

# "Spatial Disparities in the Literacy of Nashik District: A Geographical Perspective"

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## Abstract

*This research explores spatial disparities in literacy rates across Nashik district, emphasizing the influence of geographical and socio-economic factors on educational attainment. Nashik, a district in Maharashtra with diverse terrain ranging from urban centers to tribal-dominated and rural regions, presents significant variations in literacy. Using secondary data from the Census of India, district handbooks, and research articles, the study identifies critical patterns of disparity. Urban areas, particularly Nashik city, exhibit higher literacy rates due to better educational infrastructure, accessibility, and socio-economic advantages, while rural and tribal regions such as Peth and Surgana lag significantly. A notable gender gap persists, with female literacy rates markedly lower, especially in remote and socio-economically marginalized communities. Topographical challenges and inadequate infrastructure in hilly and tribal areas further exacerbate these disparities. The study underscores the need for targeted interventions to bridge the literacy divide. Recommendations include developing educational infrastructure in underprivileged regions, promoting gender equality through awareness campaigns and scholarships, and utilizing technology to deliver education in remote areas. Addressing poverty and enhancing livelihood opportunities in rural areas are also critical to improving access to education. Findings highlight the importance of region-specific strategies, including mobile schools and digital platforms, to reach underserved populations. This geographical analysis of literacy in Nashik district emphasizes the urgent need for inclusive educational policies and localized solutions to ensure equitable human development.*

**Key words:** - literacy, illiterate, Disparity, Gender Gap, Population

## Introduction:-

Literacy is essential for the overall development of a region. It enhances the quality of human resources and drives fundamental changes in the socio-economic development of society. It serves as a key indicator for measuring human resource development of the study region. (Pawar, January 2016) Education is widely acknowledged as a major contributor to both national and individual development. Literacy is an essential measure of human development and quality of life. (Hande 2020) According to the Indian census, a person is considered literate if they can read and write with understanding in any language. It does not consider the length of schooling as a valid measure of educational accomplishment and rejects the ability to merely read and write one's name in their native language as a sufficient criterion for literacy. (G.T, 1969)

Literacy is an index of human development and quality of human life Any person above the age of seven years, who can read and write in any language is treated as literate (Husain, 2011)

Literacy rate of the population is defined as the percentage of literates in the age group seven years and above (Census, 2011). Social and economic growth are significantly influenced by literacy, which promotes both individual and collective advancement. It improves decision-making, lessens inequality, and encourages creativity, health, and interaction among cultures. The spatial distribution of literacy is important for regional growth because it serves as a basis for education and skills that are essential for sustainable development. Literacy is many times considered as a fairly relevant index of the socio-economic development of a region. The variations in literacy, many times indicate, the place of which a society is getting transform. A level of literacy influences to a significant extent, the socio economic development of a region. Literacy also influences fertility, mortality, and economic composition of the population of a region. Without, an analysis of literacy pattern, therefore, a study of the population geography of a region is not complete (T. G. Ghatage, 2023)

This research aims to analyze the spatial disparities in literacy rates across Nashik district, using secondary data from the Census of India, district handbooks, and academic studies. The study highlights the influence of geographical and socio-economic factors on literacy levels and proposes targeted strategies for addressing these disparities. By employing a geographical perspective, this paper contributes to the understanding of literacy as a spatial phenomenon and underscores the importance of region-specific policy measures to promote inclusive educational development in Nashik district.

### **Objectives of the study:-**

To analyze and evaluate the spatial disparities in literacy levels across the Nashik district

To analyze the disparity in literacy rates between males and females in the study region.

### **Study area:-**

As per the Indian Census 2011, the population of India was 1,210,854,977 with 623, 724, 248 males and 586,469, 174 females. The current total literacy rate in the country is 74.04%, with male literacy at 82.14% and female literacy at 65.46%.The population density is 382 people per square kilometer. In terms of the sex ratio, there are currently 943 females per 1000 males, and the child sex ratio is 914 females per 1000 males. As per the census 2011, Nashik had a population of 6,107,187 people in 2011, with 3,157,186 men and 2,950,001 females, respectively, according to 2011census. Nashik had a population of 4,993,796 people according to the 2001 census, with 2,590,912 men and 2,402,884 women. Nashik has a population density of 393 people per square kilometer in 2011. In 2011, Nashik had an average literacy rate of 82.31, up from 74.36 in 2001. When looking at the data by gender, the male and female literacy rates were 88.17 and 76.08, respectively. In India, the average sex ratio per 1000 men is 940. According to the census, the child sex ratio was 890 girls for every 1000 boys. the Nashik district subdivided into 15 tahsils, which as , Baglan, Kalwan, Chandwad, Niphad, Sinnar, Yeola, Malegaon, Nandgaon, Nashik, Igatpuri, Dindori, Peint, Surgana, Deola Trimbakeshwar.

