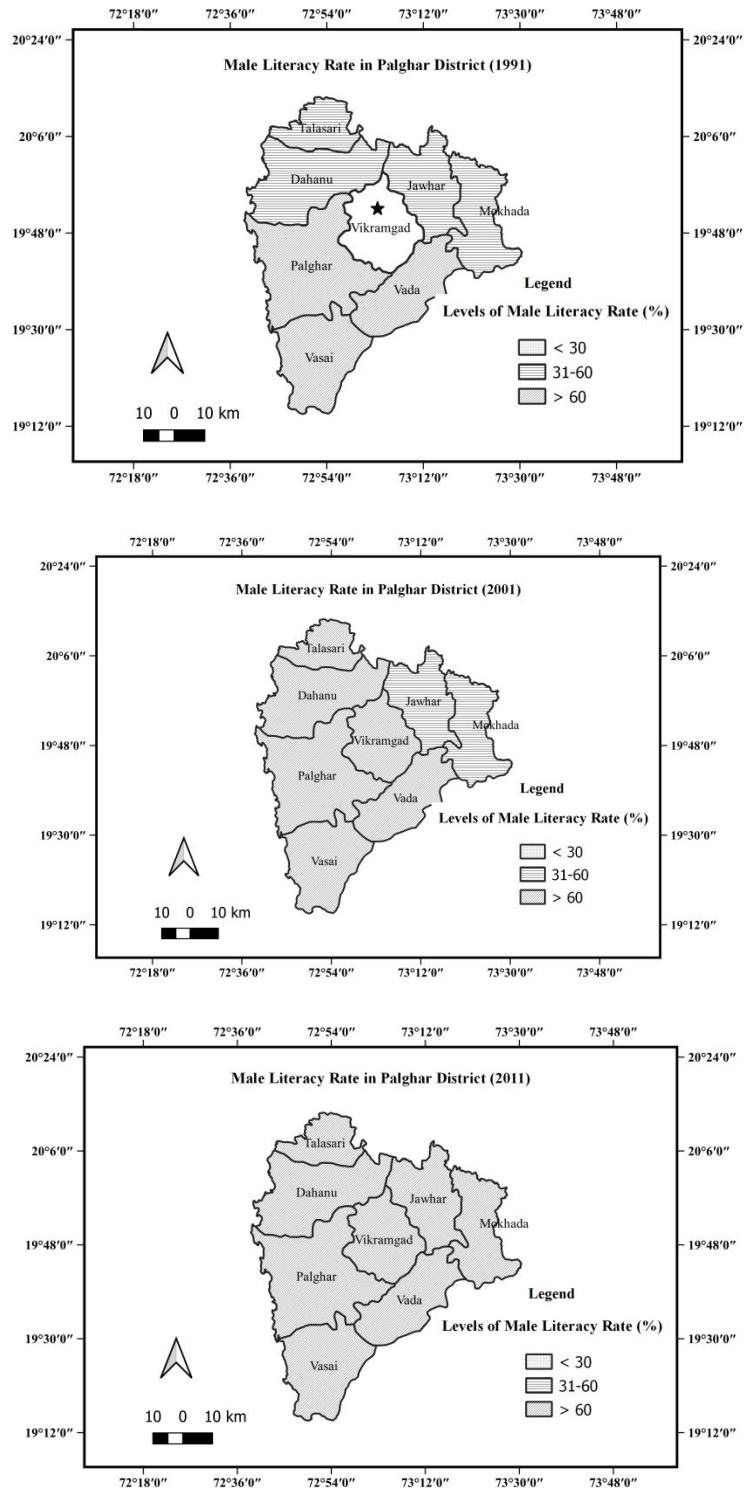
**Table 4 Classification of Levels of Male Literacy Trend at Taluka level in Palghar**

District					
Sr. No.	Levels of Literacy	Literacy Class-Group	Year		
			1991	2001	2011
1	High	> 60 %	Palghar Vasai Vada	Palghar, Vasai Talasari, Dahanu, Vada Vikramgad	Palghar, Vasai Vada, Vikramgad Talasari, Dahanu Jawhar, Mokhada
2	Moderate	60 – 30%	Dahanu Mokhada Talasari Jawhar	Jawhar Mokhada	-
3	Low	< 30 %	-	-	-

Source: Compiled by Researcher



### Tehsil-wise Spatio-temporal trend in Male Literacy Rate in Palghar District: 1991 -2011



Map 3

Thus overall there is increase in male literacy rate from 1991 to 2011 except for the tehsil of Dahanu and Vasai revealing slight decline from 2001 to 2011 probably due to immigrant population mainly as construction labor who are generally not literate.

