

Spatial Temporal Change in Literacy Rate of Punjab

Imrozpreet Singh¹, Ram Sharn²

¹Research scholar, department of Geography, Kurukshetra University Kurukshetra

²Assistant Professor, P.G. Department of Geography, Baba Farid College Deon, Bathinda

Abstract: *Literacy rate of any state and country reflects the social, economic and political status of respective place. Meaning of literacy is different in different country. Literacy rate vary from place to place and it increases with time. Average literacy rate of India is 74.04 per cent and average literacy rate of Punjab is 76.7 per cent. In India Punjab is situated on 21st place of all states and union territories. In Punjab uneven spatial distribution of literacy rate in all districts, south western Punjab has lowest literacy rate. There is significant temporal change in literacy rate of Punjab. In Punjab there is significant variation in rural and urban literacy rate and male female literacy rate.*

Keywords: Punjab, Literacy, Spatial, Temporal, Rural-Urban and Male-Female

1. Introduction

The original meaning of the English word 'literacy' is different from its translations in several other languages. For most of its history in English, the word 'literate' meant to be 'familiar with literature' or, more generally, 'well educated, learned'. Only since the late nineteenth century has it also come to refer to the abilities to read and write text, while maintaining its broader meaning of being 'knowledgeable or educated in a particular field or fields'.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) regards 'literacy', in an attempt to recognize the diversity of definitions attributed to the term, as being beyond simply "the set of technical skills of reading, writing and calculating . . . to a plural notion encompassing the manifold of meanings and dimensions of these undeniably vital competencies. Such a view, responding to recent economic, political and social transformations, including globalization, and the advancement of information and communication technologies, recognizes that there are many practices of literacy embedded in different cultural processes, personal circumstances and collective structures".

In India the national Census defines a 'literate' person as one having the ability to read and write in any language. Literacy also represent a development scale of any region more literate means more developed region. Punjab is also one of the developed states in India and literacy rate is also more than India's average. Punjab was ranked on 16th place with 69.95 per cent literacy rates in 2001 but according to 2011 Census Punjab fall at the 21st Place with 76.68 per cent literacy rate.

The disparity between male and female literacy is a sensitive indicator of social discrimination. The gender gap in education occurs when there are systematic differences in schooling levels between men and women. It is a useful appraisal for providing facts of the inequalities that exists between the genders in terms of access to school. At the same time, the rural urban disparities in literacy pattern are essentially a function of the different rates of change taking place in villages and towns. The pace of the process depends

on the intensity of interaction between the two elements i.e. gender and literacy or locality and literacy.

Literacy and Education are reasonably good qualitative indicators of development and plays a very crucial role in the social and economic development of a country. Spread and diffusion of literacy is positively associated with the essential traits of today's civilization such as, modernization, industrialization, urbanization, communication, trade and commerce. Literacy is one of the important demographic elements, which is a good measure of human process towards modernization. It is also the social characteristics and forms a significant input in the overall development of individuals enabling them to comprehend their economic, social, political and cultural environment better and respond to it properly.

2. Objectives

- 1) To analyze the spatio-temporal change in literacy rate of Punjab form 2001 to 2011.
- 2) To examine the difference between urban and rural literacy rate in Punjab.
- 3) To study the variation between male and female literacy rate in Punjab.
- 4) To analysis the disparity among male-female and rural-urban literacy rate in Punjab.

3. Database and Research Methodology

The present study is mainly based on secondary data, which is collected from Primary Census Abstract, Census of Punjab and Statistical Abstract of Punjab. 2001 and 2011 period is selected for study purpose. An attempt has been made to tabulate process, analyze and interpret the data by applying suitable statistical and cartographic techniques. District wise spatial variation in literacy rates has been shown on maps by using choropleth method. Literacy rate has been calculated by using the following formula.

Literacy in % = $\frac{\text{Number of literates (above 6 years)} \times 100}{\text{Total Population}}$

For the measurement of male female and rural urban disparity in literacy, Sopher's Disparity Index (1974) modified by Kundu and Rao (1983) has been employed: $D_s = \log(X_2 / X_1) + \log(100 - X_1) / (100 - X_2) \dots (I)$

Kundu and Rao's modified disparity index formula, as follows:

$D_s = \log(X_2 / X_1) + \log(200 - X_1) / (200 - X_2) \dots (II)$

X_2 is considered for male and X_1 for female literacy rates.

