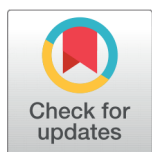


## RESEARCH ARTICLE



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## Temporal and spatial variation of literacy: A case study of Tumkur District

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### Abstract

Literacy is considered as a fairly index of socio-Cultural and economic development of society / Population. Literacy is essential for eradicating poverty and mental isolation for cultivating peaceful and friendly relation at areas and area levels for permitting a free play of demographic process. Tumkur district is situated between 12°45' and 14°20' North latitudes and 76°20' and 77°31' East longitudes. The district has irregular shapes with peculiar features. The North Eastern part of the district is totally detached from the remaining part of the district. To know talukwise literacy in 2001 & 2011. To identify the change in literacy between 2001 & 2011. The methodology adopted to study the literacy characteristics of Tumkur districts with the help of secondary data collected from various departments of government. Simple statistical technology like diagrams, graphs and maps will be used to analyze the population aspects. However several maps will be prepared to show the location and physical aspects and various population characteristics of the study area with the help of GIS technology. Literacy of the district is characterised with sharp differences between the literacy rate of males & females and also rural & urban areas. Table represents the literacy level of population in India, Karnataka and Tumkur district according to 2001 and 2011 census. The total literacy level of India was 64.8% in 2001 and in 2011 it became 73.0% with the increase of 8.1%. Total male literacy was 75.3% in 2001 and 80.9% in 2011, which denotes a growth of 5.6%.

**Keywords:** Literacy; economic development; population

### Introduction

Literacy is considered as a fairly index of socio-Cultural and economic development of society / Population. Literacy is essential for eradicating poverty and mental isolation for cultivating peaceful and friendly relation at areas and area levels for permitting a free play of demographic process. Trend in Literacy is considered an index of the place at which the socio-economic transformation of a society is taking place. Thus, the analysis of literacy, its pattern and trends is immense

significance.

United Nations Educational, Scientific and Cultural Organization (UNESCO) defines education as the capability to learn through the use of languages, images, figures, numbers, electronics media etc., to comprehend, to use, to communicate, to solve mathematical and general problems, to create, to understand cultural symbols associated to one or many societies and to apply learned skills wherever necessary. Literacy is the combination of both tangible and

intangible skills, human can acquire and should acquire for individual and societal development. Literacy in India has shown tremendous growth since independence, which is its one of the primary socio-economic progress indicators. Given its large young demography, growth of literacy will decide the fate of the country in the global social, political and economic landscape of near future. At the end of British rule, the overall literacy rate of the country was mere 12%, it has grown six fold since independence.

Different countries adopted different types of calculation of literacy rate. The population of below 6 years of age is not capable of acquiring literacy skills. Hence the population of below 6 years of age is not considered for the calculation of literacy rate in India.

Literacy rate in India has shown tremendous growth since independence, which is its one of the primary socio-economic progress indicators. Given its large young demography, growth of literacy rate will decide the fate of the country in the global social, political and economic landscape of near future. The total literacy of India stands at 73% whereas rural literacy is 67.8% and urban literacy is 84.1% as per 2011 census. It has grown six fold since independence, as at the end of British rule, the overall literacy rate of the country was mere 12%. In the state of Karnataka, the total literacy rate of 2011 stands at 75.4% while rural literacy is 68.7% and urban literacy is 85.8%. All the three literacy rates of Karnataka are higher than national average, which is although not commendable still noteworthy achievement for the state.

$$\text{Literacy rate} = \frac{\text{Total number of Literates}}{\text{The population of below 6 years of age}} \times 100$$