To get a broader scenario about the Male Literacy rate among tehsils of the district of Palghar it has been grouped into three categories of high, moderate and low levels as given in table 4 and map 3. It is noteworthy that none of the tehsils fall into the category of low level of male literacy rate during the period 1991 to 2011 undertaken for study.

Moderate level of male literacy rate is seen in the tehsils of Dahanu, Mokhada, Talasari and Jawhar during 1991 which continued in 2001 for Jawhar and Mokhada, while the tehsils of Dahanu and Talasari rose up to high levels during 2011. However the tehsils of Palghar, Vasai and Vada consistently revealed high levels of male literacy rate from 1991 to 2011 and Vikramgad from 2001 to 2011. Interestingly by 2011 all the tehsils of Palghar district reveal high levels of male literacy rate based on the classification adopted here for analysis which is a pleasant feature to note.

**Tahsil Wise Spatio-Temporal Trend in Female Literacy Rate in Palghar District (1991-2011):**

In case of female literacy we notice great variation among tehsils throughout the period from 1991 to 2011 under study.

**Table 5 Taluka-wise Total Female Literacy Rate in Palghar District (1991-2011)**

S. N.	Taluka	Year		
		1991	2001	2011
1	Talasari	10.80	32.41	45.37
2	Dahanu	27.11	45.17	46.53
3	Jawhar	17.58	34.97	46.17
4	Mokhada	15.52	40.06	47.56
5	Vada	41.85	55.41	64.60
6	Palghar	49.42	65.16	72.22
7	Vasai	64.54	80.47	69.94
8	Vikramgad	-	32.60	54.81

*Source: Census data*

The lowest female literacy rate was 10.80 per cent in the tehsil of Talasari and the highest at 64.54 per cent in Vasai tehsil. A huge gap in female literacy rate in the district of 53.74 per cent in 1991 is observed from table 5 that however reduced to 26.5 per cent by 2011. Overall Female literacy rate among tehsils of the district has increased drastically from 2001 which is definitely an appreciable feature. For which the government needs to be

congratulated as it is mainly due to the governmental efforts through implementation of various educational and other developmental projects in the interest of girl child and women.