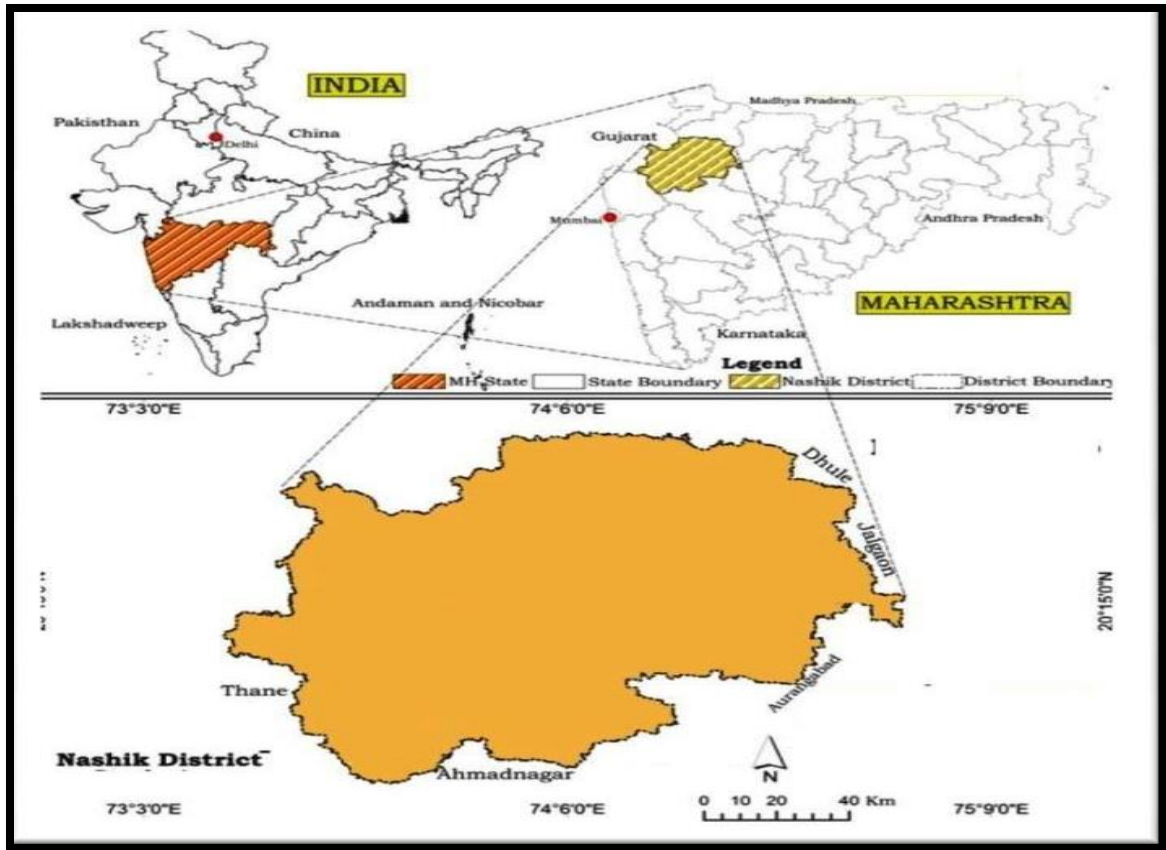


Fig.01. Location Map of Study Area

### Research Methodology

The methodology for this study focuses on analyzing spatial disparities in literacy rates within Nashik district through a geographical and socio-economic perspective. The research is descriptive in nature, relying on secondary data sources and employing spatial and statistical techniques for analysis. Secondary data is utilized to examine literacy patterns across Nashik district. Census of India (2011) Provides data on literacy rates, gender-specific literacy, urban-rural demographics, and socio-economic indicators. District Statistical Handbook Supplies information on infrastructural development, educational institutions, and population distribution across the district. Research Articles and Reports and Relevant academic studies and policy documents are reviewed to contextualize the findings and identify factors influencing literacy trends.