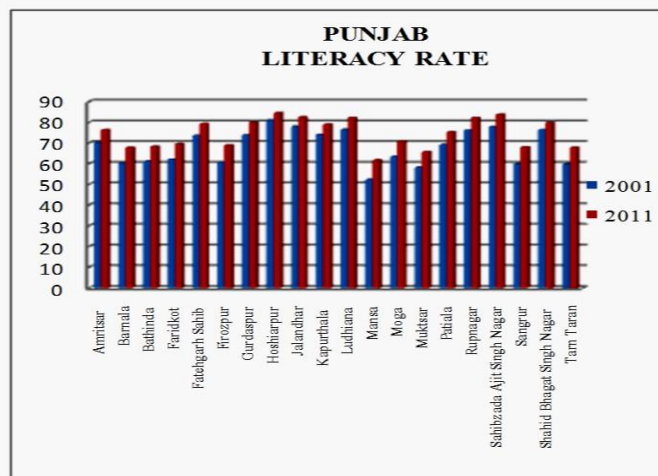
Table 1: Literacy rate of Punjab (2001 – 2011)

Districts	2001	2011	Change in 2001-2011
Amritsar	70.4	76.3	5.9
Barnala	60.3	67.8	7.5
Bathinda	61.2	68.3	7.1
Faridkot	62	69.6	7.6
Fatehgarh Sahib	73.6	79.4	5.8
Firozpur	60.7	68.9	8.2
Gurdaspur	73.8	79.9	6.1
Hoshiarpur	81	84.6	3.6
Jalandhar	78	82.5	4.5
Kapurthala	73.9	79.1	5.2
Ludhiana	76.5	82.2	5.7
Mansa	52.4	61.8	9.4
Moga	63.5	70.7	7.2
Muktsar	58.2	65.8	7.6
Patiala	69.3	75.3	6
Rupnagar	76.1	82.2	6.1
Sahibzada Ajit Singh Nagar	77.9	83.8	5.9
Sangrur	59.9	68	8.1
Shahid Bhagat Singh Nagar	76.4	79.8	3.4
Tarn Taran	59.9	67.8	7.9
PUNJAB	69.7	75.8	6.1

involved in agrarian activity or agricultural workers and least road connectivity of the district as compare to other districts. In 2001 and 2011 highest literacy rate is found in Hoshiarpur district, because most of the population engaged in non-agricultural activity and most of the land is affected by chaos or is a part of Kandi region which is infertile. Change in literacy rate is also present a significant picture. Significant change occurs in Mansa district which is highest in all districts 9.4 per cent but on the other hand least literacy rate change visible in Shahid Bhagat Singh Nagar which is only 3.4 per cent.

Table 2: Male-Female Literacy rate of Punjab (2011)

Districts	Total Literacy	Female	Male	Disparity index
Amritsar	76.3	72	80.1	0.06
Barnala	67.8	63.6	71.6	0.07
Bathinda	68.3	61.9	73.8	0.09
Faridkot	69.6	63.9	74.6	0.08
Fatehgarh Sahib	79.4	74.8	83.3	0.06
Firozpur	68.9	61.7	75.4	0.10
Gurdaspur	79.9	74.8	84.6	0.07
Hoshiarpur	84.6	80.3	88.8	0.06
Jalandhar	82.5	78.5	86.1	0.06
Kapurthala	79.1	74.6	83.2	0.07
Ludhiana	82.2	77.9	86	0.06
Mansa	61.8	55.7	67.3	0.10
Moga	70.7	66.5	74.4	0.07
Muktsar	65.8	59.2	71.8	0.10
Patiala	75.3	69.8	80.2	0.08
Rupnagar	82.2	76.4	87.5	0.08
Sahibzada Ajit Singh Nagar	83.8	79.2	87.9	0.06
Sangrur	68	62.2	73.2	0.09
Shahid Bhagat Singh Nagar	79.8	73.9	85.4	0.08
Tarn Taran	67.8	61.9	73.2	0.09
PUNJAB	75.8	70.7	80.4	0.07



