

Assessment of Primary School's Capability in Managing Facilities and Infrastructures Supporting Conducive Learning

(Case Study at MIT Al-Ishlah in Gorontalo Province)

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Abstract

A conducive teaching and learning atmosphere affect the sustainability of the education system, starting from elementary school to college. Creating a conducive atmosphere can be done through various efforts, including providing complete and relevant facilities and infrastructure for teaching and learning activities in schools. When every school is able to fulfill educational facilities and infrastructure as much as possible, whether located in developed cities and in areas that are still developing, then realizing *Indonesia Emas 2045* goal is not impossible to achieve. This study was conducted to examine the capabilities of elementary madrasahs in Gorontalo Province, which is a developing area, in managing educational facilities and infrastructure that include aspects of the availability of facilities and infrastructure; utilization of facilities and infrastructure; and maintenance of facilities and infrastructure. Presentation descriptive analysis was used as an approach in studying this topic with a case study taking one Madrasah Ibtidaiyah in Gorontalo Province. The study results shows that the primary education institution in a region categorized as a developing area have demonstrated good capabilities in managing facilities and infrastructure that support a conducive learning environment.

Keywords: School Facilities, Infrastructures, Primary School, Developing Area, Conducive Learning

1 INTRODUCTION

Education distinguishes humans from other creatures. Education is a human effort to improve knowledge and self-quality. Education can be achieved through formal or non-formal institutions. Quality education, aimed at achieving high standards, requires adequate and relevant facilities and infrastructures, an effective and conducive learning process, highly capable teachers, motivated and enthusiastic students, and good management in the resources and governance of the institution.

Student motivation and enthusiasm are key drivers in education, shaping their engagement in the learning process and its outcomes. The level of motivation and

how schools nurture it influences the development of students' learning behaviors [1][2][3][4][5][6]. Students with high motivation and enthusiasm for learning tend to be more active, diligent and focused in learning, and the positive impact of which can be seen from students' achievements in the learning process [7][8][9]. However, the level of student motivation and enthusiasm is influenced by the quality of the education system at school, particularly from the perspectives of teachers, curriculum, and relevant facilities and infrastructure. A high-quality education system supported by adequate and relevant resources ultimately creates a conducive environment that enhances student motivation and enthusiasm for learning [10][11][12][13][14][15][16][17].

Formally, education is provided at schools starting from the basic level, including preschool, to elementary/primary school, with the possibility of advancing to higher education. If they are lucky, students may benefit from a quality education system supported by relevant and adequate facilities and infrastructure starting from preschool or elementary school. However, not all students are so lucky, as access to such resources can be influenced by factors such as the completeness of facilities and infrastructure at a school, which often varies between schools in advanced large cities and those in developing small towns, between schools in developed and developing countries, and between government-managed schools and private schools. It also depends on the school's capability to provide and manage facilities and infrastructure, as well as the understanding of teachers and students in utilizing the resources provided by their school[14][18][16][19][20].

Gorontalo Province is one of the regions in Indonesia categorized as a developing area. According to statistical data [21][22], the Human Development Index (HDI) for this region in 2023 was 71.25, which is lower compared to the HDI of DI Yogyakarta, a city known for its advanced educational sector in Indonesia, which stands at 81.094. In terms of literacy development index, Gorontalo's score was also lower (70.3900) compared to DI Yogyakarta (85.0900), and similarly, the adequacy of library collections in Gorontalo (0.4305) was lower than DI Yogyakarta (0.8447), and the level of library visits per day was also lower in Gorontalo (0.0647) compared to DI Yogyakarta (0.3277) (BPS-Statistics of Indonesia, 2023). In 2023, Gorontalo Province had 928 primary schools (both private and public) and 97 Islamic primary schools (*madrasah ibtidaiyah*). There were 8,392 primary school teachers and 1,130 Islamic primary school teachers. The number of primary school students was 108,142, while the Islamic primary schools' students were 13,651 [23].

