A CRITICAL ANALYSIS OF INFRASTRUCTURE FACILITIES FOR STUDENTS OF MADARIS IN BAHAWALNAGAR DISTRICT

Muhammad Rafiq-uz-Zaman [1]

Affiliations:

[1]Doctor of Philosophy in Education, Department of Education, The Islamia University of Bahawalpur, Punjab, Pakistan

ORCID ID:
https://orcid.org/0009-0002-4853-045X

Corresponding Author/s Email:

[1] mrzmuslah@gmail.com

Abstract

This study addresses the significant gap in understanding the state of infrastructure facilities in Madaris (religious schools) in the Bahawalnagar District of Pakistan. While the importance of educational infrastructure in shaping student outcomes is well established, research focusing specifically on Madaris is limited. This study aims to assess the current infrastructure, identify challenges faced by these institutions, examine the impact of infrastructure on academic performance and personality development, and propose strategies for improvement. Using a quantitative approach, the study targeted 10 purposively selected Madaris, including 8 male and 2 female institutions providing residential facilities and Dars-e-Nizami courses. Using pre-tested questionnaires, a sample of one hundred students (eighty male, twenty female) were chosen and the researcher gathered data personally via face-to--face interaction. SPSS was used for the data analysis applying descriptive and inferential statistical methods. The results exposed notable shortcomings in categories including ventilation, sanitation, energy, and security in terms of infrastructure. The learning environment was shown to be hampered by poor access to basic facilities including drinking water and insufficient classroom space. Furthermore, influencing students' academic experiences were the absence of contemporary teaching resources including internet connection and AV aids. One critical challenge was also found to be security systems. Safety measures, student protection, and strengthening basic infrastructure such as classroom facilities were identified as major gaps in school supervision and need immediate reforms of infrastructure classical upgrades. The findings suggest that the personalization and general educational experiences of the students attending Madaris Centres are highly dependent on the investments made on these areas, which suggests that the politicians need to focus on infrastructural development of these institutions first.

Keywords: Madaris infrastructure, Academic performance, Educational challenges, Student safety, Policy reforms

Introduction

Background and Context of the Study

The types of infrastructural amenities available to pupils are what determines the level of instruction and, to a greater extent, the outcomes of learning in Madaris – Islamic religious schools. The impacts of educational infrastructure on learning have been greatly accepted and studied. Well-maintained infrastructure contributes to possibilities of learners' engagement and achievement, support a healthy learning environment, and increases the achievement of the students on academic activities (Barrett et al, 2018).

On the other hand, there are various gaps and problems, which concern the infrastructural facilities of the Madaris that need attention. The way these Madaris handle their infrastructure and facilities could be one of main

problems. Correct enough Effective management is necessary for maintenance and wise infrastructure use (Herawati et al, 2020). This covers organizing, planning, and making use of school resources to support 4.0 era teaching and learning initiatives. Therefore, it is imperative to identify the signs of efficient management of school infrastructure and their influence on the general quality of the institution (Siswanto & Hidayati, 2020).

The utilization of e-learning materials in Madaris is another issue. As technology develops, e-learning has become more and more significant inside the educational process. Examining how teachers and students in Madaris apply e-learning materials would help one to appreciate their worth in enhancing education (Eze et al., 2018; Azad, 2024).

Apart from that, one should also consider the socioeconomic adaption of Madaris students. Parents' financial perspective on pupils in Madaris and secondary education may help to clarify the topic of what adults believe to be essential for their children to be active. This clarifies the need of economic adaptation in enhancing the economy while raising the students' confidence in employment and entrepreneurial activities (Ullah, 2020).

Studying the physical and instructional facility management, the usage of e-learning resources, and the socio-economic adaptability of the students can help one to do an extensive assessment on the infrastructure facilities accessible for learners in Madaris. Knowing these features will enable the establishment of sensible policies and initiatives that improve the learning environment and the results of education in Madaris.

Research Problem Statement and Significant

The aim of this study is to assess the infrastructure facilities given to Madaris pupils. One kind of Islamic school that struggles greatly in giving pupils high-quality education is madaris. Such problems include the limited career training, low work prospects of the graduates, inadequate educational and instructional facilities, deregulated curricula and teaching materials, isolationist-teaching approaches, limited compensation for teachers (Mangondato, 2021). The absence of appropriate infrastructure in Madaris schools could negatively influence kids' personal and educational development (Fagbohunka & Oladehinde, 2021).

Global competitiveness and economic progress depend fundamentally on infrastructure facilities (Palei, 2015). Research reveal that student performance is influenced by the infrastructure of a school, including its classrooms and buildings. One of the main determinants of the learning results in the physical surroundings of the classroom a student is taught (Cheryan et al., 2014). Academic achievement of pupils is favourably correlated with the presence of infrastructure like electricity, medical facilities, libraries, and even laboratories (Fagbohunka & Oladehinde, 2021).