### Result and Conclusion:

**Table 1. Demographic profile of population Nashik district of Maharashtra state according to the census, 2001-2011.**

Description	2011	2001
Actual population	6107187	4993769
Male	3157186(51.7%)	2590912(51.88%)
Female	2950001(48.3%)	2402884(48.11%)
Population growth	22.30%	29.66%

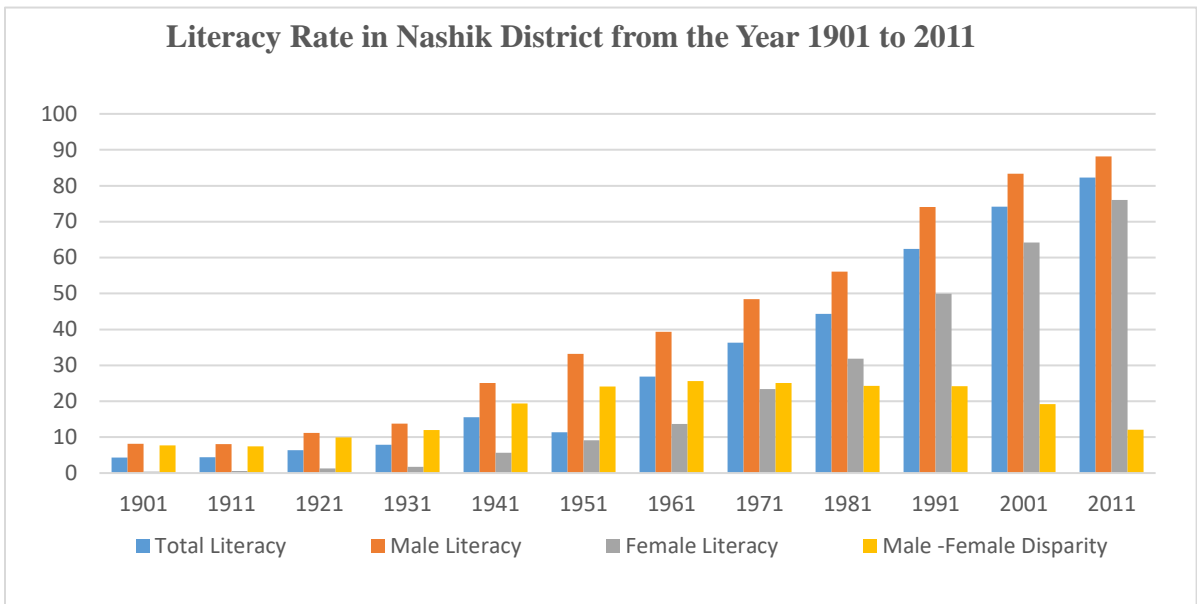
Sex ratio	934	922
Child sex ratio	890	920
Literacy	82.31	83.65
Male literacy	88.17	83.65
Female literacy	76.08	64.35
Area(km <sup>2</sup> )	15530	15530
Density/km <sup>2</sup>	393	322
Proportions to total population of Maharashtra	5.43%	5.15%
Total child population	827935	789398
Male population (0-6Age Group )	438050	411061
Female population (0-6Age Group )	389885	378337
Child proportion (0-6Age Group )	13.56%	15.81%
Boys proportion (0-6Age Group )	13.87%	15.87%
Girls proportion (0-6Age Group )	13.22%	15.75%
<i>Sources: Census of India, 2001-2011</i>		

Between 2001 and 2011, Nashik district experienced significant demographic changes. The population grew by 22.30%, reaching 6,107,187 in 2011, though at a slower rate than the previous decade's 29.66%. The sex ratio improved markedly from 922 females per 1,000 males in 2001 to 934 in 2011, signaling better gender equity, yet the child sex ratio declined from 920 to 890, highlighting persistent challenges. Literacy rates showed progress, particularly for females, with female literacy rising from 64.35% to 76.08%, narrowing the gender gap, while male literacy increased to 88.17%. Despite this, overall literacy dipped slightly to 82.31%, likely due to population growth outpacing educational initiatives. The population density rose from 322 to 393 persons per square kilometer, reflecting growing urban pressures. Additionally, the child population proportion decreased from 15.81% to 13.56%, suggesting demographic shifts toward lower birth rates or an aging population. Nashik's contribution to Maharashtra's total population increased from 5.15% to 5.43%, underlining its growing importance in the state. These trends illustrate progress in gender equity and education but highlight challenges in child gender disparity and managing urbanization.