**Table 6 Classification of Levels of Female Literacy Trend at Taluka level in Palghar District**

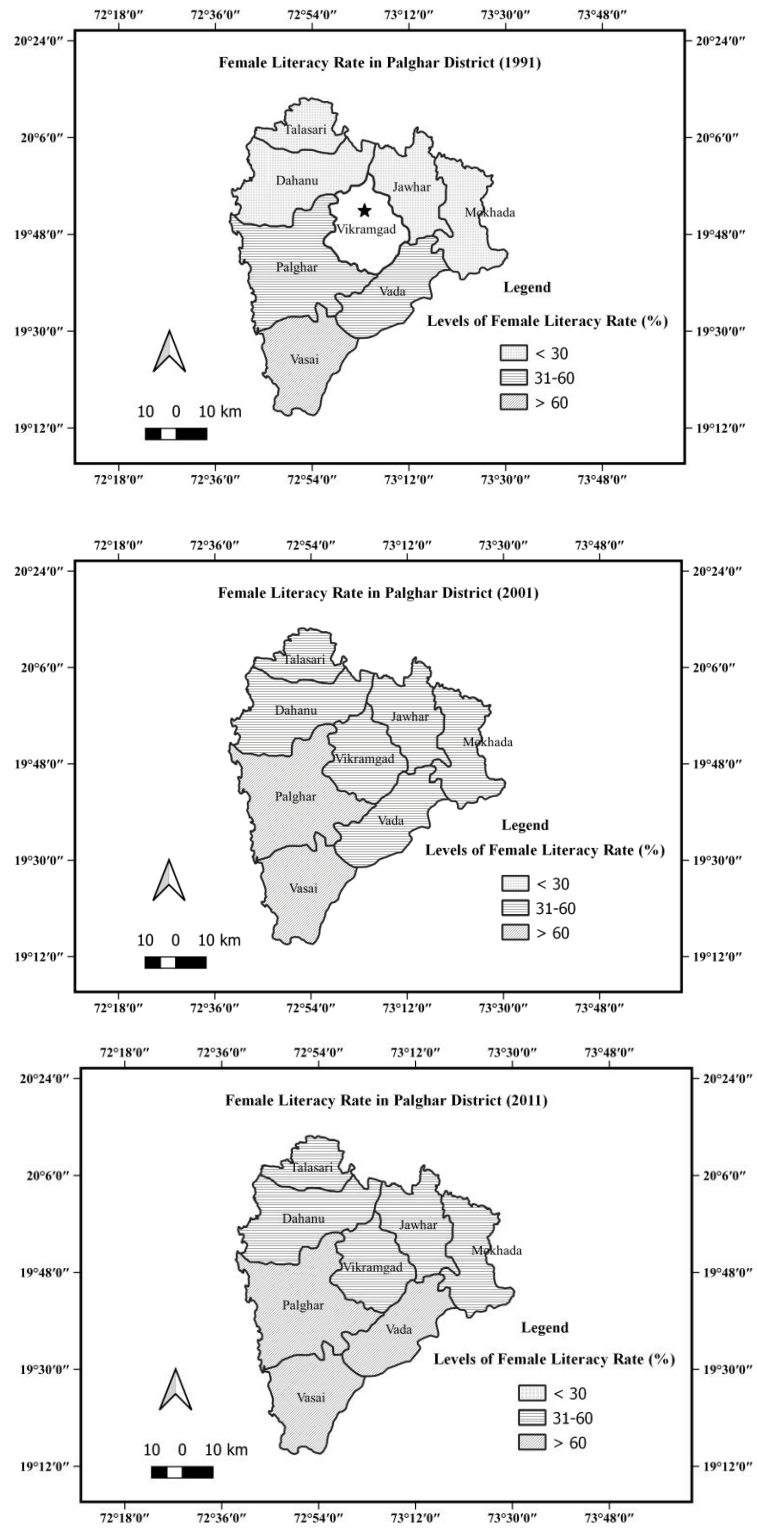
S.N.	Levels of Literacy	of Literacy Class-Group	Year	2001	2011
1	High	> 60 %	Vasai	Palghar Vasai	Palghar Vasai Vada
2	Moderate	60 – 30%	Palghar Vada	Talasari Dahanu Vada Vikramgad Jawhar Mokhada	Talasari Dahanu Jawhar Mokhada Vikramgad
3	Low	< 30 %	Talasari Dahanu Jawhar Mokhada	-	-

*Source: Compiled by Researcher*

Table 6 and map 4 provides tehsilwise classification of female literacy rates into three levels of class groups as high, moderate and low from 1991 to 2011. During 1991 among 7 talukas of the district only Vasai recorded high levels of female literacy rate while Palghar and Vada with moderate levels and the rest four talukas of Talasari, Dahanu, Jawhar and Mokhada with low levels. However the situation improved and none of the tehsils recorded low levels of female literacy rate from 2001 to 2011.

The situations improved largely for the tehsils of Palghar in 2001 and Vada in 2011 to move from moderate levels to high levels respectively while the tehsils of Talasari, Dahanu, Jawhar, Mokhada, Vikramgad continued at moderate levels from 2001 to 2011.