Decadal Differences in Literacy Rates

The above table -1 presents an overall picture of literacy rate and district-wise percentage change in literacy "between" 2001 to 2011 in the state. The percentage of literates to total population in the state has gone up from 69.95% in 2001 to 76.68 % in 2011. Fig. 1 and fig. 2 give a visual impression of inter-districts variations in literacy rate in the state. The lowest literacy rate in 2001 as well as in 2011 has recorded in Mansa district 52.4 per cent and 61.8 per cent respectively. It is because of the most population of district

3.1 Gender Disparities in Total Literacy Rate

Male Female literacy variation of any region presents a mental level and social status of any society. Literacy rate of Punjab is more than nation average national average is 74.04 per cent and state average is 75.8 percent. But male literacy rate is lower than nation average national average is 82.14 per cent but Punjab male literacy rate is 80.4 percent. Punjab female literacy rate is higher than national level. National average is 65.46 per cent and Punjab female literacy rate is 70.7 per cent. There is significant variation between male and female literacy rate which is 80.4 per cent male and 70.7 percent female. All Doaba region of Punjab has more than 80 per cent male literacy rate and Patiala, S.A.S nagar, Rupnagar, Ludhiana and Fatehgarh Sahib from Malwa region and Amritsar and Gurdaspur district have more than 80 per cent literate male. Literacy rate of female presented a development picture of any region. Least developed district of Punjab has lowest in female literacy rate which is Mansa with 55.7 per cent. Table No. 3 presents the gender based disparity in literacy difference in literacy rates by sex for 2011. It is quite evident from the table that the gender disparity in literacy rate 2011 censuses had narrowed down in all the districts of study area. Gender disparity of Punjab is 0.07. Gender disparity is highest in Ferozpur and Mansa districts which are 0.10 and Bathinda, Sangrur and Tarn Taran has also higher disparity (0.09) rate than other

districts. Disparity rate is lowest in Ludhiana (0.06) S.A.S nagar (0.06) Amritsar (0.06) Fatehgarh sahib (0.06) Hoshiarpur and Julander districts, and other districts included in moderate disparity rate.

Table 3: Urban-Rural Literacy rate of Punjab (2011)

<i>Districts</i>	<i>Urban %</i>	<i>Rural %</i>
Amritsar	74.58	59.64
Barnala	65.78	57.90
Bathinda	70.45	55.46
Faridkot	69.79	57.38
Fatehgarh Sahib	74.24	69.53
Firozpur	69.98	56.95
Gurdaspur	78.59	68.12
Hoshiarpur	78.77	74.77
Jalandhar	77.03	70.53
Kapurthala	76.40	67.73
Ludhiana	75.28	70.12
Mansa	67.43	51.68
Moga	70.36	60.90
Muktsar	67.29	54.66
Patiala	75.72	60.83
Rupnagar	77.50	72.00
Sahibzada Ajit Singh Nagar	77.67	69.68
Sangrur	66.52	57.83
Shahid Bhagat Singh Nagar	74.04	70.98
Tarn Taran	67.74	58.30
Punjab	74.14	63.41

3.2 Urban Rural Literacy rate of Punjab

India is a country of villages and Punjab is also lives in villages. There is significant variation between literacy rate of rural and urban Punjab. Urban population is less literate than nation average and same in the case of rural literacy rate. Literacy rate of urban India is 85.0 per cent and literacy rate of urban Punjab is 74.14 per cent on the other hand rural literacy rate of Punjab is 63.41 per cent which is less than national average is 68.9. There is more need to concentrate in rural areas for the development of education infrastructure and teaching faculty.

