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The Importance of Infrastructural Facilities in The University

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ABSTRACT

Infrastructure development is a crucial factor that must be taken into consideration in both schools and institutions of higher education. Numerous components make up the broad concept of infrastructure. These consist of things like playgrounds, libraries, labs, computer centers, technology, machinery, tools, and other things. To upgrade the infrastructure, the educational institutions' members must invest money. Infrastructure improvements will enable people to perform their jobs properly and advance educational institutions by enabling people to carry out their job tasks. The staff members of educational institutions must make sure that they continuously upgrade the infrastructure available to them. The main objective of the paper is to study infrastructural facilities in schools. For the research data has been collected with the help of a questionnaire through personal visits to the schools. The outcome of the results will be helpful to the stakeholders and government.

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1. INTRODUCTION

Education is a critical method for achieving the required changes to assure economic, cultural, and social development, as well as environmental and food security (Gasperini, 2000; Kramer-LeBlanc & McMurry, 1998; Asiyai, 2022). Education is the most basic building block of development and is crucial for reducing poverty and increasing human capital. A well-educated and well-advocated labor force is required for a country to create the groundwork for long-term economic success and to compete effectively in today's global market (Durgesham, 2022). Recognizing the importance of education in development, methods, particularly in the developing world, are now focusing on providing high-quality education to a wide range of target groups, including children, youth, and adults.

In India, both the public and private sectors work together to deliver education. The government, state, and local levels are in charge of policymaking and funding. The world's first university system was Nalanda University. Since the British Raj was established, Western education has been embedded in Indian society. Both the Union Government and the states are in charge of education in India, with the Union having some duties and the states having others that are left to their discretion. Education is a fundamental right guaranteed by several provisions of the Indian Constitution. The Union or the State Governments govern the majority of universities in India.

There is no questioning the importance of education in molding a student's personality and overall learning process. Infrastructure is as important as a skilled instructor and teaching pedagogy in influencing students' academic lives. It fosters an environment conducive to pupils' holistic growth. Every parent wants their children to feel safe and comfortable while learning and enjoying their college experience. They want to make certain that the schools have adequate safety standards and amenities to make learning enjoyable.

The educational infrastructure in the state (Telangana) is deplorable, according to past studies. Secondary schools in Telangana face several issues, including crowded classrooms, high enrolment, a lack of suitable restrooms, the provision of good and safe drinking water, a shortage of school libraries, and a lack of playground equipment. Studies have also shown a correlation between the Tenth performance and physical facilities, educational resources, etc. A study on the infrastructure in Upper and Lower Primary schools was done by the state planning department, and it revealed that Telangana's educational infrastructure gaps are a serious indication of the poor condition in which many of the schools are.

However, there hasn't been any research done of this nature on the infrastructure of Hyderabad City's secondary schools. The results of past studies also indicated that teachers' and students' academic performance is negatively impacted by infrastructural issues in schools. Also noted is the lack of research to date on the infrastructure available in Hyderabad's secondary schools.

As a result, the study of infrastructural facilities has become crucial in the current environment because there are so many educational institutions popping up all over without the fundamental needs and requirements for the staff, professors, and students. The current paper, therefore, hopes that by focusing on this particular aspect, it will help to highlight the current type of infrastructural facilities that are available in the schools in the Hyderabad region and that the study's findings will be useful for a constructive renovation for the betterment of the existing system as well as care can be taken by the new schools that may emerge in the future.

The objectives of this study were to study infrastructural facilities in schools under the University College of Education, Osmania University, and to suggest measures for improvement in the infrastructural areas.

2. LITERATURE REVIEW

The growth of secondary education in the findings in connection to infrastructure in Meghalaya since Independence demonstrated that the biggest issue with secondary schools is a lack of funding for education, large enrolment with crammed classrooms, and current unacceptable service conditions (Bolaji & Adeoye, 2022). In a related study, looked at the elements that affect an institution's program, whether it is quality or decline (Prathap *et al.*, 2019a). The study looked at the input from the students, the resources needed, and the instructional techniques used to change the input, among other things. Two directors, two department heads, three division heads, six lecturers, three instructors, 35 students, seven postgraduates, and twelve business professionals made up the study sample. The researchers used interview schedules, eleven questionnaires, annual reports, and pamphlets to gather their data. The results of the study showed that a good technical institute was influenced by many criteria. These included the institute's capacity to draw a sizable number of students with strong academic achievement above the standard required for admission.