## Study area

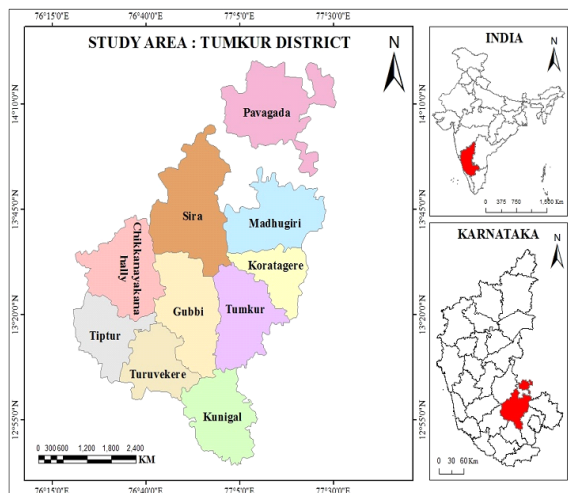


Fig. 1. Study Area

Tumkur district is situated between 12°45' and 14°20' North latitudes and 76°20' and 77°31' East longi-

tudes. The district has irregular shapes with peculiar features. The North Eastern part of the district is totally detached from the remaining part of the district. This place named Pavagada taluk and surrounded by the Andrapradesh, western part of this taluk with very short stretch to touches the Chitradurga district.

The district is bounded on the north by Annantpur district by Andrapradesh, on the south by Mandya district on the east by Chikkaballapur, Bangalore rural and Ramanagar district and west bounded by Hassan and Chitradurga district of Karnataka state. The midwest part of the district too touches Chikkamagalur district. The district has an area of 10,597 km<sup>2</sup>, accounts 5.5% of the total geographical area of the Karnataka state.

## Objectives

To know talukwise literacy in 2001 & 2011. To identify the change in literacy between 2001 & 2011.

## Methodology

The methodology adopted to study the literacy characteristics of Tumkur districts with the help of secondary data collected from various departments of government. Simple statistical technology like diagrams, graphs and maps will be used to analyze the population aspects. However several maps will be prepared to show the location and physical aspects and various population characteristics of the study area with the help of GIS technology.

## Data analysis

### Literacy rate in 2001

The population of Tumkur district above the age of 6 years is 2276549 persons as per 2001 census, out of which rural population is 1829360 and urban population is 447189. Total male population is 1155722 while the female population is 1120827. Rural male and female populations are 924878 and 904482 respectively. In case of urban area population after negating children below the age of six is 230844 males and 216345 females.

Table represents the literacy rate among population above the age of 6 years as per 2001 census. Total literates of Tumkur in absolute number are 1525485, which accounts for 67.0% of the total population. Male literacy is 76.8% while total female literacy is 56.9%. In the rural area of Tumkur district, total literacy rate stands at 63.4% of the total population out of which male literacy is 74.2% and female literacy is 52.3%. In comparison, urban literacy rates are higher as, total literacy of urban areas of Tumkur district is 81.8% while male and female literacy rates are 86.9% and 76.3% respectively. The total, rural and urban all the three literacy rates of Tumkur district are

**Table 1.** Literacy level in India, Karnataka and Tumkur

	Literacy(%) 2001			Literacy (%) 2011			Difference		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
India T	64.8	75.3	53.7	73.0	80.9	64.6	8.2	5.6	11.0
India R	58.7	70.7	46.1	67.8	77.1	57.9	9.0	6.4	11.8
India U	79.9	86.3	72.9	84.1	88.8	79.1	4.2	2.5	6.3
Karnataka T	66.6	76.1	56.9	75.4	82.5	68.1	8.7	6.4	11.2
Karnataka R	59.3	70.4	48.0	68.7	77.6	59.7	9.4	7.2	11.7
Karnataka U	80.6	86.7	74.1	85.8	90.0	81.4	5.2	3.4	7.2
Tumkur T	67.0	76.8	56.9	75.1	82.8	67.4	8.1	6.0	10.4
Tumkur R	63.4	74.2	52.3	71.7	80.5	62.7	8.3	6.2	10.4
Tumkur U	81.8	86.9	76.3	87.3	90.9	83.7	5.5	4.0	7.3

(Source: Census of India)

higher than national average and very close to the literacy rate of the state.

### Literacy rate in 2011

The total population of Tumkur district above the age of six years is 2413238, out of which rural population is 1876217 and urban population is 537021. Total male population above the age of six is 1214923 while the female population is 1198315. Rural male and female populations are 944721 and 931496 respectively. In case of urban areas population after negating children below the age of six is 270202 males and 266819 females.