**Table 2. Literacy rate in Nashik District from the year 1901 to 2011**

Sr.No	Year	Nashik District	Male	Female	Male -Female Disparity
1	1901	04.31	08.13	00.39	07.74
2	1911	04.37	08.08	00.60	07.48
3	1921	06.36	11.22	01.31	09.91
4	1931	07.89	13.79	01.77	12.02
5	1941	15.57	25.07	05.70	19.37
6	1951	11.40	33.20	09.10	24.10
7	1961	26.89	39.36	13.71	25.65
8	1971	36.30	48.45	23.37	25.08
9	1981	44.36	56.09	31.85	24.24
10	1991	62.37	74.07	49.89	24.18
11	2001	74.15	83.37	64.16	19.21

12	2011	82.31	88.17	76.08	12.09
Sources: District census handbook of Nashik District 2001-2011, Census of India, 2001-2011					



### Spatial Changes of Literacy in Nashik District:

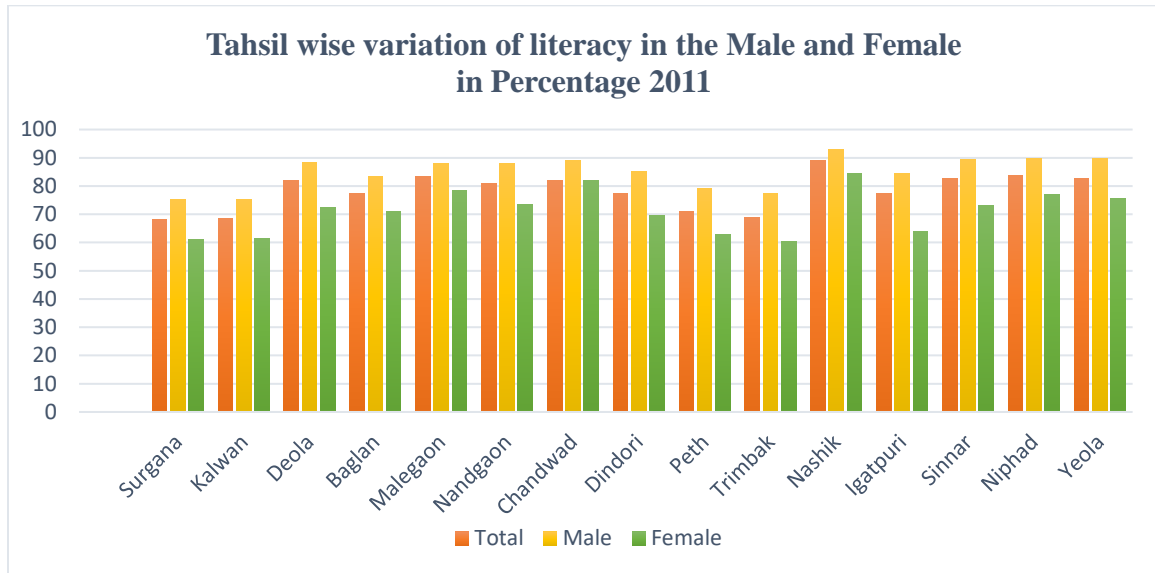
The literacy trends in Nashik District from 1901 to 2011 reflect remarkable progress, but they also underscore persistent socio-cultural and geographical disparities. Starting from a literacy rate of just 4.31% in 1901, the district achieved 82.31% by 2011, with marked growth in the latter half of the 20th century. Male literacy consistently exceeded female literacy throughout the period, with male rates rising from 8.13% in 1901 to 88.17% in 2011, while female literacy grew from an extremely low 0.39% to 76.08%. The stark male-female literacy gap, which peaked at 25.65% in 1961, highlights the systemic exclusion of women from education due to cultural norms, early marriages, and prioritization of boys' education.

The post-independence era (1950 onward) saw significant improvements, particularly after the introduction of government policies aimed at universal education, such as the Right to Education and gender-focused schemes like Beti Bachao Beti Padhao. These efforts contributed to narrowing the male-female literacy disparity to 12.09% by 2011, indicating progress in female education but also revealing persistent challenges, especially in rural and tribal areas where socio-economic barriers remain entrenched. Analyzing decadal changes, the growth in literacy was relatively slow from 1901 to 1941, with increases of only 3.58% over 40 years, reflecting the lack of infrastructure, limited government focus, and socio-economic constraints of colonial India. Significant improvements began post-1961, as literacy rates rose sharply by 46.01% from 1961 to 2011. This rapid growth was fueled by increased public investment in education, infrastructure development, and awareness campaigns. Male literacy consistently grew faster in the early decades, reflecting male-centric policies and societal priorities, whereas female literacy gained momentum later due to focused interventions. The analysis also reveals substantial spatial disparities. Urban areas, particularly Nashik city, benefitted from better infrastructure, economic opportunities, and awareness, achieving literacy rates exceeding 88%. In contrast, tribal-dominated tahsils like Surgana and Peth lagged significantly, with

rates around 68-71%, reflecting poor access to schools, insufficient teacher availability, and socio-economic backwardness. The urban-rural differential in literacy highlights how geographic and economic factors exacerbate inequality, with urban areas benefitting from better resource allocation.