Table 4: Urban Literacy rate of Punjab

<i>Districts</i>	<i>Female %</i>	<i>Male %</i>	<i>Disparity index</i>
Amritsar	71.92	76.91	0.05
Barnala	62.17	68.89	0.06
Bathinda	65.49	74.70	0.07
Faridkot	65.26	73.75	0.07
Fatehgarh Sahib	70.71	77.20	0.06
Firozpur	65.76	73.66	0.07
Gurdaspur	75.17	81.50	0.05
Hoshiarpur	76.42	80.93	0.04
Jalandhar	74.29	79.44	0.05
Kapurthala	73.03	79.36	0.05
Ludhiana	71.92	78.17	0.05
Mansa	62.79	71.56	0.07
Moga	67.33	73.06	0.05
Muktsar	62.49	71.55	0.08
Patiala	72.41	78.67	0.05
Rupnagar	74.22	80.47	0.05
SahibzadaAjit Singh Nagar	74.74	80.28	0.05
Sangrur	62.00	70.54	0.07
ShahidBhagat Singh Nagar	70.25	77.55	0.06
Tarn Taran	64.10	70.97	0.06
PUNJAB	70.72	77.12	0.05

3.3 Gender Disparities in urban Literacy Rate

The above Table No. 4 shows the gender disparities in urban literacy rate. The average disparity rate of Punjab is 0.05 and there is not much variation within different districts among male female disparity rate in urban areas. Male female disparity is highest in Muktsar district with 0.08 disparity index and most of the districts are same to the state average disparity index which is 0.05. There is not much variation in gender disparities in urban literacy rate among districts. All districts are varying between 0.05 to 0.08 disparity index and most of the districts lie in 0.05 and 0.06 disparity index.

Table 5: Rural Literacy rate of Punjab

<i>Districts</i>	<i>Female %</i>	<i>Male %</i>	<i>Disparity index</i>
Amritsar	55.29	63.57	0.08
Barnala	54.26	61.11	0.07
Bathinda	49.58	60.60	0.10
Faridkot	52.46	61.82	0.09
Fatehgarh Sahib	65.47	73.13	0.06
Firozpur	50.17	63.06	0.12
Gurdaspur	63.80	72.08	0.07
Hoshiarpur	71.16	78.28	0.06
Jalandhar	66.57	74.30	0.06
Kapurthala	63.81	71.37	0.07
Ludhiana	65.84	73.97	0.07
Mansa	46.18	56.52	0.10
Moga	57.13	64.26	0.07
Muktsar	48.85	59.89	0.10
Patiala	55.36	65.70	0.09
Rupnagar	66.55	77.01	0.08
Sahibzada Ajit Singh Nagar	64.60	74.09	0.08
Sangrur	52.62	62.45	0.09
Shahid Bhagat Singh Nagar	65.74	76.02	0.08
Tarn Taran	53.28	62.83	0.09
Punjab	58.65	67.73	0.08

Source: census of India

3.4 Gender Disparities in Rural Literacy Rate:

The above given table shows the gender disparities in rural Punjab. Gender disparity in rural areas is higher than urban Punjab. Disparity index of rural Punjab is 0.08 which is higher than 0.05 urban Punjab. Gender disparities in rural Punjab is highest in south west Punjab which include Muktsar, Bathinda, Mansa and Firozpur districts. South west region of Punjab is least developed because of semi arid conditions. Male female disparity is highest in rural Mansa districts which is 0.10 highest disparity reflects the least development of the districts.

4. Conclusion

The analysis clearly indicates that there is an undoubtedly significant wide range of variations and narrowed down over the period of ten years in gender disparities in literacy rate between 2001 and 2011 censuses among the districts of Punjab. It is also observed from the analysis that the difference in literacy rate depicts high among female compared to male in all the districts of the study area. The observations further added that the gender disparities in the western and southeastern districts are relatively high as compared to the northern and eastern districts of command area. Literacy rate of Punjab is more than national average

on the other hand male literacy rate is lower and female literacy rate is higher than national average. Gender disparity is highest in Firozpur and Mansa districts with 0.10 according to disparity index. Rural urban literacy rate is lower than national average. Gender disparity in urban area of Punjab is less than rural Punjab. In rural Punjab Mansa has highest in disparity index.

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Author Profile



Imrozpreet Singh (M.Sc, M.phil Geography)



Ram Sharn A.P. B.F.C. Bathinda