Those facts motivate the author to examine the capabilities of one of the Islamic primary schools (*madrasah ibtidaiyah*) in Gorontalo Province in managing educational facilities that support a conducive learning environment. Thus, the aim of this study was to assess the capabilities of the school located in Gorontalo Province, a developing region, in managing educational facilities and infrastructures which covered three aspects: (1) availability of facilities and infrastructure; (2) utilization of facilities and infrastructure; and (3) maintenance of facilities and infrastructure. The results of this study are expected to serve as an initial reference for local governments, education departments, and the central government in enhancing support for schools that effectively manage their facilities and infrastructure. Additionally, it aims to

encourage schools throughout the region to continuously and committedly strive towards achieving a high-quality education system with a conducive learning environment through the provision of adequate and relevant facilities and infrastructure.

2. METHODS

The method used in this study was quantitative research with an explanatory descriptive type. The research was conducted at *Madrasah Ibtidaiyah Terpadu (MIT) Al-Ishlah* in Kota Gorontalo in January, 2024. The study population consisted of 50 teachers from MIT Al-Ishlah in Kota Gorontalo. The sample used for the study included the entire population, which was 50 respondents. Data collection techniques included questionnaires and interviews, and data analysis was performed using percentage analysis.

3. RESULTS AND DISCUSSION

The assessment of capability of MIT Al-Ishlah in Gorontalo in managing educational facilities covered aspects of the availability of facilities and infrastructure, the utilization of facilities and infrastructure, and the maintenance of facilities and infrastructure.

Field observation results showed that classrooms at MIT Al-Ishlah in Kota Gorontalo were equipped with LCD screens and audio equipment, all of which were well-maintained. Teachers used these facilities to help create a conducive learning environment and boost student motivation. Additionally, there were teaching aids relevant to subjects like mathematics, Indonesian, and English. This indicates that the management of facilities and infrastructure at MIT Al-Ishlah aligns with the needs of the learning process and is consistent with the current educational curriculum. Teachers at the school were also proactive in providing media that matched the subjects they taught.

The data processed from the questionnaire is presented in tabular format. Table 1 illustrates the frequency distribution of the availability of facilities and infrastructure at MIT Al-Ishlah in Kota Gorontalo in order to foster a conducive learning environment in the school.

Table 1. Frequency distribution of the availability of school's facilities and infrastructure

Descriptor	Average Scores	Percentage	Category
Classroom and study space facilities	201.00	80.40	Good
Internet access and learning resources	224.67	89.87	Good
Laboratory facilities	201.33	80.53	Good

Library facilities	203.33	81.33	Good
Health and sports facilities	224.00	89.60	Good
Arts facilities	187.33	74.93	Fair
Average	206.94	82.78	Good

The data in Table 1 indicates that the school's capability in providing facilities to support learning activities is categorized as good, with an average percentage of 82.78%. This result also highlights that the school needs to enhance its efforts in providing arts facilities, which has the lowest percentage at 74.93% among all facilities. Classroom and study space facilities, laboratories, and libraries also require more attention from the school, as they rank lower compared to internet access and learning resources facilities score achievement, as well as the health and sports facilities. The school should strive to balance the provision of classroom and study space facilities with the availability of internet access and learning resources because the condition of classrooms and study spaces significantly impacts student achievement in the learning process (Khumalo & Mji, 2014; Ruhyana & Aeni, 2019), especially if internet access and learning resources are intended to facilitate the learning process in that classrooms [19].

Table 2 presents a summary of the frequency distribution of utilization of facilities and resources in the learning process.

Table 2. Frequency distribution of the utilization of school's facilities and infrastructure

Descriptor	Average Scores	Percentage	Category
Utilization of technology in learning	194.67	77.87	Fair
Alignment (relevant) with learning objectives	237.67	95.07	Excellent
Compatibility of media with learning material	243.33	97.33	Excellent
Suitability for student characteristics	230.00	92.00	Excellent
Appropriateness of facilities and infrastructures used	223.67	89.47	Good
Average	225.87	90.35	Baik

Table 2 shows that the capability of MIT Al-Ishlah in Kota Gorontalo to utilize educational facilities and infrastructure in the learning process falls into the "good" category, with an average percentage of 90.35%. The study results indicate that both

students and teachers experience significant benefits when supported by facilities and infrastructure that are aligned with their learning objectives, relevant to the learning material, suitable for student characteristics, and appropriate for their intended functions. However, attention is needed for the use of technology in learning, which has a much lower percentage of 77.87% compared to other sub-aspects, which range from 89% to 97%. The utilization of technology facilities in learning, as shown in Table 2, does not yet match the percentage of internet access and learning resources facilities, which reached 89.87% (see Table 1).