On the other side, eight key elements that characterize effective schools. Clear academic objectives, order and discipline, high standards, teacher effectiveness, a culture of widespread compassion among the populace, rewards and incentives, community support, and administrative leadership are a few of these. School leadership had power over the other seven components; as a result, the degree to which the school head had competency in controlling the factors determined how effective the school became (Prathap *et al.*, 2019b; Prathap *et al.*, 2019c).

To understand why private schools in Mysore do better than public schools, Khader conducted a study. The study also looked at factors that influence academic success and whether private schools had better learning environments. Ten high schools, including five government schools and five Christian missionary private schools, were chosen from the Calicut district of Kerala using stratified random sampling, together with 455 students from the tenth grade. A school environment scale, a personality characteristic tool, a language ability exam, and a science achievement test were among the tools the researcher employed. Multiple regression and multivariate analysis were used to analyze the data that had been obtained. Students at high- and average-quality public schools as well as average-quality private schools perceived their environments as either high- or average-quality. Compared to students from lower social groups, those from upper social classes were more academically focused. Additionally, it was discovered that kids from the same schools had a strong tendency to behave similarly, with low levels in poor-quality schools and high levels in private schools. According to Khader's research, key elements for academic achievement in school include intelligence, educational ambitions, the school environment, language proficiency, linguistic level, and academic attention (Adeoye, 2023).

The research mentioned above shows that although there have been several studies done in the past on various amenities related to School education, there hasn't been a comprehensive investigation of infrastructure facilities. This inspired us to start the investigation and offer insightful information on the secondary schools' infrastructure in Hyderabad.

3. METHOD

A representative sample of 10 secondary schools comprising 5 private and 5 government schools has been taken for the study. A random sampling technique was applied for the selection of the sample for the study.

Tools are used to collect new information to investigate new fields. Depending on the needs of the study, a variety of tools may be used to gather unknown information or data. The investigator's goal in the current study was to gather data on the secondary schools' infrastructure in the Hyderabad districts.

The investigator's primary tool was a questionnaire. To gather information about the infrastructure in each school, we created two different types of questionnaires, one for the teachers, and one for the children. The questionnaire contained numerous unique items as well as some typical ones. **Table 1** shows the sample of the study.

Table 1. The sample of the study.

Name of School	Number of Teachers	Number of Students
GHS, Jamia Osmania	12	402
GHS, Sitafalmandi	8	450
Railway Mixed HS, Lalaguda	12	900
NGRI, HS	8	224
Wesley HS Nacharam	10	200
Veermachani HS, Sitafalmandi	9	451
Chinmaya Vidyalaya Begumpet	9	1400
OU Model HS,	10	558
Amravati HS, Namalgundu	20	650
Nehru HS, Sitafalmandi	12	150

The investigator personally went and approached the principals of the institutions and explained the aim of the visit to get information from the educational institutions. The questionnaire was given out to the sample population (i.e., teachers and students) after receiving consent.

The respondents were informed that the information they provided in the questionnaires would be kept private and would only be used for research purposes. Although there was no set deadline for finishing scheduled, the responses were urged to return them as soon as possible. The questionnaire sheets were then returned to the investigator for evaluation and interpretation.

Through the use of questionnaires, information about infrastructure facilities was gathered. Percentage analysis was used to examine the data.

4. RESULTS AND DISCUSSION

In the analysis and interpretation of data collected from the teachers, there are several points:

- (i) Classroom facilities. The data analyzed in Table 2 from the responses from the sample schools' teachers reveals that 70% of the teachers had rooms with plenty of space, while 30% of the teachers find it challenging to teach in crowded spaces. In terms of classroom visibility, it was discovered that 60% of teachers have well-lit, well-ventilated classrooms, whereas 20% of teachers struggle with inadequate visibility.
- (ii) Staff room facilities. Teachers require a common area where they may unwind or chat with their co-workers about various topics related to school, classroom instruction, etc.