### Tehsil-wise Spatio-temporal trend in Female Literacy Rate of Palghar District (1991 – 2011)



Map 4

### Gender Gap in Literacy Rate:

It is one of the important components of demographic analysis providing results for appropriate planning to reduce regional disparities with socio-economic justice. Least or absence of gender gap in literacy rate is an indicator of healthy society and healthy nation. Generally the female literacy rates are lower compared to male literacy rates in the developing countries due to economic reasons associated with socio-cultural taboos. Hence it is felt necessary to study the component of Gender Gap in Literacy Rate in Palghar district and understand the situation prevailing in the region from its analysis based on census data as given in table 7.

### Tehsil wise spatio-temporal trend of Gender gap in literacy in Palghar district (1991-2011):

The variation among gender gap in literacy rate between tehsils was 10.7 in 1991 that increased to 20.69 in 2001 but again drastically reduced to 9.86 per cent in 2011 which is a pleasing feature of the district as noted in table 7.

**Table: 7 Taluka wise Gender Gap in Literacy Rate 1991-2011**

S. N.	Talukas	1991	2001	2011
1	Talasari	25.81	31.06	24.00
2	Dahanu	20.99	20.69	20.22
3	Jawhar	20.71	19.9	16.48
4	Mokhada	19.98	22.64	17.93
5	Vada	24.25	21.57	16.31
6	Palghar	22.03	18.17	14.14
7	Vasai	15.11	10.37	14.18
8	Vikramgad	-	27.65	18.10

Source: Census data

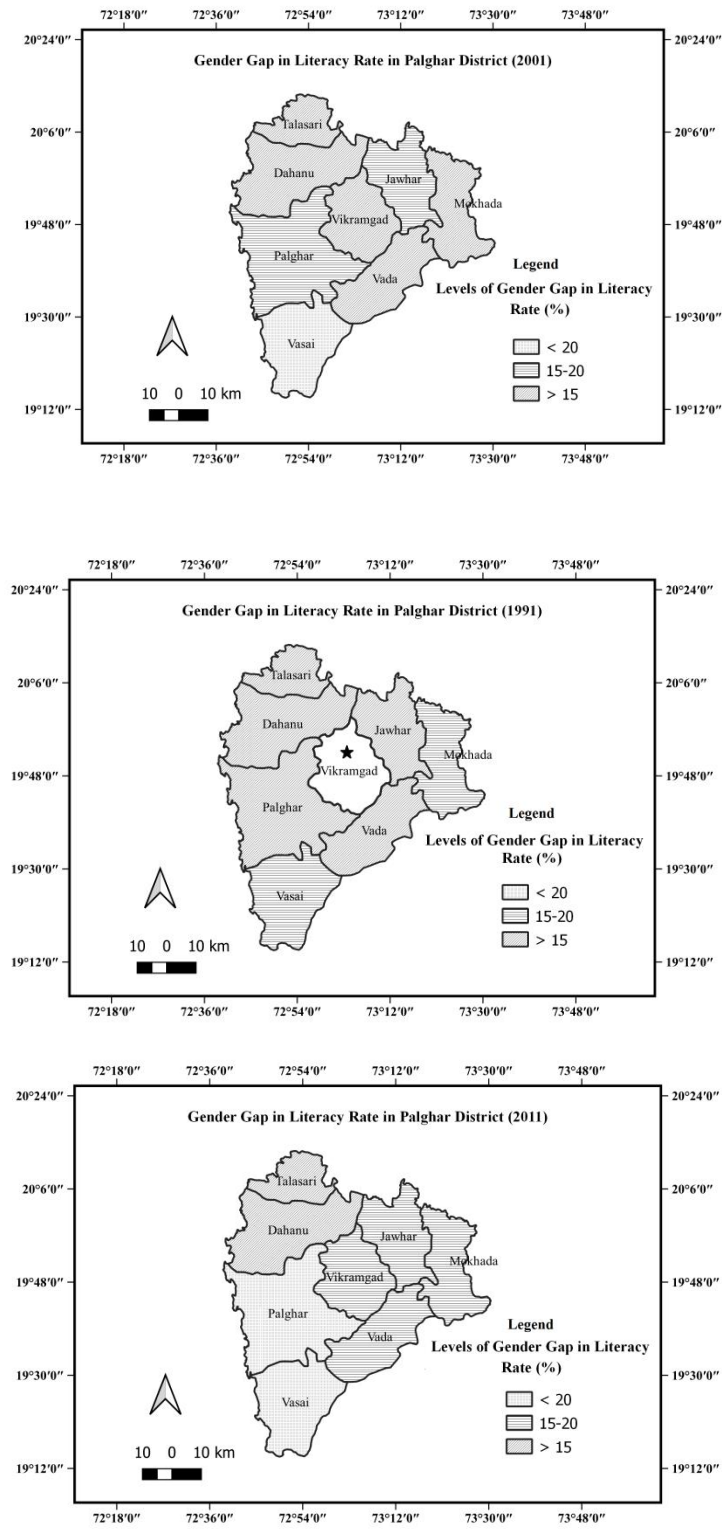
**Table 8 Classification of Gender Gap in Literacy Trend at Taluka level in Palghar**