Table 3 presents the frequency distribution of the maintenance of school's facilities and infrastructure at MIT Al-Ishlah, Kota Gorontalo in its efforts to maintain a conducive learning atmosphere.

Table 3. Frequency distribution of the maintenance of school's facilities and infrastructure

Descriptor	Average Scores	Percentage	Category
Routine/periodic checks	215.00	86.00	Good
Optimizing usage lifespan	220.67	88.27	Good
Ensuring user safety and security	223.67	89.47	Good
Ensuring operational readiness	230.67	92.27	Excellent
Average	222.50	89.00	Good

Data in Table 3 indicates that the school's capability in maintaining its facilities and infrastructure is rated as good, especially in ensuring their operational readiness. However, despite achieving a good rating, the madrasah needs to focus on further improving maintenance efforts. This is crucial considering that the utilization of these facilities by students and teachers is very high—reaching 97.33% in terms of relevance to the learning material and 95.07% in terms of relevance to learning objectives (see Table 2).

Thus, when comparing the maintenance aspect with utilization, the percentage of operational readiness only stands at 92.27%, with other related points being below 90%. For example, the routine/periodic checks (see Table 3) are only rated as "good" (86%), which contrasts sharply with the "excellent" rating achieved for the relevance of the utilization to learning material and objectives facilities as shown in Table 2.

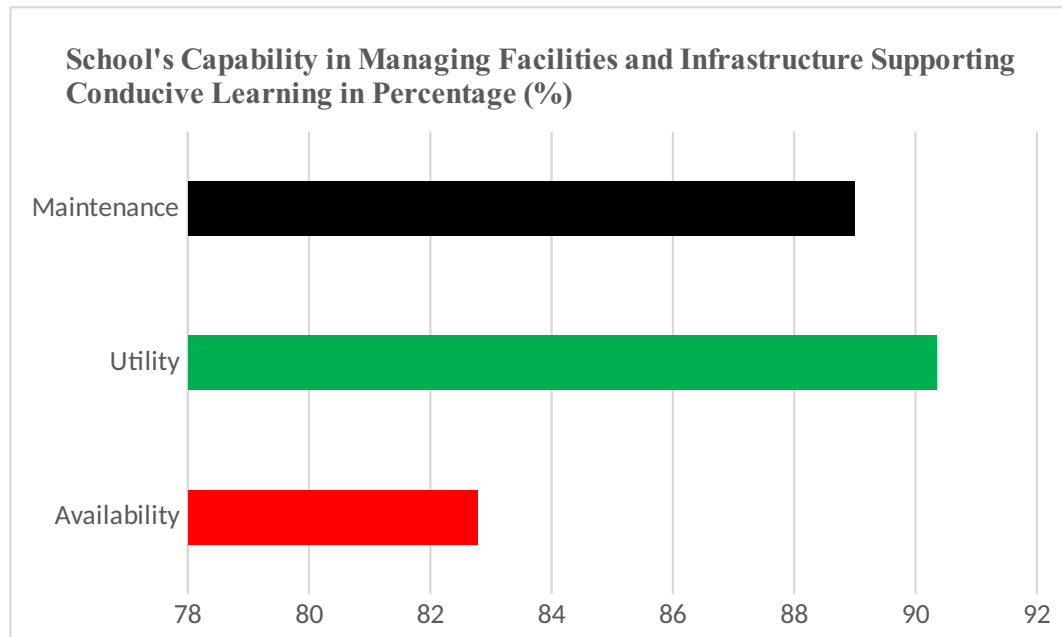


Figure. 1. Comparison of capability achievements between aspects of availability, utilization, and maintenance of facilities and infrastructures.