Data were gathered to determine which schools offered instructors common rooms with enough space, ventilation, furniture, and other amenities. A review of the data regarding the availability of a teacher's common room and the amenities connected to it shows that 40% of all the instructors involved in the study have a large, well-ventilated staff room, while 60% of the teachers reported having a staff room without adequate ventilation. 20% of the teachers said their classrooms had enough shelves and furnishings. A lack of such a facility was acknowledged by 80% of the teachers.

- (iii) Playground facilities. According to the study, 60% of teachers have access to a playground for their kids, compared to 40% who said they did not. While 40% of teachers mentioned having a large playground, the other 60% mentioned having a smaller playground.
- (iv) Library facilities. The results of the study's analysis of the teachers' responses revealed that 70% of them have libraries, while 30% said they don't have any for both teachers and students say. A librarian was reported by 20% of the teachers. A qualified librarian was identified as being unavailable by 80% of the teachers. In terms of book distribution, the study reveals that 10% of teachers permit pupils to borrow books from the library, whereas 90% of teachers said this was not the case.
- (v) Teaching Aids. One of the most crucial components of every teaching and learning activity is intended to be instructional aids. The knowledge may be transferred from one teacher to the student more readily with the use of instructional resources. According to the study, 60% of the teachers frequently used instructional aids and 40% of them said that they never use teaching aids in the classroom. Charts are the primary instructional tool of choice for 80% of teachers. Computer use was cited as the most practical teaching aid by 10% of the teachers. Regarding the provision of teaching aids, the study finds that instructors do receive teaching aids from the school, while teachers claimed that they do not get any financial support/ funding for teaching aids.
- (vi) Computer facilities. In contrast, 70% of instructors do not have access to a computer room, according to the investigator's survey, which found that 30% of teachers have computer rooms in their schools. Computer facilities were reported by 10% of the teachers. The lack of any computer facilities is mentioned by 90% of the professors. According to the research, 10% of teachers have access to an Edusat computer facility. While 10% of the teachers have access to the internet, 80% merely have the bare minimum, like a table and chairs.
- (vii) Toilets facilities. The study found that all of the teachers have separate restrooms after examining the comments from the teachers. In terms of the availability of running water inside the restrooms, it was discovered that 70% of the instructors have this convenience, whereas 30% of the teachers reported not having running water.
- (viii) Drinking water facilities. In terms of the availability of clean drinking water, the study finds that all of the schools included in the study had a facility for providing water. In terms of the methods used to provide water, it was discovered that 80% of schools had faucets, while 20% used Aqua Guard.
- (ix) Transportation. The survey finds that 100% of the schools do not have a transportation facility and must rely on public transportation after examining the responses from the teachers.

In the analysis and interpretation of data collected from the students, there are several aspects:

- (i) School Building. According to the study, just 60% of the schools in the Hyderabad area are tidy and clean, while 40% of them said the same about their school buildings. It was

discovered that 80% of schools can be comfortable inside the school building, whereas 20% of schools reported not feeling comfortable there.