The literacy rate among population above the age of 6 years as per 2011 census is depicted in table. Total literacy of Tumkur in absolute number is 1813391, which accounts for 75.1% of the total population. Male literacy is 82.8% while total female literacy is 67.4%. In rural Tumkur, total literacy rate stands at 71.7% of the total population out of which male literacy is 80.5% and female literacy is 62.7%. In comparison, urban literacy rates are higher as, total literacy of urban Tumkur is 87.3% while male and female literacy rates are 90.9% and 83.7% respectively

### Literacy comparison between 2001 and 2011

Literacy of the district is characterised with sharp differences between the literacy rate of males & females and also rural & urban areas. Table represents the literacy level of population in India, Karnataka and Tumkur district according to 2001 and 2011 census. The total literacy level of India was 64.8% in 2001 and in 2011 it became 73.0% with the increase of 8.1%. Total male literacy was 75.3% in 2001 and 80.9% in 2011, which denotes a growth of 5.6%. The literacy growth of female population was more impressive during the period 2001 to 2011 as the increase in literacy rate is 11.0%. In 2001 female literacy was 53.7% and in 2011 it became 64.6%. In rural India, the literacy rates of male, female and overall

population are below the corresponding total literacy rates of the country in case of both 2001 and 2011 census, but the literacy growth rate is more than national average. The literacy rates of urban India in both 2001 and 2011 census are higher than corresponding national averages, but the literacy growth rate is lower. The tendency is continued in Tumkur district. The literacy rate of Karnataka and Tumkur are better than the rate of India. The total, male and female literacy rates are higher than national average in both Karnataka and Tumkur. As per 2001 census, the total literacy rate of urban Tumkur is 81.8% and it improved to 87.3% in 2011. The growth of literacy in the urban areas of the district is better than the national average of urban India. Similarly, the male and female literacy rate of urban area of Tumkur district performed better, when compared to the national average of urban India.

The literacy rate among males and females varies significantly in both rural & urban areas. Usually male literates are more than females, male literacy rate is 75.1% and female literacy rate is 67.4%, the difference between these two is about (15%) in the district. The difference is gradually decreasing from the last decade, from 20% in 2001 to 15% in 2011.

### Taluk wise literacy rate in 2001

Tumkur district has 10 taluks in its fold. Of the 10 taluks Tumkur taluk has the district head quarter and recorded highest total literacy rate (75.1%), followed by Tiptur with 75%. Turuvekere 71.4%, Chikkanayakanahalli 70.2% and Gubbi with 67.5% literacy and rest of the taluks are below the national average literacy (64.8%) in the year 2001. There is a wide gap in level of literacy, among males & females and between rural and urban areas, in all the taluks of the district. With the better agricultural development, rural area of Tiptur taluk is placed the first with 72.5% literacy, among the rural areas of all taluks in the district.