The impression of the quality of education in a given area is much shaped by knowing the degree of education in that area together with the kind of facilities accessible (Asif et al., 2023; Khan et al., 2022). Particularly, the suitability of the given facilities in Madaris directly influences the quality of education acquired by students and influences the general educational experience inside local institutions (Mangondato, 2021). Lack of resources or facilities like labs and libraries will hinder a student's educational process and significantly reduce the learning prospects accessible.This lack of facilities massively affects the quality of education a learner is able to receive (Taher & Qureshi, 2021).

The buildings and other infrastructural facilities available in educational institutions are fundamental in enhancing students' not only comprehension but their overall engagement with the subjects being taught (Calam et al., 2022). Courses such as construction and architecture require practical lessons, which should be matched with relevant resources pertinent to effective learning. These features greatly influences the impact educators and students experience and insight within educative frameworks, respectively.

Pakpahan and Hidayati (2021) noted that the epic for attending institutions of learning goes beyond instructional resources, but extends to the comfort students are provided, which to a significant extent determines their focus and attention toward learning. The specific manner through which students and their educators react to educational experiences within the formal context of schooling is largely shaped by the features and benefits offered to students over and above core instructional materials.

Without adequate infrastructural resources, students experience great challenges within their educational journey, ultimately lowering the quality of education exposed to which permanently affects their skills and opportunities available after graduating (Mangondato, 2021). This illustrates highlights the great impact inadequacies can have on students in Madaris and greatly challenges the prevailing faceless ideology on learners' readiness shouldering basic responsibilities at such a tender age.

The underlying idea illustrating the existing facilities and the quality of services provided in Madaris is that no fundamental pedagogical benefits can be derived from such inadequacies that equip learners with the skills and capabilities it anticipates lie would assist them in easily navigating life after schooling.

This research is significant for its potential to illuminate the obstacles encountered by Madaris in delivering quality education to their kids. This study identifies deficiencies in infrastructure facilities, thereby informing policymakers and stakeholders of the necessity for investment and enhancement in Madaris infrastructure. This, in turn, can contribute to enhancing the educational experience and outcomes of Madaris students, ultimately benefiting the broader society.

Research Questions

1. What is the current state of basic infrastructure facilities (ventilation, electricity, drinking water, sanitation) in Madaris?
2. How does the security infrastructure (security guards, boundary walls, visitor control) impact the safety and well-being of students in Madaris?
3. How does the availability and quality of classroom and library infrastructure (AV aids, furniture, and books) influence students' academic performance in Madaris?
4. What are the strategies for the betterment of Madaris and their students?

Research Objectives

1. To assess the quality of basic infrastructure facilities (ventilation, electricity, drinking water, sanitation) in Madaris.
2. To examine the impact of security infrastructure on the safety and well-being of students in Madaris.
3. To evaluate the availability and quality of classroom and library infrastructure and its influence on students' academic performance.
4. To suggest strategies for improvement of Madaris and their students.

Scope of the Study

The scope of this study is to critically analyse the infrastructure facilities for students of Madaris. It aims to assess the existing infrastructure facilities in Madaris, identify the challenges faced by Madaris in providing quality infrastructure facilities, examine the impact of infrastructure facilities on the academic performance and personality development of students, determine the factors that contribute to the achievement of standard facilities and infrastructure in Madaris, and propose strategies, and recommendations for improving the infrastructure facilities in Madaris.

Limitations

1. Resulting in limited generalizability of the findings when the study focuses on a specific region or sample of Madaris.
2. Findings are not applicable to all Madaris given the limited sample size may affect the representativeness of the findings.
3. The constraining time will limit the depth of data collection and analysis, capturing all aspects of infrastructure and its impact.
4. The impact on academic performance and personality development is subjective and may vary leading to bias from stakeholders.
5. Funding and data access restrictions limit resources in gathering and evaluating data, applying other solutions, and implementing suggested enhancements.

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6. External elements including socio-economic situation and government policy changes could influence the quality and availability of infrastructure amenities in a certain location.

The aim of the research is to shed light on the infrastructure issues and necessary enhancements for Madaris students despite these mentioned constraints.

Literature Review

Madaris and their Role in the System of Education.

In Muslim majority nations, Islamic educational institutions also known as Madaris are absolutely essential for the system of education. These long-standing establishments have always been quite helpful in giving pupils religious education and training (Rahman et al., 2020). Specializing in Islamic education, madaris are well known for teaching the Quran, Hadiths, and fiqh. Its aim is to give pupils strong knowledge of Islam, morals, and religious values (Rahman et al., 2020).

Within the Madrassah system, focus has moved to modernization and reforms. Some academics think the Madaris should incorporate contemporary subjects and teaching approaches to fit the evolving scene of education (Anjum, 2017.). This case emphasizes the need of teaching pupils in many other disciplines including physics, mathematics, social sciences, and many more than merely religion.