District					
S. N.	Level	Class-group	1991	2001	2011
1	High	> 20 %	Talasari Dahanu Jawhar Vada Palghar	Talasari Dahanu Vikramgad Mokhada Vada	Talasari Dahanu
2	Moderate	15-20%	Mokhada Vasai	Jawhar Palghar	Jawhar Vikramgad Mokhada Vada
3	Low	< 15%	-	Vasai	Vasai Palghar

*Source: Compiled by Researcher based on census data*

To get an overall trend of levels of gender gap in literacy rate among and within tehsils it has been grouped into three categories as given in table 8. High level of gender gap in literacy rate ( more than 20 per cent) among tehsils during 1991 and 2001 is found in the tehsils of Talasari, Dahanu, Jawhar, Vada and Palghar. This situation prevailed even during 2001 except for the tehsils of Jawhar and Palghar that reduced to moderate levels (15-20 per cent). Newly formed Vikramgad and Jawhar tehsil revealed improved situation from high level in gender gap in 2001 to moderate level in 2011. The tehsil of Vada had high levels of Gender Gap in Literacy rate during 1991 and 2001 that reduced to moderate levels in 2011. However the urbanized taluka of Vasai and Palghar reveals moderate levels and high levels in 1991 to low and moderate levels in 2001 respectively. The situation has changed for Palghar in 2011 to record low levels of Gender Gap in Literacy rate and associate with Vasai tehsil in this category and shown in table 8 and map 5.

### Tehsil-wise Spatio-temporal trend of Gender Gap in Literacy Rate of Palghar District (1991 – 2011)



Map 5

### **Conclusions:**

Though the overall literacy levels were quite varying among the tehsils of Palghar district for the period under study, yet by 2011 the scenario has changed to a great extent to record more than 50 per cent. The scenario for literacy rate has increased over period yet cent per cent literacy needs to be achieved. Similarly the male literacy rate is above 65 per cent and that of female is above 45per cent. This gender gap in literacy also needs to be removed for having a healthy society and developed economy. The government policies in promoting education by providing various freships, scholarships, hostels, nutritional meals with special provision for girls has definitely yielded satisfactory output in terms of increased literacy rate in the district. Yet much scope exists and efforts needed with holistic approach to achieve cent per cent literacy.

### **Suggestions:**

It seems that the tehsils lacking accessibility in terms of transportation forms the major obstacle in for economic development. As a consequence it affects levels of literacy in the remotely located hilly and forested tehsils of the district.

Various government schemes such as Support to National/State Scheduled Tribe Finance and Development Corporations, Minor Forest Produce (MFP) through Minimum Support Price (MSP) and Mechanism of marketing of Development of Value Chain for MFP, Research Information & Mass Education, Tribal Festival, Van Dhan Scheme, Vanbandhu Kalyan Yojana and Others need to be intensified. This will help to provide of supplementary income source through modern forest and agriculture based activities besides providing better transportation facilities that promotes increase in literacy levels. Today with digital economy most of the transactions are done online that necessitates literacy levels for operating the internet banking failing which a person will be devoid of using utility goods and services. It is therefore essential to implement the government policies for strengthening educational level by reaching to those sections of the society that are yet to be covered under the scheme. Then only our aim of achieving cent percent literacy levels can be fulfilled.



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