**Table 2.** Taluk wise comparison of literacy in Tumkur district

Taluks		Literacy (%) 2011			Literacy (%) 2001			Decadal Change (%) (2001-2011)		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
C.N. Halli	Total	76.6	84.0	69.3	70.2	79.5	60.8	6.4	4.5	8.5
	Rural	74.7	82.6	66.8	69.0	78.6	59.3	5.7	4.0	7.5
	Urban	85.6	90.6	80.9	80.3	87.5	73.0	5.4	3.1	7.8
Sira	Total	71.9	80.2	63.3	62.4	73.1	51.4	9.4	7.1	11.9
	Rural	69.2	78.6	59.6	59.7	71.3	47.8	9.5	7.3	11.9
	Urban	83.8	87.5	80.0	76.3	82.0	70.3	7.4	5.5	9.7
Pavagada	Total	66.6	76.6	56.5	56.5	68.6	44.0	10.0	8.0	12.5
	Rural	64.6	75.1	54.0	54.1	66.7	41.0	10.5	8.3	13.0
	Urban	81.8	88.3	75.4	75.3	83.2	67.0	6.5	5.2	8.3
Madhugiri	Total	69.9	79.3	60.3	61.2	72.7	49.4	8.6	6.6	11.0
	Rural	68.0	78.1	57.9	59.2	71.2	46.7	8.8	6.8	11.2
	Urban	84.8	89.4	80.2	79.7	85.7	73.4	5.1	3.7	6.8
Koratagere	Total	71.9	80.1	63.6	62.7	73.3	51.8	9.2	6.8	11.8
	Rural	70.6	79.1	62.0	61.2	72.1	49.9	9.4	7.0	12.0
	Urban	85.0	89.8	80.3	79.4	86.5	72.1	5.7	3.4	8.2
Tumkur	Total	82.6	87.8	77.1	75.0	82.3	67.1	7.6	5.6	10.1
	Rural	76.1	83.8	67.7	66.7	76.8	55.8	9.3	6.9	11.9
	Urban	88.9	91.8	85.9	83.8	88.1	79.1	5.1	3.8	6.8
Gubbi	Total	74.7	81.8	67.5	67.5	76.7	58.2	7.2	5.1	9.4
	Rural	73.6	81.0	66.1	66.4	75.8	56.7	7.2	5.1	9.4
	Urban	89.8	93.2	86.4	84.4	89.2	79.4	5.4	4.0	7.1
Tiptur	Total	82.1	88.4	75.7	75.0	83.7	66.2	7.0	4.7	9.6
	Rural	79.8	87.2	72.4	72.5	82.4	62.5	7.3	4.8	9.9
	Urban	88.3	91.7	84.9	82.9	87.8	77.7	5.4	3.9	7.1
Turuvekere	Total	77.3	85.8	69.1	71.4	81.7	61.1	6.0	4.1	7.9
	Rural	76.1	84.9	67.4	69.8	80.6	59.1	6.3	4.3	8.3
	Urban	89.0	93.5	84.6	85.6	90.7	80.1	3.5	2.8	4.5
Kunigal	Total	68.7	78.2	59.3	61.3	72.0	51.0	7.3	6.2	8.3
	Rural	65.9	76.3	55.7	58.8	70.1	48.0	7.0	6.1	7.6
	Urban	84.8	89.1	80.5	78.6	84.3	72.5	6.3	4.7	7.9

(Source: Census of India Publication, 2001&amp; 2011)

### Taluk wise literacy rate in 2011

Similarly, literacy differentials also exist in the district in 2011. Economically developed taluks namely, Tumkur, Tiptur Turuvekere and Chikkanayakanahalli are recorded the total literacy above the national average 73%. Tumkur taluk with 82.6% literacy occupy the first place and separable border taluk Pavagada has least literacy with 66.6% among the taluks of the district. Exept Tumkur taluk, the gap between males & females literacy rate is more than 15% in all the taluks and it is more widen (19.9%) in Pavagada taluk. Usually, Tumkur & Tiptur taluks have more than 87% male literates. Highest rural male literacy is recorded in Tiptur taluk with 87.2%, whereas highest urban male literacy is recorded in Turuvekere taluk with 93.5%. Generally, female literacy is more in urbanised

areas, so that Tumkur taluk with 77.1% female literacy occupy the first place, followed by Tiptur taluk with 75.7%. Female literacy in rural areas varies significantly, among the taluks Tiptur taluk with 72.4 % occupy the first place in the district.

Table represents the Taluk wise literacy level of population in Tumkur district according to 2001 and 2011 census. The total literacy level of the district was 67.0% in 2001 and in 2011 it became 75.1% with the increase of 8.1%. Among the taluks, literacy level of Pavagada taluk occupies the first place with rapid increase, the literacy rate of the taluk was 56.5% in 2001 and it became 66.6% with the increase of 10.0% in 2011. Total male literacy was 68.6% in 2001 and 76.6% in 2011, which denotes a growth of 8.0 %. The literacy growth of female population was more impressive during the period 2001 to 2011 as the increase in literacy rate is 12.5%. In 2001