Conversely, there are worries about the extremism and violence indoctrination among some Madaris (Anjum, 2017). These issues have prompted demands for tighter control and supervision of these establishments. Although most Madaris provide a moderate curriculum combining religious instruction and modern topics, it is important to stress that many of them are not connected with extreme ideas.

Efforts to upgrade the infrastructure and education provided in Madaris have emerged in the past few years. Big data infrastructure and technology's help have been investigated in connection to Madaris' teaching and learning process (Tariq et al., 2024; Williamson, 2018). With data analytics and visualization tools, this strategy seeks to build a " smarter university." These kinds of approaches might enhance the learning chances and results for Madaris students. All things considered, Madaris are quite helpful in guiding and instructing students on religious education.

Talks are in progress concerning the need for modernization and change in the discussion of the curriculum within the Madrassah system. There are some efforts directed towards the rehabilitation of the existing educational structures systems in Madaris along with the technological inclusions. It is important to find an equilibrium between maintaining and following the religious principles and teachings and to provide students with knowledge that prepares them for contemporary challenges.

Previous studies concerning the infrastructure in Madaris

Research literature on the infrastructure in Madaris has focused on the diverse issues related to the design and management of infrastructure within educational institutions. Ebekozien et al., (2022) analyze the impact of private sector stakeholders on the infrastructure growth of higher educational institutions through greater corporate social responsibility. They argue that governments have a responsibility to provide access to basic infrastructural services and facilities. This study helps to understand the general framework of infrastructure construction within educational institutions.

Beauregard and Ayer, (2019) study the upkeep of K-12 schooling in the United States and the relationship of maintenance with academic achievement. Their study makes use of available publications to develop a decision support document for institutional facility maintenance. Such research can provide useful insights into the maintenance and management of infrastructural facilities in educational institutions. Pangestu and Hariri, (2022) focus on the management of facilities and infrastructure as tools for improving the learning process.

The review covers prior studies from diverse countries around the world. This study looks deeply into the role of infrastructure in enhancing the learning environment in Madaris. Calam et al. (2022) study the learning behaviours of early year's students in primary schools through facility and infrastructure utilization analysis. Their work documents the impact of facilities and infrastructure on educational participation as regards learning

mathematics. This research will add to understanding the impact of infrastructure and facility sufficiency on students in Madaris.

These references in this case provide information on the development, upkeep, and management of educational institutional infrastructure. They highlight the role of infrastructure in providing conducive environments for learning as well as the obligation of numerous public and private stakeholders towards provision of adequate features. These documents will add enable understanding of available information on infrastructure in Madaris.

Pertinent Theories or Frameworks

The explained concepts and information structures are important works for effective ensuring sufficiency studying the infrastructure of Madaris pupils. A piece of work is the concept critical infrastructure protection CIP (Ivanenko, 2020). Critical infrastructure singularly and collectively is defined as systems and resources that perform critical operations and services. The failure of such systems may severely or catastrophically affect society and national security. This can be applied to analyse the boarding facilities as it best explains the need for the construction and maintenance of these infrastructures.

A relevant one is service quality theory (LeBlanc & Nguyen, 1997). This theory focuses on the impressions that consumers have with regards to the level of service offered. In applying this theory for analysing the infrastructure of Madaris, it is important to consider the perception of the students regarding the availability and adequacy of these services. Focusing on this strategy enables to know where improvement is needed making the situation better at the students' perspective.

Facility and infrastructure standards assessment is relevant framework (Sugiyono, 2021). This framework highlights the importance of national standards for educational facilities including but not limited to classrooms, libraries, laboratories, and other resources. Evaluating the infrastructure of Madaris against these standards helps to uncover gaps or weaknesses and design strategies for improvement.

The challenges of the Madaris education system can be studied using a descriptive evaluative design (Mangondato, 2021). This aids in compiling the data on the difficulties the Madaris experience in the Bangsamoro Autonomous Region of Muslim Mindanao. Developing appropriate plans and enhancing the infrastructure services for Madaris pupils depends on an awareness of these problems.

Furthermore, guiding the management and upkeep of infrastructure and facilities in Islamic educational institutions are punctuality, precision, and efficiency (Nasution, 2022). This strategy underlines the need of management that is both efficient and effective to guarantee that the infrastructure facilities serve the students and enhance their learning environment. All things considered, the thorough study of infrastructure facilities accessible to Madaris students can be directed by Critical Infrastructure Protection and Service Quality frameworks, Standards Evaluation, Descriptive Evaluative Design, and the ideas of Management and Administration. Such frameworks and theories offer a whole strategy to evaluate and upgrade the infrastructure of Madaris facilities, including conformity to national requirements, reasonable, unrestricted access, proper security, and improved general conditions suitable for learning.

