



**ASSESSING THE SPATIAL DISTRIBUTION OF SCHOOLS IN  
PATHANKOT DISTRICT THROUGH PROXIMITY ANALYSIS  
USING GIS AND REMOTE SENSING**

**A dissertation has been presented for consideration in fulfilment of the requirements for the award of  
degree of M.Sc. in Geography**

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**DOI: - 10.48047/ecb/2023.12.si5a.0114**

### **About Pathankot District –**

- Pathankot is a district located in the northern Indian state of Punjab.
- It is a relatively small county, covering an area of 929 square kilometres and having a population of about 658,849 (as of 2021).
- Pathankot is located at the junction of three states – Punjab, Jammu and Kashmir, and Himachal Pradesh, making it a strategic location for transportation and commerce.
- The district is bordered by the Ravi River to the west, the Beas River to the south, and the Chakki River to the north.
- The topography of the district is characterized by an alternation of hills and plains.
- The Shivalik Range runs through the district, with the Dhauladhar Range visible in the distance.
- The district has a subtropical climate, with hot summers and cold winters.
- The monsoon season usually lasts from July to September, bringing heavy rains.
- Pathankot has a rich history and is known for its cultural heritage.
- The district was once part of the Kangra kingdom and was ruled by the Katoch dynasty.
- It was then ruled by the Mughals, followed by the Sikhs and the British.
- As a result, Pathankot has a diverse mix of cultures and traditions.
- The area has many historical sites including Nurpur Fort, Mukteshwar Temple, and Shahpurkandi Fort.
- Agriculture is the main occupation of the district, with wheat, maize, sugarcane, and rice being the main crops.
- The county is also known for its horticulture, with apple orchards a common sight in hilly areas.
- The district is rich in natural resources including minerals such as limestone, gypsum, and bauxite.
- The district also has a number of small industries, including a paper mill, a sugar mill, and a cement plant.
- Pathankot is well connected to other parts of the country by road and rail networks.
- Highway 44 passes through the district, connecting it with major cities such as Jammu, Amritsar, and Delhi.
- Pathankot Railway Station is a major railway hub, connecting the district with other parts of the country.
- The district also has an airport, which is a base for the Indian Air Force.

- The education sector in the district is well developed, with a number of schools and colleges offering quality education.
- The district has a literacy rate of about 83%, which is higher than the national average.
- The county also has a thriving tourism industry, with several sites of historical and religious significance attracting tourists from across the country.
- In recent years, the neighbourhood has seen significant development, with a number of infrastructure projects underway.
- The district government has also launched a number of programs to promote tourism and stimulate the local economy.
- The district has also seen an increase in private investment, particularly in the tourism, agricultural and industrial sectors.
- In a nutshell, Pathankot is a county with a rich history, diverse culture, and rich natural resources.
- The district has significant growth and development potential, especially in the tourism, agricultural and industrial sectors.
- With its strategic location and well-developed infrastructure, Pathankot is poised to become a key player in the region's economy.

### **Identification of Spatial Distribution of Schools in Pathankot District and creating buffer analysis through Proximity Analysis using GIS and Remote Sensing –**

