

# SPATIAL ANALYSIS OF EDUCATIONAL FACILITIES AND QUALITY OF LIFE IN HAVERI DISTRICT

***Pujar L.M.\*., Karlawad S.L.\*\*., Badanekavi M.B.\*\*.***

*Asst. Professor in Geography, G.F.G. College Hirekerur.*

*Asst. Professor in Geography, RTES College Ranebennur.*

*RTES College Ranebennur, G.F.G. College, Mundargi.*

## **Abstract**

*People always seek ways to satisfy their needs in the immediate vicinity. Wherever man lives he has to adopt himself to his surroundings in order to meet the basic necessities, therefore the first step for a regular development programme is to provide infrastructural facilities for rural development. The development of educational facilities in rural areas will help to improve the socio-economic life of the people as about 70% of the Indian population lives in rural areas. The quality of life has been measured in terms of a variety of suitable criteria; it includes health, education, and social-economic aspects etc. These indicators among others reflect the quality of functioning of a social system and efficiency of its economic welfare. The existing educational facilities and social-economic aspects of the region are necessary for the fulfillment of the aims of the quality of life. The main objectives of the study are examining the spatial distribution of educational facilities. To identify the different levels educational facilities in the district and to suggest the priorities to reducing spatial disparities in the quality of life. A methodology is essential for understanding and achieves the desired aims and objectives. The composite Z score method is used for identifying the different levels of quality of life and summarizing the information of a large number of components. The taluka wise spatial distributions of educational facilities are categorized at three levels.*

**Key Words:** *Primary, Secondary Educational Facilities, Socio-Economic Status.*

## **Introduction**

People always seek ways to satisfy their basic needs in the immediate vicinity. Wherever man lives he has to adopt himself to his surrounding environment in order to meet the fundamental necessities therefore, the first step for a “regular development programme is to provide infrastructural facilities for rural development”. Primarily development can be perceived as reflection of personal values conditioned by societal framework in which one lives (Stohr and Taylor 1981). In the other words, development implies progressive changes in socio-economic structure of a country (Chand and Puri 1990). The development is an outcome of the efforts made for the eradication of poverty and unemployment and regional inequalities (Seer 1989). Thus, development is the state of change from a given situation of a region to become better one with a given period of time (Sharma 1989). The concept of development may be taken to imply an improvement in the material and cultural well being of the people in a region. The development of a region can be identified with an increase in the employment opportunities, availability of infrastructural facilities, amenities and services, proper distribution of resources, increase in production and investment in consumption and so on. Thus, the development refers to an improvement of all the sectors of economic, social and cultural pursuits (Verma 1993).

The development of educational facilities in rural area will help to improve the quality of life of the people as about 75% of the Indian population lives in rural areas. In educational literature “Educational development has been defined as the development of men in terms of knowledge and innovative skills. In actual practice the quality of life has been measured in terms of a variety of suitable criteria, it includes education, health, socio-economic aspects of

people and infrastructural facilities etc. These indicators among others reflect the quality of functioning of a socio-cultural system and efficiency of its economic welfare.

Education has a significant role for human development as well as social development. The role of education for social development has been recognized ever since the days of Plato. Plato believed is indispensable for the 'economic health of a structured society', as education makes citizens 'reasonable men'. Primary and secondary education is the major concern of all nations, since it is the foundation of the entire superstructure of the education and is directly related to success of socio-economic transformation, its universalization has been taken as an international challenge, a national commitment and an important concern of states over the last fifty years. School education is the base for the development of human resources.

According to the World Bank (1999) "Successful development entails more than investing in physical capital or closing the gap in capital. It also entails acquiring and using knowledge as well as closing the gaps in knowledge". India stands as an outstanding classic example of massive expansion of educational systems among the third world countries. In the post independent India, particularly since the inception of the plan era (since 1951), an educational explosion has been taken place, which may be described as an "educational miracle". The miracle is particularly important when one examines in the context of the colonial legacy.

After independence although, several plans and policies have been taken in India to drive out illiteracy completely but the disparity and discrepancy exists in many dimensions. *India's progress in providing access to quality and relevant education to its children and youth is a story of mixed results, with some remarkable outcomes and some nonstarters. While India can boast of contributing a large number of human resources to the pool of the world's most educated, scientifically and technically qualified people, it is equally appalling that the same country accounts for more than a third of the world's illiterates also (YOJANA January 2010).* This variation is mainly concerned with the inter-regional disparity in educational development.

Present study is an attempt to unfold the disparity of education which includes the whole Haveri district including its 7 taluks. Where the spatial variation regarding the educational attainments and facilities in primary and secondary level and socio-economic status, its relation with quality of life.

## Objectives

To analyze the spatial variations of primary and secondary educational facilities and socio-economic status of population in Haveri district. To identify the spatial disparities in the quality of life of people in the study area.