**Table No. 3 - Tahsil wise Percentage of literates to total population of Nashik District (2011)**

Sr. No.	Tahsil	Population	Sex Ratio	Total	Male	Female	Male –Female Disparity	Rural	Urban
1.	Surgana	175,816	1,001	68.15	75.34	61.01	14.33	67.45	86.35
2	Kalwan	208,362	963	68.50	75.39	61.41	13.98	68.50	N.U.A.
3	Deola	144,522	919	81.96	88.19	72.25	15.94	81.96	N.U.A.
4	Baglan	374,435	939	77.45	83.51	71.07	12.44	76.03	89.73
5	Malegaon	955,594	949	83.39	88.08	78.48	9.6	77.46	87.18
6	Nandgaon	288,848	932	80.91	88.01	73.34	14.67	75.86	89.59
7	Chandwad	235,849	932	82.09	88.93	81.95	6.98	81.36	88.12
8	Dindori	315,709	955	77.52	85.08	69.68	15.4	77.52	N.U.A.
9	Peth	119,838	988	71.03	79.01	62.94	16.07	71.03	N.U.A.
10	Trimbak	168,423	975	68.91	77.23	60.37	16.86	67.21	89.61
11	Nashik	1,755,491	904	88.98	92.97	84.59	8.38	88.98	89.80
12	Igatpuri	253,513	965	77.43	84.53	63.98	20.55	74.39	87.93
13	Sinnar	346,390	924	82.68	89.56	73.15	16.41	81.59	89.56
14	Niphad	493,251	936	83.63	89.85	77.08	12.77	82.51	89.92
15	Yeola	271,146	937	82.71	89.60	75.44	14.16	80.85	88.54
	District	6107187	934	82.31	88.17	76.08	12.09	77.19	89.12
<i>Sources: District census handbook of Nashik District 2011</i>									
N.U.A- Not urban area									



**Tahsil wise variation of literacy in the Male and Female :-**

The tahsil-wise data for Nashik District highlights substantial disparities in literacy, demographics, and rural-urban differences, reflecting the complex interplay of socio-economic, cultural, and infrastructural factors. With an overall literacy rate of 82.31%, the district has made significant progress, but disparities persist. Urban tahsils like Nashik (88.98%) and Malegaon (83.39%) consistently show higher literacy rates, benefiting from better educational infrastructure, economic development, and access to resources. Conversely, tribal and rural tahsils, such as Surgana (68.15%), Trimbak (68.91%), and Peth (71.03%), lag considerably due to geographic isolation, poor infrastructure, and socio-economic challenges. These regions also exhibit the highest male-female literacy gaps, with disparities reaching 20.55% in Igatpuri and 16.86% in Trimbak, underscoring deep-rooted gender inequities fueled by cultural norms, early marriages, and limited awareness of the importance of education for women.

The rural-urban divide further compounds these issues, with urban areas achieving an average literacy rate of 89.12%, compared to 77.19% in rural regions. Urban centers, such as Nashik city, benefit from concentrated economic activities that necessitate literacy and education, whereas rural and tribal economies, largely dependent on agriculture and manual labor, offer fewer incentives for education. Tribal tahsils, with high poverty rates and poor transportation networks, face additional challenges in ensuring regular school attendance and retention, particularly among girls. Furthermore, the sex ratio data indicates a more balanced gender distribution in tribal tahsils like Surgana (1,001) and Peth (988), yet the high literacy gaps suggest that cultural norms, rather than demographic factors, significantly hinder female education in these regions. Despite these challenges, some tahsils, such as Chandwad (82.09%) and Niphad (83.63%), exhibit relatively balanced male-female disparities (6.98% and 12.77%, respectively), reflecting the positive impact of localized interventions and better educational outreach. However, even in these areas, rural sections face barriers like limited school facilities, inadequate teacher-student ratios, and a lack of secondary and higher education opportunities, which constrain overall development.

**Conclusion:-**

This study highlights the spatial disparities in literacy across Nashik district, underscoring significant variations influenced by geographic and socio-economic factors. Urban areas, such as Nashik city,

exhibit higher literacy rates due to better infrastructure and economic opportunities, while rural and tribal regions lag, hindered by inadequate resources and cultural barriers. The persistent male-female literacy gap, particularly in tribal tehsils, reflects entrenched gender inequities. To bridge these gaps, region-specific interventions, such as improving educational infrastructure, promoting gender equality, and leveraging technology, are crucial. Addressing these disparities is vital for equitable development and enhancing the district's socio-economic growth.

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