Methodology

A quantitative research plan was applied in order to reach the aims of the study. Several quantitative data collecting methods were used to guarantee a thorough awareness of the problem under analysis. The focus population for this research was all the students attending Madaris within the Bahawalnagar district. However, due to budgetary constraints, a purposive sample of ten major Madaris (eight males and two females) offering boarding facilities and Dars-e-Nizami classes were selected for the study.

A sample of 100 students (80 males and 20 female) was drawn from each selected madrassa using purposive sampling technique, 10 students were selected form each Madrassa, resulting in a total student sample of 100. The questionnaire were pre-tested to ensure validity and reliability before use in data collection as instrument of data collection. Primary data was collected through face-to-face interaction with the students of

Madaris.

Quantitative data from closed-ended questionnaire items was analysed using the Statistical Package for Social Sciences (SPSS). Both descriptive and inferential statistical techniques such as frequencies, percentages, means, and standard deviations were used to analyse the data. Proper ethical protocols were followed during all stages of the study to ensure confidentiality and informed consent of participants.

Result Analysis and Discussion

Laboratory facilities

None of the respondents responded about laboratory facilities because there was not any laboratory, equipment and lab experts available in Madaris. The respondents said that these were the needs of 21st century to develop the Madaris according to the modern requirements but Madaris cannot bear the expenses of laboratory itself. Mostly respondents said that government should support the Madaris for developing laboratories.

Computer and Internet facilities

None of the respondents responded about computer and internet facilities because there were not any computer lab or internet facilities available in Madaris. The respondents said that these were the requirements of modern era to develop the Madaris but Madaris had no financial support by government and they could not bear the expenses itself due to financial problem. Teacher of Madaris said ICT facilities are basic needs of Madaris (Hakim et al., 2015; Shahid et al., 2022).

Hostel, Health, and Sanitation, Security, Classroom, Library Infrastructure Facilities

The table 1 represents a comprehensive evaluation of infrastructure facilities in Madaris within the Bahawalnagar District, based on a scale where 1 represents excellent, 2 indicates above average, 3 reflects average, 4 suggests below average, and 5 denotes poor. The mean value for each facility is used to determine its rating, where lower mean values signify better quality, and higher mean values indicate a poorer facility. This analysis provides insights into areas where improvements are needed to enhance the student experience and environment in Madaris.

Table 1

Distribution of infrastructure facilities with Weighted Score, Mean Value, and Standard Deviation

Infrastructure Facilities	Weighted Score	Mean Value	Standard Deviation
Hostel Infrastructure Facilities			
Ventilated	180	1.8	1.101
Over crowded	220	2.2	1.137
Electricity	238	2.38	1.254
Drinking water	254	2.54	1.547
Record keeping	420	4.2	1.119
Separate hostels	423	4.23	1.067
Well-constructed hostels	458	4.58	0.831
Internet facilities	470	4.7	0.644
Hostel furniture	470	4.7	0.644
Health and sanitation Infrastructure Facilities			
Proper drainage	286	2.86	1.363
Water tank	310	3.1	1.176
Toilets	336	3.36	0.847
Safe drinking water	352	3.52	0.99
Washrooms	354	3.54	1.259
Cleanliness	394	3.94	0.952

Infrastructure Facilities	Weighted Score	Mean Value	Standard Deviation
Hot and cold water according to season	416	4.16	0.735
Dispensary	492	4.92	0.273
Free medicines	492	4.92	0.273
Security Infrastructure Facilities			
Boundary wall	274	2.74	1.39
Main Gate	310	3.1	1.176
Safe building	312	3.12	0.998
Waiting Hall for visitors	394	3.94	0.952
Visitors control rooms	470	4.7	0.644
Security guards block	478	4.78	0.416
Classroom Infrastructure Facilities			
Fans	238	2.38	1.254
Electricity in Classrooms	254	2.54	1.547
Ventilated	266	2.66	0.794
Well furnished	274	2.74	1.515
Proper Classrooms	428	4.28	0.78
Availability of Furniture	470	4.7	0.644
Full with AV aids	470	4.7	0.644
Air conditioner	492	4.92	0.273
Projector installed	492	4.92	0.273
Library Infrastructure Facilities			
Fans	238	2.38	1.254
Electricity in library	254	2.54	1.547
Shelves for books	298	2.98	0.953
Books are proper arranged	312	3.12	0.998
Proper Library	316	3.16	0.992
Full with books	322	3.22	1.26
Well furnished	470	4.7	0.644
Reading furniture	478	4.78	0.416
Air conditioner	492	4.92	0.273
Reading Cabin	492	4.92	0.273

Scale: 1=Excellent, 2=Above Average, 3=Average, 4=Below Average, 5=Very Poor

The table presents a comprehensive evaluation of infrastructure facilities in Madaris within the Bahawalnagar District, based on a scale where 1 represents excellent, 2 indicates above average, 3 reflects average, 4 suggests below average, and 5 denotes very poor. The mean value for each facility is used to determine its rating, where lower mean values signify better quality, and higher mean values indicate a poorer facility. This analysis provides insights into areas where improvements are needed to enhance the student experience and environment in Madaris.