- (ii) Classroom facilities. Information was gathered about the classes' size, the availability of enough desks and benches, ventilation, etc. According to the study's examination of the student responses, Spacious classrooms are offered in 20% of the sample schools. It was shown that 80% of schools have non-Spacious classrooms. It was discovered that 40% of the pupils noted that there were enough desks and benches, but 60% indicated that there weren't enough desks and benches. 40% of schools are well-ventilated, while 60% are not sufficiently or properly ventilated. Almost all the school's blackboards and whiteboards were present.
- (iii) Playground facilities. Data were gathered to determine how many schools, regardless of how well maintained, have a playground. According to student comments, appropriate playgrounds are present in 100% of the schools, whereas proper playgrounds size are absent in 60% of the schools. Regarding the sorts of playground amenities, it has been determined that all schools have access to toilets and drinking water.
- (iv) Library facilities. After examining the information provided as responses by the students of the sample schools, we discovered that 60% of Hyderabad's schools offer pupils access to libraries, compared to 40% of schools that do not. While just 80% of schools lack a librarian, 20% of them do have trained librarians. It was discovered that 40% of schools have enough library books, however, 60% of the schools reported having insufficient numbers of books.
- (v) Laboratories facilities. Regarding the availability of laboratories, the survey finds that 30% of schools have these resources, whereas 70% of schools are lab-deficient. In terms of having separate laboratories for physics, chemistry, and biology, it was discovered that 80% of the schools in Hyderabad lack these facilities. Only 20% of the schools that the students claim have this amenity do. Since each institution should have a well-equipped science lab for physics, chemistry, and biology with space for instructor demonstrations and student experimentation, this is something that should be encouraged and worked on.
- (vi) Computer facilities. We discovered through the investigation that 20% of Hyderabad's schools have a computer room, indicating that only these institutions are teaching their kids about computers. The use of computers unrestrictedly is not permitted in schools in 90% of cases, it has been discovered.
- (vii) Toilet facilities. Everyone needs to have access to clean restrooms. In Hyderabad city, 80% of the schools offer proper, hygienic lavatories or latrines, whereas 20% reported not having adequate restrooms. It was shown that 40% of people have access to clean, sanitary restrooms, whereas 60% of schools do not provide the facility. Although from the perspective of the student's health and aesthetic demands, this can be stated to be a clear impediment to the school's expansion healthily and hygienically. However, any educational institution should give sanitation its top priority.
- (viii) Drinking water facilities. In terms of the availability of clean drinking water, the study finds that all of the schools included in the study had a facility for providing water. In terms of the methods used to provide water, it was discovered that 80% of schools had faucets, while 20% used Aqua Guard.
- (ix) Transportation. The survey finds that 100% of the schools do not have a transportation facility and must rely on public transportation after examining the responses from the teachers.

Suggestions are in the following:

- (i) According to the report, the majority of the schools in Hyderabad did not have enough latrines or latrine facilities. Due to the children's aesthetic demands, the principals and management teams of all institutions should ensure that there are enough clean latrines and latrine rooms available for the kids.
- (ii) Additionally, it has been noted that an inadequate school structure has contributed to classroom congestion, which has undermined the learning environment. Before the building is built, the authorities should have a solid plan in place to ensure that there are large classrooms with appropriate lighting and ventilation.
- (iii) A school must include a separate common room for staff and pupils. Students' common areas should offer amenities that allow them to pursue their interests and hobbies while also unwinding. There must be space set up for indoor games.
- (iv) Libraries are significant sources of information. Every educational establishment ought to have a reading room and a connected library. There ought to be plenty of excellent reading resources in the library. There should be stored at the library, which should have a full-time librarian assigned to help pupils find the appropriate reading materials.
- (v) Experiments and demonstrations are a crucial part of science. Therefore, it is ideal that each institution has physics, chemistry, and biology laboratories that are separate from one another. The lab should have everything it needs to conduct the required experiments.
- (vi) Water filters should be installed, especially in institutions where students are drinking water straight from the faucet. Provisions for clean drinking water should be made available. The school maintenance fund may be utilized for this.
- (vii) By charging students for nominal fees, arrangements for school buses can be arranged to reduce traffic congestion inside and outside of the institution. The pupils will also be able to arrive at the schools on time thanks to this.

5. CONCLUSION

Education is a crucial aspect of human life. It was created at the same time as the human race, therefore it will keep working for as long as humans exist. Education has the same range of boundaries as life. It has a wide range of rich connotations. Therefore, education is crucial for the advancement of both the individual and society. Direct instruction, tuition, and schooling are all part of it. Its curriculum is precise and clearly defined. Teachers who are competent and experienced deliver it. It often follows a stringent code of conduct.

A school is a tiny version of society because it is set up to benefit society. The improvement of society will ultimately be aided by good schools with high standards. The future of the country will be built by the youngsters attending top-notch schools. A school should be well-organized and equipped with the necessary infrastructure since it plays a significant part in students' lives. This will allow them to obtain a suitable education from the appropriate teachers in the appropriate setting. This is why we selected this subject. The investigator expects that the school administration and the state's department of education would follow up on the findings and implement beneficial repairs and changes for the benefit of the schools in the Hyderabad metropolitan area.

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7. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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