



## Assessment of School Infrastructure at Primary and Upper Primary Level: A Geospatial Analysis

*Siddesh.M.G\**, *Veerabhadrapa B.P\*\**

\*Research scholar, Department of Economics, Davangere University, Davangere, 577002

\*\*Vice Chancellor, Kuvempu University, Jnanasahyadri, Shankarghatta, Shivamogga, 577451

### ABSTRACT

The goal of this research is to better understand how to manage school-level teaching and learning facilities, as well as the fundamental infrastructure that is required to improve educational quality. Education is an important part of a country's development. Primary and upper primary education receives the highest priority in the educational system and is regarded the foundation for higher education. It is on the cusp of secondary and post-secondary education. The facilities, teaching and learning resources accessible to a school are all determinants in the growth of an education system. The school learning environment is influenced by the infrastructure of the school, such as the buildings, furniture, and essential equipment. The government claims that primary schools lack adequate infrastructure, which has an impact on the entire teaching and learning process. The purpose of this research is to examine the supply of school amenities in terms of the physical infrastructure available to the student fraternity.

Key words: Education, primary education, infrastructure,

### Introduction

Education is one of humanity's most basic requirements. People can reach their objectives through education (Akareem& Hossain, 2012). The primary purpose of a school as an educational institution is to facilitate the teaching and learning process. 2011 (Akhiero) Learning implementation should ideally focus not just on learning outcomes but also on the student learning process. Students' creativity and activity are fostered through a variety of interactions and learning opportunities. Student learning activeness is a fundamental component of learning that must be fostered. School infrastructure is a facility that has an impact on student learning and allows it to run smoothly. (2019 AnangAmiruddinNugroho) Infrastructure development is an important factor that must be considered not only in schools, but also in higher educational institutions. Infrastructure is a broad phrase that encompasses a wide range of topics. Playgrounds, library facilities, laboratories, computer centers, technology, machinery, tools, and equipment are just a few examples. (2019, RadhikaKapur) Primary education is the cornerstone upon which higher education is built. Primary education is now a fundamental entitlement for all individuals in India. Furthermore, article 21-(A) mandates free and compulsory education for all children aged 6 to 14 years old, regardless of caste, creed, class, race, or religion. The educational facilities are primarily responsible for ensuring that this provision is met. (2017, PallabJyoti Boruah)

### Objectives of the study

1. To assess the School Infrastructure at Primary and Upper Primary Level.
2. To know the role of Infrastructure in Improving the Quality of Education.

### Statement of Problem

The goal of this research is to better understand how to manage school-level teaching and learning facilities, as well as the fundamental infrastructure that is required to improve educational quality. The purpose of this research is to examine the supply of school amenities in terms of the physical infrastructure available to the student fraternity. Because school teaching and learning infrastructure is important for both teachers and students in the teaching-learning environment, the current study will focus on primary school physical infrastructure. Assessment of School Infrastructure at the Primary and Upper Primary Level: A Geospatial Analysis is the study topic

## Methodology of the study

A systematic literature review was conducted to investigate the relationship between school-level teaching and learning facilities and basic infrastructure requirements in improving educational quality. This study examines several periodicals linked to school infrastructure and its relationship to student activities in order to conduct a literature review. The findings of this literature review will be used to determine the impact of infrastructure on student learning activities. The goal of this research is to better understand how to manage school-level teaching and learning facilities, as well as the fundamental infrastructure that is required to improve educational quality. The purpose of this research is to examine the supply of school amenities in terms of the physical infrastructure available to the student fraternity.

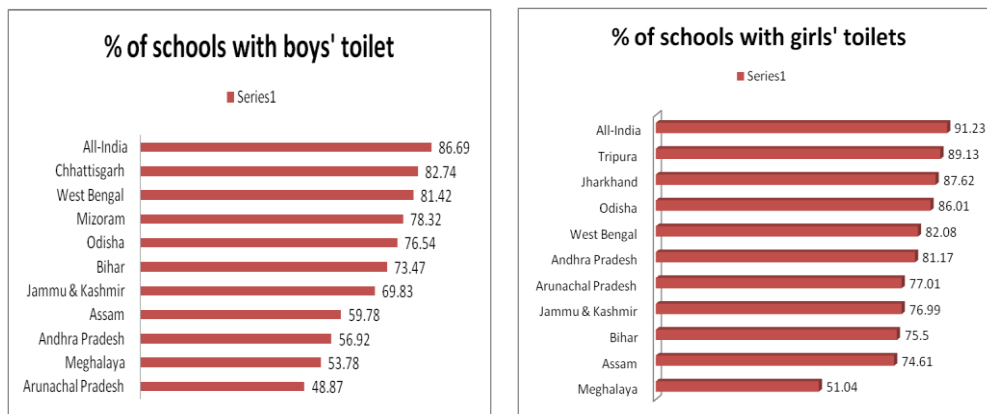
## Data analysis and Interpretation

**Table-1 schools with toilet facility (top 10 states)**

% of schools with boys' toilet		% of schools with girls' toilets	
Arunachal Pradesh	48.87	Meghalaya	51.04
Meghalaya	53.78	Assam	74.61
Andhra Pradesh	56.92	Bihar	75.5
Assam	59.78	Jammu & Kashmir	76.99
Jammu & Kashmir	69.83	Arunachal Pradesh	77.01
Bihar	73.47	Andhra Pradesh	81.17
Odisha	76.54	West Bengal	82.08
Mizoram	78.32	Odisha	86.01
West Bengal	81.42	Jharkhand	87.62
Chhattisgarh	82.74	Tripura	89.13
All-India	86.69	All-India	91.23