Figure 1 illustrates that the capabilities of MIT Al-Ishlah Gorontalo in the aspect of utilization are not yet balanced with the aspects of availability and maintenance. Therefore, there is a need for increased efforts and commitment from the madrasah and all its members to improve the availability and maintenance of facilities. This will help align these aspects with the capability of utilization aspect, so that collectively, these two aspects can also achieve a beyond “just good” rating. The high level of benefit derived from facilities and infrastructure that support a conducive learning environment must be matched by efforts in availability and maintenance aspects. This balance relies on the consistency of the school/madrasah in providing and managing these resources fully, as well as on the ability of teachers and students to utilize them effectively [19].

It is common to find that school facilities and infrastructure are damaged and neglected due to inadequate maintenance and utilization capabilities. According to data from the (Indonesian Ministry of Education, 2024), the total number of elementary school classrooms by condition across provinces for the 2023/2024 period was 1.15 million. Of these, 40.79% were in good condition, 27.98% were lightly damaged, 20.71% were moderately damaged, and 10.52% were severely damaged. In Gorontalo Province specifically, there were 3,032 classrooms (44.99%) in good condition, 1,491 classrooms (22.12%) with light damage, 1,603 classrooms (23.78%) with moderate damage, and 614 classrooms (9.11%) with severe damage. This indicates a significant difference in the percentage of severely damaged classrooms compared to those that are well-maintained. Even West Sulawesi, a newer province established in 2004, only four years younger than Gorontalo, had a similar issue, with 22.28% of classrooms in severe disrepair compared to 27.87% in good condition [23].

The quality of the education system, conducive atmosphere, school capabilities in providing and managing facilities and infrastructure, motivation and enthusiasm for teaching and learning are related to each other. Especially when schools are in areas that are still developing, or even in areas that are still underdeveloped. The results of research from [18] show how great the influence of facilities and infrastructure is in ensuring the sustainability of the learning system when viewed from the conditions of the area, which may never or are very unlikely to be found in developing areas, especially in urban areas where the economic conditions and human resources are very advanced. Their study in remote villages shows results that some students were unable to continue their hopes of studying due to drowning in broken toilets [18]. The case that occurred in this African country is in stark contrast to a previous study conducted in Indonesia by Ruhyana, in one of the areas in West Java, namely Sumedang, which showed that toilet facilities and infrastructure did not even have an effect on student learning at school (except when it indirectly related to student health).

Assessment of school capabilities in relation to the availability, utilization, and maintenance of school facilities and infrastructure is very important to be carried out continuously and evenly throughout the city, from urban areas, to developing areas, to remote villages so that no more students or teachers are cut off from their right to seek knowledge just because of inadequate school facilities and infrastructure, especially if these problems are not exposed and only become hidden and unsolvable problems for that schools.

Raising the issue of the importance of assessing school capabilities in the availability and management of facilities and infrastructure, in terms of the development of the area where the school is located, will help all parties related to and concerned with education in mitigating problems that still occur in the availability and management of school facilities and infrastructure, so that in the future, a conducive, relevant, and safe learning atmosphere for teachers and students and the school community will be evenly enjoyed from urban to remote villages.

Research is open to be continued on the capability assessment of the providing, utilizing, and maintaining facilities and infrastructure in elementary schools in urban and district areas in Gorontalo Province that are located in rural areas. Research can also be focused on the influence of the completeness of school facilities and infrastructure on student achievement in schools with quantitative and qualitative approaches.

4. CONCLUSION

The capability of the primary madrasah in the developing province of Gorontalo to manage educational facilities, including aspects of availability, utilization, and maintenance, falls into the "good" category. However, there is a need to improve and refine the provision of classroom and learning space facilities, as well as the maintenance of all facilities. This enhancement is necessary to achieve results that are not just good but excellent, and ensuring harmony with their utilization in supporting teaching and learning activities in the classrooms.

This finding can serve as an initial reference for local governments, education departments, and the central government in enhancing support for schools that have managed their facilities and infrastructure well; offer help in improving schools' capabilities in managing educational resources through supporting programs such as training and others; offer aid in increasing teachers' and students' understanding of how to utilize the facilities and resources provided by the school through training and other supportive programs; and encouraging schools across different regions to work towards achieving a high-quality education system with a conducive learning environment. Through these collective efforts, a conducive learning atmosphere, which sometimes only can be enjoyed by teachers and students in advanced cities, can also be experienced by educators and students in schools located in remote areas.

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