In the Hostel Infrastructure Facilities category, ventilated spaces received a mean value of 1.8, placing it in the excellent category. However, it suggests that ventilation is lacking in many Madaris, with a tendency toward improvement needed. Overcrowded hostels scored a mean value of 2.2, categorizing this facility as above average. This suggests overcrowding is a concern but not as critical as other issues. Similarly, electricity scored 2.38, indicating that while electricity is generally available; it may not be reliable or sufficient, falling into the above average category.

Drinking water facilities had a mean value of 2.54, categorizing it as average. While drinking water is provided, its quality or availability is inconsistent and could be improved. Record keeping (mean value 4.2), separate hostels (mean value 4.23), and well-constructed hostels (mean value 4.58) are ranked below average and very poor, showing that while some administrative systems are in place, the overall hostel infrastructure, including construction quality, needs urgent improvement. Internet facilities and hostel furniture, both with a mean value of 4.7, are rated very poor, indicating significant deficiencies in these areas.

In the Health and Sanitation Infrastructure Facilities category, proper drainage (mean value 2.86) and water tanks (mean value 3.1) are considered above average and average, respectively, indicating that these essential sanitation facilities are functional but not up to the required standards. Toilets (mean value 3.36) and safe drinking water (mean value 3.52) are similarly rated as average, showing that these facilities are available but may be inadequate in terms of cleanliness or maintenance.

Washrooms (mean value 3.54) and cleanliness (mean value 3.94) fall into the below average category, indicating significant issues with hygiene and upkeep. Hot and cold water according to the season (mean value 4.16) is also rated below average, reflecting inconsistent availability of water temperature control. Dispensary and free medicines both scored a mean value of 4.92, placing them in the very poor category. These scores suggest that health services are either completely inadequate or unavailable, representing a critical area for improvement in Madaris.

In the Security Infrastructure Facilities, boundary wall (mean value 2.74) and main gate (mean value 3.1) are ranked above average and average, suggesting that the security infrastructure, while present, may not be strong enough to ensure safety. Safe building (mean value 3.12) and waiting hall for visitors (mean value 3.94) also received average to below average ratings, indicating that security and visitor management could be further enhanced.

Visitors control rooms (mean value 4.7) and security guards block (mean value 4.78) scored very poor, signalling severe deficiencies in the security measures and personnel accommodations. This reflects a significant area of concern regarding the safety and security of Madaris.

In the Classroom Infrastructure Facilities category, fans (mean value 2.38) and electricity in classrooms (mean value 2.54) are ranked as above average, suggesting that although these facilities are provided, they may be insufficient or unreliable. Ventilation (mean value 2.66) and well-furnished classrooms (mean value 2.74) are rated as above average, indicating that while some classrooms are equipped, they may not be adequately designed for comfort or learning efficiency.

The higher-rated facilities in the classroom category include proper classrooms (mean value 4.28), availability of furniture (mean value 4.7), and full with AV aids (mean value 4.7), which are categorized as below average and very poor, indicating significant deficiencies in these areas. The air conditioner and projector-installed facilities both scored 4.92, placing them in the very poor category, signifying a lack of essential technological and climate control resources for students.

In the Library Infrastructure Facilities, fans (mean value 2.38) and electricity in the library (mean value 2.54) are ranked above average, suggesting some provision of basic amenities but with room for improvement. Shelves for books (mean value 2.98) and books are properly arranged (mean value 3.12) are rated as average, indicating that while there are efforts to organize and store books, the system is not fully functional or efficient. Proper library (mean value 3.16) and full with books (mean value 3.22) fall into the average category, reflecting

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the need for a more comprehensive collection of books and better organization. The library displays the worst rating of 'very poor' for the study space climate control, furniture furnishings, and basic furniture, yet there are 'air conditioners' reading cabins and other facilities with scores of 4.92 and 4.78, indicating the underlying value of 4.9.

The Comprehensive examination of Madaris reveals extensive under provisioning of vital features such as health services, security facilities, classrooms, and conditioned air. From the study, it can be inferred that despite substantial allocations for modern features like air conditioning, audiovisual aids, and associated medical services which are rated as excellent, influences the infrastructure negatively because it does not meet the funding expectations given to the areas. It could also be noted that the lower score makes it clear that the funding of the areas has to be drastically improved for students to regard them positively.