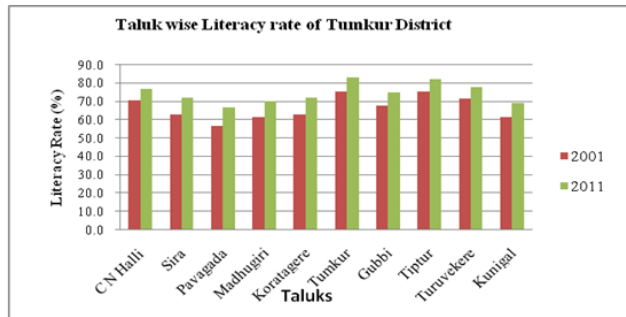


Fig. 2. Taluk wise Literacy Comparison between 2001 and 2011

female literacy was 44.0% and in 2011 it became 56.5%. In the taluk, the literacy rates of male, female and overall population are below the corresponding total literacy rates of the country in case of both 2001 and 2011 census, but the literacy growth rate is more than national average. The literacy growth rate of rural area of the taluk is higher than corresponding national averages. The literacy growth of rural population is more impressive during the period 2001 to 2011 as the increase in literacy rate is 10.5%. In Sira taluk, the total literacy in 2011 is 71.9%, while male literacy is 80.2% and female literacy is 63.3% of total population above the age of six years. In comparison, the 2001 census represents modest picture as the total literacy at that time is 62.4%, while the male literacy is 73.1% and female literacy is 51.4%. The growth rates in literacy between the time period 2001 to 2011 are 9.4%, 7.1% and 11.9% for total, male and female population respectively. Total rural literacy rate is 69.2% in 2011 in comparison to 59.7% of 2001 census. In case of male population rural literacy rate of 2011 is 78.6% and of 2001 is 71.3%, while for female population it is 59.6% and 47.8% for 2011 and 2001 census respectively. For urban areas total literacy of 2011 is 83.8% and of 2001 is 76.3%. The total literacy level of Gubbi taluk was 67.5% in 2001 and in 2011 it became 74.7% with the increase of 7.2%. Total male literacy was 76.7% in 2001 and 81.8% in 2011, which denotes a growth of 4.7%. The literacy growth of female population was more impressive during the period 2001 to 2011 as the increase in literacy rate is 9.4%. In 2001 female literacy was 58.2% and in 2011 it became 67.5%. In Turuvekere taluk, the total literacy in 2011 is 77.3%, while male literacy is 85.8% and female literacy is 69.1% of total population above the age of six years. In comparison, the total literacy of 2001 census is 71.4%, while the male literacy

is 81.7% and female literacy is 61.1%. The growth rates in literacy between the time period 2001 to 2011 are 6.0%, 4.1% and 7.9% for total, male and female population respectively. Total rural literacy rate is 76.1% in 2011 in comparison to 69.8% of 2001 census. In case of male population rural literacy rate of 2011 is 84.9% and of 2001 is 80.6%, while for female population it is 67.4% and 59.1% for 2011 and 2001 census respectively. For urban areas total literacy of 2011 is 89.0% and of 2001 is 85.6%. In rural areas of all taluks, the literacy rates of male, female and overall population are below the corresponding average literacy rates of the taluks in case of both 2001 and 2011 census, but the literacy growth rates are more than total average. The literacy rates of urban taluks in both 2001 and 2011 census are higher than corresponding taluk averages, but the literacy growth rates are lower.

Literacy growth rate is more in the taluks which have recorded low level of literacy in 2001. Among the taluks, four taluks namely Pavagada, Sira, Koratagere, and Madhugiri recorded the literacy growth rate higher than national average growth 8.15% in 2011, rest of all the taluks are recorded the literacy growth rate below the national average growth. The Literacy rate is increased between 2001 & 2011, particularly in the rural areas due to the implementation of Continue Education Centre Program, (CEC) and other educational development programmes by the government and NGOs. Awareness about literacy among the females instigates to get more benefit by the programmes and female literacy grown faster than male literacy.

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