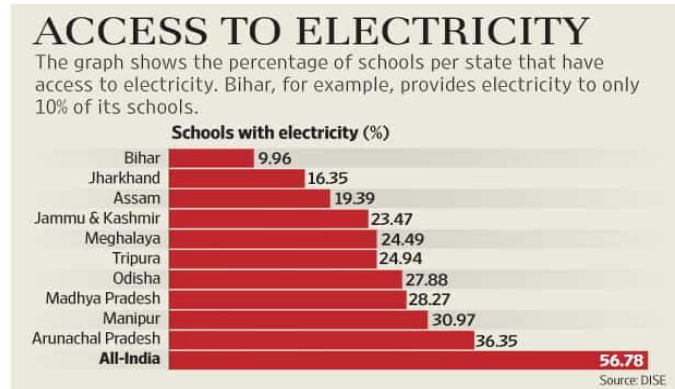
Source: DISE data 2013-14

**Graph-1**



Source: DISE data 2013-14

The bathrooms provided for boys and girls in India are mentioned above; yet, India performs admirably. According to DISE statistics, boys' toilets are found in 86 percent of Indian schools, while girls' toilets are found in 91 percent. More than 80% of Indian schools have toilets, according to the majority of states. Arunachal Pradesh and Meghalaya are among the lowest performers.



Source: [www.livemint.com](http://www.livemint.com) 2013-14

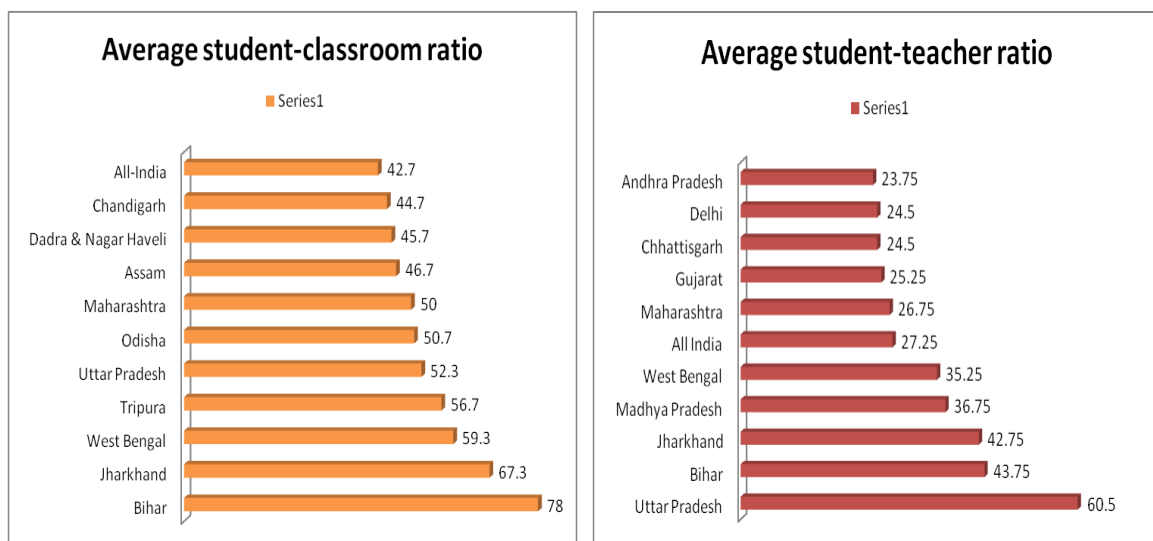
Electricity is a critical aspect in the operation of a school. The graphs above depict the availability of electricity in Indian schools. According to DISE statistics, just six out of ten schools in the country have access to power. The majority of schools in one-third of states do not have access to electricity. Bihar is the worst offender once again, with only 10% of its schools having electricity. Punjab, Gujarat, and Haryana do very well, with nearly all of their schools having access to power.