Figure 1

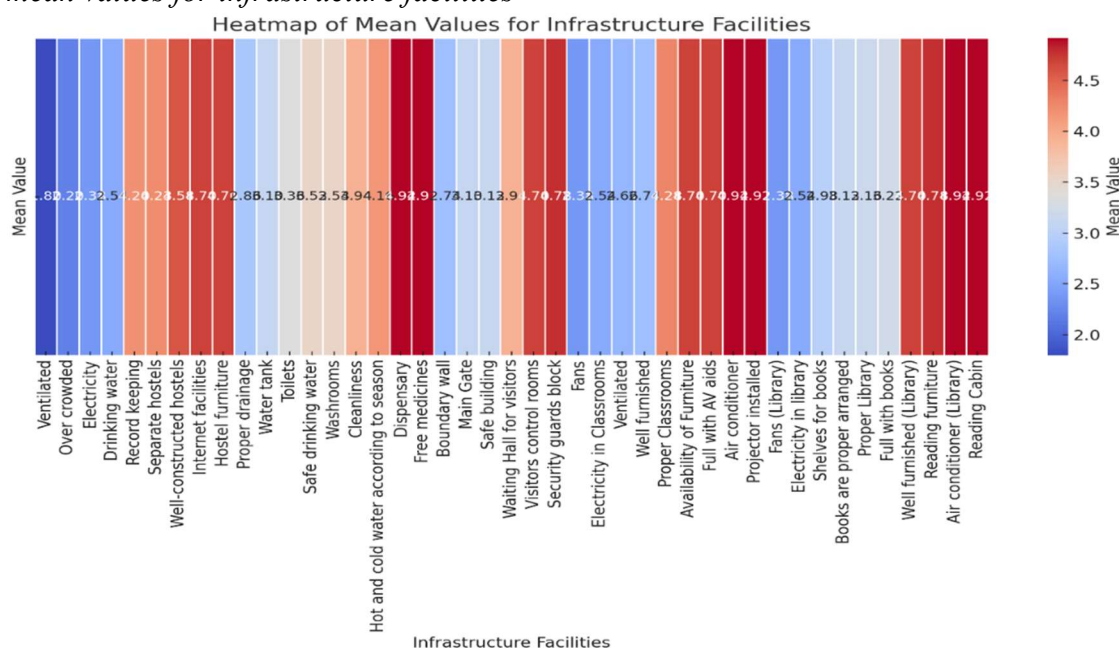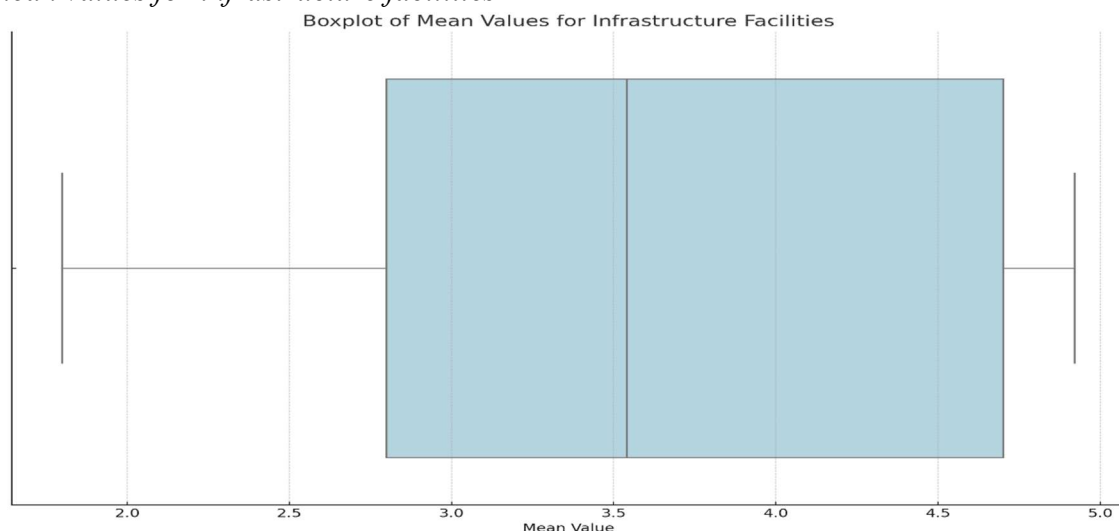*Heatmap of mean values for infrastructure facilities*

Figure 2

Boxplot of mean values for infrastructure facilities

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Findings, Analysis, Conclusion, and Suggestions

Findings

The evaluated facilities at Madaris in Bahawalnagar region have a mix of moderate to satisfactory bases across different criterion with a moderate to concerning level of inadequacy.