## Database

The present study is based on primary and secondary source of data that has been collected from district and taluka head quarters. In the present analysis, a set of fifteen indicators from primary, secondary educational facilities have been taken into account to determine the levels of educational development at one hand and socio-economic aspects on the other hand in the seven taluks of the district. In the first step, the raw data for each variable which determines the areal variations of educational facilities and socio-economic status have been computed into standard score.

Table 1. Indicators of primary, secondary and socio-economic status in Haveri district-2010-11.

Sl.No	Primary Educational Indicators	Secondary educational Indicators	Socio-Economic Indicators
1	Enrolment ratio of students/ 1000 population (X1)	Enrolment ratio of students/ 1000 population (X16)	Literacy rate (X31)
2	No. of schools/1000 population (X2)	No. of schools/1000 population (X17)	No. of
3	Students-teacher ratio (X3)	Students-teacher ratio (X18)	No. of beds/1000
4	Students- school ratio (X4)	Students- school ratio (X19)	% of urban pop to total pop (X24)
5	Teacher-school ratio (X5)	Teacher-school ratio (X20)	% of SC/ST pop (X25)
6	% of dropout children (7-14 age group (X6))	% of dropout children (7-14 age group (X21))	No. of post offices/lakh pop (X32)
7	% of SC/ST children in primary school (X7)	% of SC/ST children in primary school (X22)	No. of
8	% of availability of toilet facilities(X8)	% of availability of toilet facilities(X23)	Road length
9	% of electricity supplies(X9)	% of electricity supplies(X24)	No of agri. Co-ops/lakh pop (X33)
10	% of playground (X10)	% of playground (X25)	Average size of
11	% of ramp (X11)	% of ramp (X26)	
12	% of compound wall (X12)	% of compound wall (X27)	
13	% of drinking water facilities (X13)	% of drinking water facilities (X28)	
14	% of library facilities (X14)	% of library facilities (X29)	
15	% of computer facilities (X15)	% of computer facilities (X30)	

## Methodology

Methodology adopted in this paper is quantitative approach which is mainly used in analyzing different parameters regarding educational development in primary and secondary level. Absolute and relative measure is unable to judge the uniformity of non uniform indices or variables. So, realizing this critical situation Z-score and composite Z-score has been used to make a accuracy of judgment using the formula as:

$$Z = \frac{(X_i - X_m)}{SD}$$

Where Z - Z score or standard score value.

X<sub>i</sub> - actual value of individual unit.

X<sub>m</sub> - arithmetic mean of the given number of data set.

SD - standard deviation of the given numbers of data set.

To achieve objectives the relevant method of quantitative analysis has been employed. The below variable are grouped into three broad categories of primary and secondary educational development and socio-economic development. Finally all these three components aggregated to find out the levels of quality of life.

## Study Area

Haveri district has been named after the district head quarter "Haveri" city with creation of the new district in 1997 with Haveri as the head quarters. It lies between parallels of latitudes 14° 19' to 15° 9' North and longitudinal extension 75° 1' to 75° 50' East covering the geographical area of 4848 sq km. It is bounded on the North by Dharwad and Davangere

district in the South. Gadga district in the East and Shimoga and North Canara district in the West. The district has been divided into 7 taluks – Byadagi, Hangal, Haveri, Hirekerur, Ranebennur, Savanur and Shinggava. Haveri district as part of Deccan trap has undulating topography and covered by black and red soils. It lies in the basin of river Tungabhadra flows in the south and eastern borders of the district and Varda which flows in the middle of the district and form west to east. The total population of the district is 14.39 lacs out of which 51.25% are males and 48.74% are females (Census 2011). Total literacy rate in the district is 77.6% which is above the state average of 75.61%. Male literacy rate 84.2% and literacy rate among females is 70.7%. Economically the study area is well developed in terms of good agricultural practices and lack of development in industrialization and tourism.

### Development of Education in Haveri District

Haveri is one of the developing district of Karnataka state regarding educational development, especially in literacy rate. Although it is observed that complete literacy has not been achieved and this has for reaching socio-economic impacts. Enrolments in schools have improved substantially in recent years, mainly due to the significant implementation of SSA and RMSA but the retention rate is poor and only a fraction of enrolled students completes even the primary classes. Completions of primary and secondary levels are still lower substantial gender biasness in both, access to and completion of education is a major cause of concern. Wide regional variation exists even within this sub-standard performance of the basic education system.

### Spatial Distribution of Different Levels of Educational Development

This part of the study analyzes the spatial distribution of primary education status and secondary educational status through the educational attainment and educational facilities in schools of different kind and socio-economic condition at taluka level in the study area.