**Table-2 student-classroom ratio and student-teacher ratio**

Average student-classroom ratio		Average student-teacher ratio	
Bihar	78	Uttar Pradesh	60.5
Jharkhand	67.3	Bihar	43.75
West Bengal	59.3	Jharkhand	42.75
Tripura	56.7	Madhya Pradesh	36.75
Uttar Pradesh	52.3	West Bengal	35.25
Odisha	50.7	All India	27.25
Maharashtra	50	Maharashtra	26.75
Assam	46.7	Gujarat	25.25
Dadra & Nagar Haveli	45.7	Chhattisgarh	24.5
Chandigarh	44.7	Delhi	24.5
All-India	42.7	Andhra Pradesh	23.75

Source: DISE data 2013-14

The graph depicts the ten states with the greatest (worst) student-teacher and student-classroom ratios. A student-to-teacher ratio of 30 is required by the Right to Education Act.

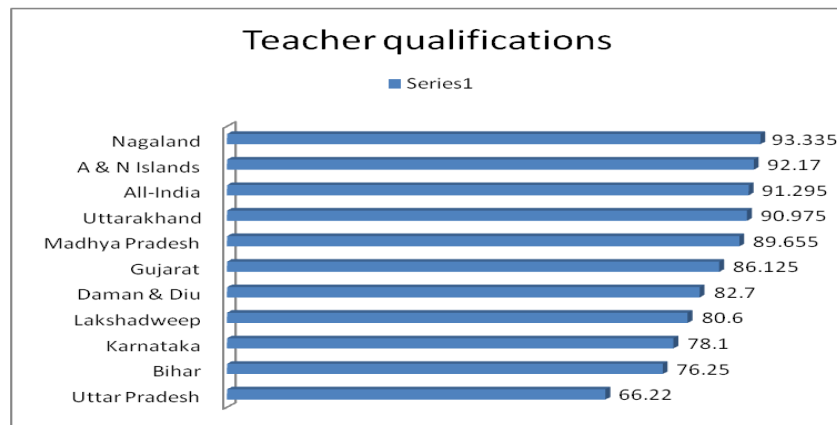


According to the table and graph above, the average number of students per classroom in India across all levels of education was 42. With an average of 78 and 67 kids per classroom, states like Bihar and Jharkhand perform worse.

In India, the student-teacher ratio is 27.25:1 at all levels of education. In light of the Right to Education Act's requirement of a 30:1 ratio, this appears to be healthy. However, in higher secondary education, the student-teacher ratio of 41:1 needs improvement. Uttar Pradesh, in particular, needs to hire a lot more instructors because its 60:1 ratio is just too high.

The graph depicts the ten states with the lowest percentage of higher secondary teachers having a master's or higher degree. According to the research, the majority of instructors are well-educated.

**Graph-3**



Source: DISE data 2013-14

Learning outcomes are also influenced by the quality of the teachers. Only 69 percent of all school instructors in the country hold a graduate degree or higher, according to DISE data. However, over 91 percent of all higher secondary teachers in the country hold a master's degree or higher. Only eight states have a percentage that is lower.

## Conclusion

Humans require education as one of their most basic requirements. School education is a fundamental means and requirement for people to pursue their higher educational objectives. The primary function of a school as an educational institution is to provide a teaching and learning environment. Learning implementation should ideally focus not only on learning outcomes but also on student learning progress. Through diverse communications and learning experiences, students' actions and creativity grow. Student learning interactions are a fundamental component of learning that must be created. School infrastructure is a basic requirement that has an impact on the learning process of students. Schools in India are intended to be temples of learning, but the average basic educational institution in India is likely to be wonderful, and a crucial location, but without power, bathrooms, and too few teachers, it will be impossible to educate the country.

## References:

- [1] Akareem, H. S., & Hossain, S. S. (2012). Perception of education quality in private universities of Bangladesh: a study from students' perspective. 22(1), 11-33. doi:10.1080/08841241.2012.705792
- [2] Akhiero, E. T. (2011). Effect of inadequate infrastructural facilities on academic performance of students Of Oredo Local Government Area of Edo State. Paper presented at the The Nigerian Academic Forum.
- [3] Radhika Kapur 2019, Infrastructure Development in Schools
- [4] Anang Amiruddin Nugroho1 , Udik Budi Wibowo2, 2019, The Influence of School Infrastructure on Student Learning Activeness: A Research Study Bhunia, 3rd International Conference on Learning Innovation and Quality Education (ICLIQE 2019)
- [5] Pallab Jyoti Boruah, 2017 A Study On Availability Of Educational Facilities For The Teachers And Students In Primary Schools With Special Reference To Nazira Sub-Division Of Sibsagar District Of Assam, IJEDR | Volume 5, Issue 4
- [6] G.S., Kumar, P., & Duary, S. (2012). Assessment of School Infrastructure at Primary and Upper Primary Level: A Geospatial Analysis. Journal of Geographic Information System, 4, 412-424. Retrieved June 25, 2019 from.
- [7] [www.livemint.com/Politics/h7WkzI77bMtmN9FLDvyo0M/The-poor-state-of-school-infrastructure.html](http://www.livemint.com/Politics/h7WkzI77bMtmN9FLDvyo0M/The-poor-state-of-school-infrastructure.html)