The evaluation utilizing mean values and scale yielded the following findings:

Hostel Facilities

- Ventilation, overcrowding, and electricity emerged as significant problems, with all facilities categorized as above average. These findings indicate that although these fundamental facilities are present, they are inadequate and fail to sufficiently address the demands of the pupils.
- Drinking water facilities received an average rating, indicating variability in quality and accessibility among different Madaris.
- Record keeping, separate hostels, and well-constructed hostels received below average to very poor ratings, indicating issues in the management and quality of the physical infrastructure, which is critical for students' well-being.
- Internet facilities and hostel furniture scored very poor, reflecting significant deficiencies in providing modern amenities essential for students' academic success and comfort.

Health and Sanitation Facilities

- Key sanitation facilities such as proper drainage, water tanks, and toilets were rated average to above average, pointing to significant gaps in maintaining hygiene and sanitary standards across Madaris.
- Cleanliness was found to be below average, indicating issues with upkeep and maintenance.
- Dispensary and free medicines were rated very poor, suggesting that health services are either extremely lacking or entirely unavailable in most Madaris, presenting a critical area for improvement.
- Security Infrastructure:
- Boundary wall and main gate were rated average to above average, pointing to inadequacies in physical security infrastructure.
- Visitors control rooms and security guards block received very poor ratings, indicating a major deficiency in security measures and the provision of necessary staff and facilities for monitoring and ensuring the safety of students and staff.

Classroom Infrastructure

- To a certain degree, the rating given to the Fans, Electricity in classrooms, and ventilation is above average, which shows that these basic features have been provided, but are not enough to support an optimal learning environment.
- Improvement in classroom or the availability of modern equipment, including audiovisual aids, and projectors was rated either below average or extremely poor-denoting significant gaps in technological infrastructure which stands to hinder the students' academic progress.
- Students' comfort in the school is not catered for as evidenced by the rating given to air conditioning in classrooms which is the lowest mark. This implies that there is no temperature regulation in the classrooms.

Library Infrastructure

The library was rated above average for fans and electricity, and this implies that these fundamental conveniences are provided, but not enough to sustain a proper study atmosphere.

Reading furniture, air conditioners, and reading cabins scored very poor-denoting absence of goal oriented study climate control in libraries that is critical in supporting an enhanced effective use of learning materials.

The average score of the library resources which include shelving, book organization, and book availability suggests some attempts are being made to provide educational resources, however, there remains a large shortfall in terms of the effort's quality and quantity.

Summary of Findings

These findings illustrate that the infrastructure of the Madaris located in the Bahawalnagar District is in dire need of enhancement in terms of the basic building facilities such as: ventilation, electricity, sanitation, security, and classroom facilities. There was inadequate provision of basic facilities, safe drinking water, proper sanitation, and adequate ventilation was found to be insufficient with many of the facilities rated to be between above average to average. Furthermore, other basic facilities such as the provision of internet, furniture, and air conditioning were struck with low ratings indicating that the infrastructure does not meet the required standards that would nurture an effective educational environment, Enhancing learning environments is vital for optimizing educational endeavours. Health services and security were highlighted as greater problems, rated poorly when it came to medical facilities and the level of security infrastructure in place. Without a doubt, significant resources and focus will need to be devoted to these areas to address such gaps and vulnerabilities and ensure the infrastructure enables the health and educational performance of students.

Discussion

In Madaris, which falls under Bahawalnagar District, the infrastructure assessment reveals poor inadequacies in a number of facilities, which offers high potential for improvement in ventilation, sanitation, security, and classroom erection. These corroborate findings of prior research done on the lack of infrastructure within educational institutions, particularly in remote regions. In rural schools across Pakistan, Qamar and Nawaz (2021) reported similar barriers in functionality where basic services such as ventilation, electricity, and sanitation were deemed dire. The study reveals a recurring trend of ignoring infrastructure improvement of schools serving underprivileged groups, which compromises the learning process and the educational environment.

With an average of 4.7, this study evaluates hostel furniture and internet services quite low. These assessments line up with the findings of Alam et al. (2022), who said that many rural institutions lack modern furnishings, obsolete internet access, and poor technological equipment, thereby affecting In particular in this digital era when internet availability and sophisticated teaching aids are vital for academic performance, the lack of technology resources in Madaris substantially limits students' access to fundamental learning tools (Mirza & Rashid, 2024). As major obstacles to efficient learning in rural educational environments, Yousafzai et al. (2018) also pointed out the prevalence of antiquated furniture and inadequate technology tools.

The study revealed that health and sanitation services including water supply, drainage systems, and toilets rated from average to below average. The investigative effort on educational infrastructure has often pointed out this problem. By means of a geographical geographic study of health and sanitation indicators in Pakistan, Khan and Hussain (2020) revealed a dearth of sanitation facilities and water availability as main impediments to the health and wellness of pupils. The results of this study emphasize the need of using more resources on these fundamental services since poor water supply compromises students' well-being and bad sanitation practices expose their physical health at danger.