#### Levels of Primary Educational Development

Development levels of primary education have been measured with help of fifteen variables Table No-2 shows the spatial variation in attainment in primary education and its facilities in terms of their composite Z-score (CS) values at the taluka level. The taluks of Haveri district have been arranged into three groups of high (>0.6091), medium (0.1920 to 0.6091) and low (<0.1920) on the basis of their composite score values of primary educational at development. As shown in the Table No.-3 only two taluks were marked in the high level of primary educational development. Two taluks of this category are Haveri taluka is situated in the central part where as the Savanur taluk is situated located in the eastern edge of the district. Highest composite score value of primary educational status was observed in Haveri (0.9761) taluk followed by Savanur (0.8303) taluk.

**Table 3. Levels of primary education development-Haveri district**

Category	Composite Value of Z-score	No. of taluks	Name of the taluks
High	>0.6091	02	Haveri, Savanur
Medium	0.1920 to 0.6091	01	Byadagi
Low	<0.1920	04	Hanagal, Hirekerur, Ranebennur, Shiggaon

Source: Computed by author from District at a glance 2010-11

Only one taluk is identified in the medium category namely Byadagi which is located in the central part of the study area. The composite score value of this taluk (0.2224) was noted. The CS value of the four taluks marked below 0.1920. All these four taluks including Hlrekerur(0.05720), Hangal(-0.1168), Shiggoan(-0.5791) and Ranebennur (-0.0459) were of low grade and formed the region from north to south in the western part of Haveri district.

The high composite Z-score value indicated that, there is good availability of primary education facilities due to Haveri city itself is the head quarter of the district, urban influences and development of transportation network. Where as in Savanur taluk has strong historical background, high size of land holding, low density of SC/ST population leads to development of primary education.

### Levels of Secondary Educational Development

The spatial variation of indicators of secondary educational development has been studied at the taluka level in the study area. It is believed that secondary education attainment and facilities are responsible for spatial variations in the levels of development in a region. The total fifteen indicators have been selected on the basis of their relevance to find out the levels of secondary educational development and these indicators are aggregated in one component. The composite Z-score values of these indicators have been obtained for each taluk and on the bases of their values, all the taluks were grouped into three categories as high ( $>0.7113$ ), medium (0.1539 to 0.7113) and low ( $<0.1539$ ) level as shown in Table no-5.

**Table 5. Secondary Education Development – Haveri district**

Category	Composite Value of Z-score	No. of taluks	Name of the taluks
High	$>0.7113$	02	Byadagi, Ranebennur
Medium	0.1539 to 0.7113	02	Haveri, Hirekerur
Low	$<0.1539$	03	Shiggaon, Hanagal, Savanur

*Source: Computed by author from District at a glance 2010-11*

High composite Z-score value indicated that there is good availability of secondary educational facilities in that taluk while low value indicated vice-versa. High category ( $>0.7113$ ) is noted in two taluks of the study area. All four taluks are arranged according to their descending composite score value and highest value is noted in Byadagi(1.1623) taluka and followed by Ranebennur (0.9170) taluka. All these two taluks touch the boarder of each other forming a compact region in the south eastern part of Haveri district. There are two taluks in the district noted in medium category (0.1539 to 0.7113), Haveri(0.4294) taluk located in the central part of the district and Hlrekerur (0.2188) taluka lies at the western edge of the district. The last category of low ( $<0.1539$ ) of secondary educational status were also marked in three taluks. It includes the areas of Shiggoan(-0.6434), Hanagal(-0.5824) and Savanur (-0.4243) taluks and these taluks are formed the region in the northern part of the study area. This region mainly having agro-economic condition and lack of educational facilities and less numbers of secondary school attainments.

### Levels of Socio-Economical Development.

Education attainment of any region was highly influenced by the socio-economic conditions of population living in that region. Enrolment in primary and secondary education was especially very much depending on the living standard of parents. So, it was also necessary to measure the levels of socio-economic development in the taluks. For this analysis ten indicators were taken for identify the different level of socio-economic development. These

out of ten indicators each five from social and economic conditions of the region. To find out spatial pattern in the levels of socio-economic development in the district, composite Z-score values have been calculated for each taluk as shown in table no-2 and on the basis of their composite value the taluks have been grouped into three categories of high ( $>0.4377$ ), medium ( $0.0967$  to  $0.4377$ ) and low ( $<0.0967$ ).

**Table 7. Socio-Economic Development – Haveri district**

Category	Composite Value of Z-score	No. of taluks	Name of the taluks
High	$>0.4377$	01	Ranebennur
Medium	$0.0967$ to $0.4377$	02	Haveri, Hirekerur
Low	$<0.0967$	04	Byadagi, Hanagal, Savanur, Shiggaon

*Source: Computed by author from District at a glance 2010-11*

The high levels of socio-economic development was observed in only one taluk of the district i.e., Ranebennur with composite score value of  $0.8357$  reflects highest level of socio-economic development. This taluk is located in the south eastern part of the district.