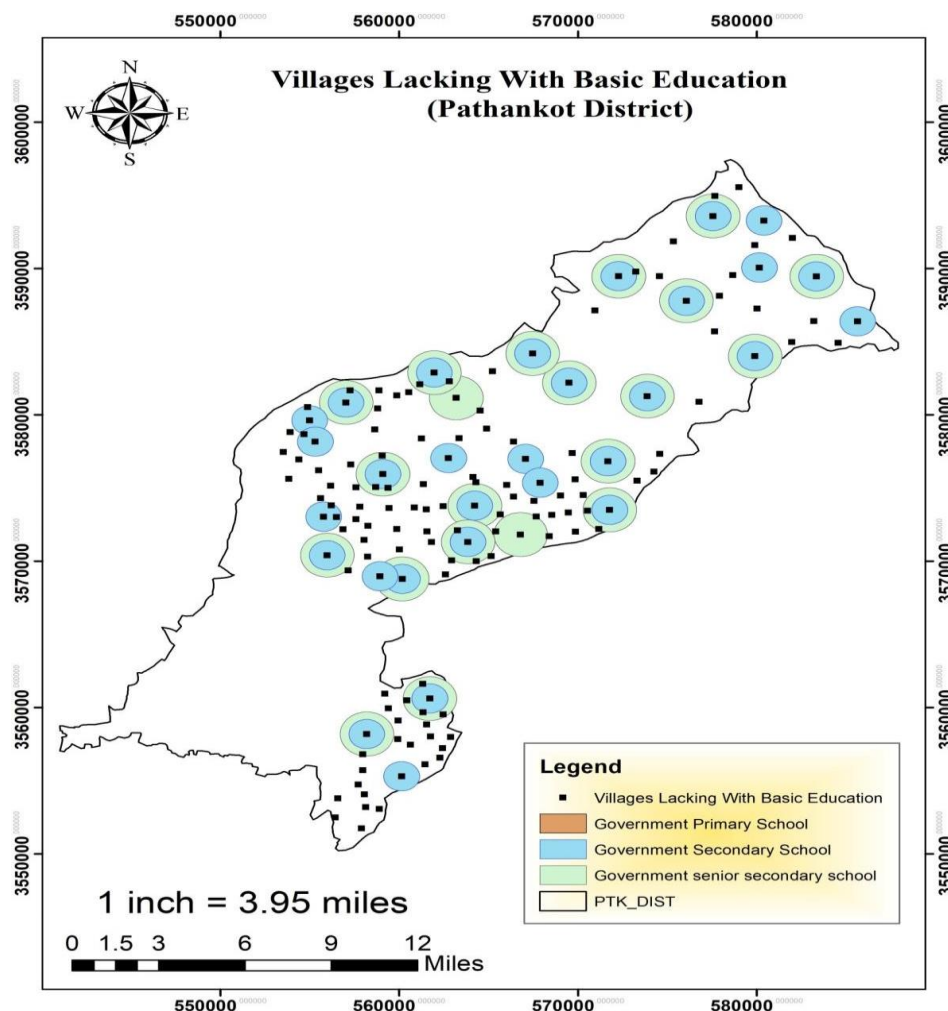
- According to the Census of India, 2011, there are a total of 352 villages in Pathankot district.
- Pathankot district is located in the northern state of Punjab in India.
- The district has a literacy rate of 85.4% as per the 2011 census.
- While there are many schools and educational institutions in the district, it is possible that some villages may still lack basic education facilities.

### **Creation of Buffer Zones –**

- Open ArcMap and import/add Shp. File of Pathankot District.
- Add a layer to create buffer zones.
- Right-click the layer and select Buffer from the menu.
- In the Buffer window, in the Distance field, set the desired distance for the buffer zone.
- For Primary schools set the distance 500 meters.
- For Government Secondary schools set distance of 1000 meters.
- For Government senior secondary school set

- distance 1500 meters.
- In the Units field, select the distance units.
- Select the required "Resolution Type".
- "None" creates a separate buffer around each feature, while "List" combines the buffers for each feature.

- Select the "end type" for the buffer.
- 'Round' creates a smooth curve at the edge of the buffer, and 'Flat' creates a straight line at the edge of the buffer.
- Click OK to create the buffer zone.



### Analysis of the Literacy rate of Pathankot District –

According to the 2011 Indian Census, the literacy rate in Pathankot district is 85.4%. This is above her national average of 74.04% and reflects the educational orientation of the region. The district's literacy rate is 89.5% for men and 80.8% for women.

This suggests a gender gap in literacy, with men being more literate than women.

However, the gap is shrinking year by year, and efforts are being made to narrow it further. The district has several educational institutions such as schools, colleges, and universities, which contribute to a relatively high literacy rate. The government also implements various initiatives to

promote education and increase literacy.

For example, the district has implemented the Sarva Shiksha Aayan program to ensure that all children in the district have access to basic education.

This program has contributed to increasing school enrollment and improving the quality of education in the region.

Another initiative to promote education in the district is lunchtime catering.

The program provides public school students with free lunches and encourages regular attendance. This has not only improved school enrollment but also improved the nutritional status of children in the region.

In addition to government initiatives, non-governmental organizations (NGOs) and community groups have also played an important role in improving education in the region.

A number of NGOs are working to provide education and training to marginalized communities and women in the district who may have limited access to education.

These efforts have helped improve literacy and strengthen local communities.

A high literacy rate has several benefits for the region, such as boosting economic growth and improving social indicators.

An educated population is more likely to be employed, earn higher wages, and contribute to the local economy.

They are also more likely to be aware of their rights and responsibilities, to participate in democratic processes, and to make well-informed decisions about their lives.

In summary, the literacy rate in Pathankot district is above the national average, reflecting the region's focus on education. Governments, non-governmental organizations, and community groups carry out various initiatives to promote education and increase literacy.

A high literacy rate brings several benefits to the region, such as boosting economic growth and improving social indicators.

While there is still work to be done to further improve literacy, the progress made so far is encouraging and lays a solid foundation for the region's future development.