This assessment gave very poor grades for security infrastructure including the count of missing visitor control rooms and security guard stations. This result supports the worries voiced by Uzooba et al. (2020), who concentrate on the fact that security presents a major obstacle for rural schools, where insufficient control measures for the protection of personnel and pupils abound. It is rather concerning that, the Madaris lacks safe zones since this can lead to more violence and disturbance not just in classrooms but also in the actual teaching process.

One more cause of concern now is the condition of the classroom. The findings revealed that some basic amenities as fans, power supply, and ventilation were scored as above average, suggesting that these facilities do exist but they do not enable ideal learning. This supports the research of Khan and Hussain et al. (2020), which

observed that poorly designed ventilation systems in rural Pakistani schools drastically lower the air circulation and, hence, the comfort and concentration of the students. The poor grades provided for the supply of air conditioning and audio-visual aids help the classrooms underline the lack of current educational tools that could improve the teaching and learning process in these institutions. This result backs up Qamar et al. (2022), who observed that kids' academic performance suffers in rural Pakistani schools without current instructional resources.

Unacceptably low scores for reading chairs, air conditioning systems, and reading cabins indicate insufficient library infrastructure. The lack of appropriate facilities in rural school libraries highlighted by Hassan et al. (2020) points to the frequent placement of pupils in systems free of an encouraging atmosphere for self-study. Lack of appealing, orderly study spaces seriously reduces students' access to resources outside the classroom and stunts their academic development.

All things considered, the infrastructure flaws found in this study are not limited to the Bahawalnagar District; rather, they reflect more general issues that rural Pakistani schools deal with. The comparison with other studies confirms the systematic character of these problems, especially the lack of fundamental services including appropriate ventilation, sanitation, safety measures, and technical facilities. To solve these issues, broad reforms in the educational system including enhancement of fundamental services, improved safety, and availability of current instructional materials is desperately needed. Ensuring correct educational possibilities for Madaris students inside a secure and suitable environment calls for significant public and private sector funding. Improving the infrastructure and reaching the learning objectives specified for Madaris students depends much on such money.

Conclusion

This report has evaluated Madaris's infrastructure facilities in Bahawalnagar District and highlights several obvious flaws. The findings reveal that fundamental needs such security, healthcare, and internet access are rather sufficient. Still, much more important issues such ventilation, energy supply, sanitation, classroom space, and overall building design are practically lacking. The very low ratings given to classic facilities including water for drinking, sanitation, and the tools used to teach a class point to something that has to be done urgently to handle these basic concerns.

The lack of modern educational tools including audio-visual aids, projectors, and even air conditioning greatly aggravates the infrastructure gap of rural Madaris, highlighting the great and pressing need to change the general neglect of fundamental infrastructure across Madaris. The results underline the need of multi-sector cooperation encompassing governmental and non-governmental groups in the development of infrastructure. Addressing these gaps through targeted investments and reforms will enhance educational opportunities and increase the overall wellbeing and academic performance of students in the region's Madaris. The study also emphasizes the need to improve the working conditions to ensure students have all the necessary materials for their success.

Recommendations

This research put forwards a few notable recommendations intended to add to the existing infrastructure facilities of Madaris located in Bahawalnagar District.

Enhance Hostel Infrastructure

Addressing ventilation, overcrowding, and electricity concerns requires the provision of adequate airflow, overcrowding mitigation, and guaranteed electricity. There is also the need to enhance potable water quality and access.

Health and Sanitation Improvement

The sanitation and potable water sections require more modernization in the form of toilet facilities, effective drainage systems, and regular maintenance assurances. Health services including, but not limited to, dispensaries and free medication access, need to be improved significantly for better medical care of the students.

Security Measure Improvement

Better security on the main gate will need to be instituted in addition to strengthening the boundary walls. Construction of sophisticated security guard posts, visitor control rooms, and the relevant documentation rooms, will improve the safety of the students and staff.

Classroom Infrastructure Improvement

The basic classroom structures need to be upgraded, including Ventilation systems, Electrical infrastructure, and Furnishings. Purchase of modern teaching materials like audio-visual equipment and climate control systems will also improve the instructional atmosphere and the comfort of the students.

Library Facility Improvement

The library infrastructure needs to be improved in a great manner as proper book ordering, better arrangement, easy access to resources, and more comfortable reading areas are sorely lacking. Integrating digital resources will improve the educational opportunities greatly.

Infrastructure Planning Improvement

Long term planning for infrastructure improvements needs to take a gradual, systematic approach where critical needs are met first, but consideration for future developments is expanded to ensure supplementary growth goes undisturbed. The state's local agencies together with community stakeholders will form the primary network for addressing these essential needs while ensuring resources are sustainable.

As mentioned earlier, these recommendations will solve the infrastructure issues in Madaris and we greatly enhance the environment conducive to learning.

Focused actions to improve basic infrastructure will enhance students' performance and well-being.

Conflict of interest

It is declared that there is no conflict of interest.

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