Hirekerur ( $0.3022$ ) and Haveri ( $0.2868$ ) taluks showed medium level of socio-economic development. These two taluks formed region in central part of the district from west to east. There are four taluks noted in the low level of category, Byadagi ( $0.0802$ ) taluk which is at the low ladder of the socio-economic development is preceded by Shiggaon ( $-0.5236$ ), Savanur ( $-0.1774$ ) and Hangal ( $-0.1265$ ) taluks. The region of low grade appeared in the northern and western part of the study area.

### Levels of Quality of Life in Haveri district

Quality of life is the result of interaction between various economic social, educational and institutional factors. The task of planning is to prepare a comprehensive developmental plan, an interacted and co-ordinated plan between the economic, social and educational components that is between different levels of quality of life of people in the region. These units of study deal with the measurements and analyze the level of living at taluka level with a view to work out imbalance in the spatial distribution of educational amenities regarding the quality of life in the district. For the purpose of micro-regional comparison it would of desirable, may absolutely essential to combine various individual indices into overall measures of operationalize the concepts of spatial distributional amenities of quality life of population. The composite score of Z values are obtained by aggregator of individual components of quality of life. Following this approach of the indicators of educational facilities are 1) primary educational attainment and facilities 2) secondary educational attainment and facilities and 3) socio-economic aspects of population are considered to identify the quality of life. The composite score of three components of quality of life is aggregated. The positive value of the Z-scores means high levels of living, while negative value means low level of living. The taluk-wise spatial distribution of educational facilities have been categorized at three levels viz., high ( $> 1.3772$ ), medium ( $0.4427$  to  $1.3772$ ) and low ( $<0.4427$ ) level on the bases of availability of educational facilities in the taluk. The following table no-6 depicts the standard of living at taluka level and discussed with a view to examine the availability of educational facilities and socio-economic aspects. An examination of figure-5 reveals that there are three taluks that have very high composite score of quality of life namely Ranebennur ( $1.7068$ ), Haveri ( $1.6923$ ) and Byadagi ( $1.4649$ ) taluks in south and

central part of the district. The taluks of high score value form a compact region, which is very well known as a urban and industrial centre. Developmental activities are agglomerated in and around the taluka head quarter. The region has been benefited from the liberal private investment in educational, medical and other social infrastructural facility. The urban nodal activities located in the urban centre have influenced for high standard of living. Areas of medium level of development is noted in Hirekerur(0.5782) taluk is located in western part of the district which benefited from expansion of industrial and tertiary activities centered in the taluk. Thus, the post-independence developments in socio-economic aspects are of significantly helpful to the micro-level development of quality of life. The low level of quality of life category includes three taluks. In the northern part of district covers the taluk like Savanur(0.2286), Shiggon(-1.7461) and Hanagal (-0.8257) due to neglect of developmental activities were mainly responsible for their socio-economic backwardness and primary nature of economic activities are practiced in the region.

**Table 9. Levels of Quality of Life in Haveri district**

Category	Composite Value of Z-score	No. of taluks	Name of the taluks
High	>1.3772	03	Ranebennur, Haveri, Byadagi
Medium	0.4427 to 1.3772	01	Hirekerur
Low	<0.4427	03	Savanur, Shiggaon, Hanagal

*Source: Computed by author from District at a glance 2010-11*

It observed during visit of some rural and urban areas that the drop-outs particularly in girls is common that may be because of socio-cultural reasons that is indicated in areas. The educational backwardness of weaker sections indicates that even when education is subsidized at all levels, a combination of factors both social and economic keep the weaker sections away from education and poverty is the main hindrance for betterment of quality of life.

## Recommendations

After all some specific planning and implementation is necessary to overcome the barriers of school education like better implementation of SSA, especially, in case of infrastructural facilities is required. Other than this, more monetary funding is necessary for the taluks which are in poor condition regarding infrastructural setup. To reduce the drop-outs, specifically in the northern taluks, several encouraging plans and policies should be implemented with better management, such as Mid-Day Meal, various types of scholarships, recreational facilities etc., Employment opportunities are the best aspects of education in every level. So, various types of job options after the completion of primary and secondary level of school education should be initiated, especially through the generation of various vocational courses, so that students are encouraged in attaining schools. More than that, better awareness among the common people and socio-economic reforms is required, not only for the educational development but also for the betterment of quality of life.

## Conclusion

Betterment of any society or quality of life of people in-terms of education requires some degree of modification in particular and socio-economic reforms in general. Most of the taluks in the Haveri district are developed in infrastructure but lacking in educational

attainment due to lack of awareness. Social motto must be changed with some positive as well as encouraging measures by which school education will achieve to fulfill the basic needs. For some eastern and southern taluks, infrastructural facility development is immediate step for augmenting better and balanced quality of life of people.

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