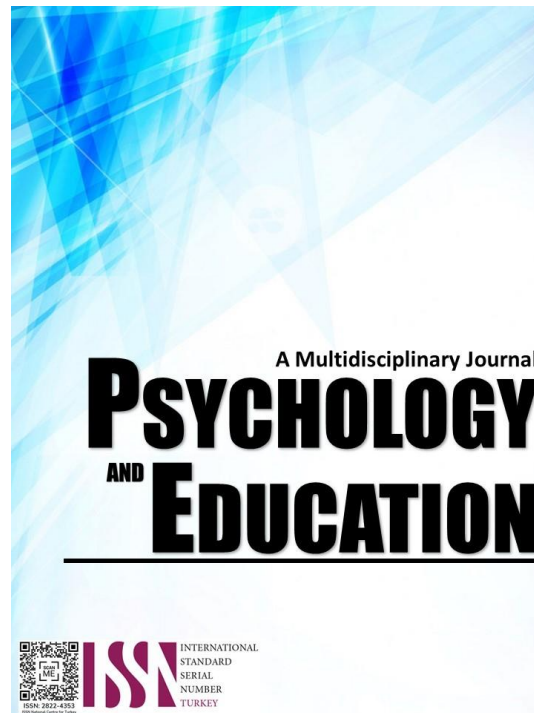


**PHYSICAL FACILITIES MONITORING SYSTEM
EMPLOYED BY THE ELEMENTARY SCHOOLS IN
THE THIRD CONGRESSIONAL DISTRICT OF
QUEZON: BASIS FOR AN ENHANCED SYSTEMATIC
MONITORING MODEL**



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Physical Facilities Monitoring System Employed by the Elementary Schools in the Third Congressional District of Quezon: Basis for an Enhanced Systematic Monitoring Model

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Abstract

The study on facilities monitoring system of schools in the Third District of Quezon was conducted in order to assess classroom building facilities and the monitoring system used. The study chose respondents of three categories, namely: schools' administrators, with 60 respondents; teachers, 120 respondents; and team of experts, with 12 respondents. The study aimed to determine the physical facilities monitoring system implemented and how they are being implemented according to availability, adequacy, functionality, practicality and feasibility. This study also aimed to determine the challenges encountered in the implementation of the monitoring system. In the course of the study, it was found that there is a school monitoring system in schools which were named as facility monitoring system. The implementation of the monitoring system was evaluated according to availability, adequacy, functionality, practicality and feasibility. Among the five categories, only the Availability category received the highest scores. This can be explained due to the infrequent mobilization of monitoring systems as reported by the respondents. Although the systems are impactful, which is evident based on the Adequacy, Feasibility, Practicality, and Functionality criteria, several respondents claimed that the monitoring is not very frequent. In terms of challenges encounters, three themes were drawn from the eight challenges cited: inadequate data, limited accessibility and outdated technology. While in terms of measures to address the challenges encountered in using the existing monitoring system, three thematic statements generated from the responses of the respondents: identify weaknesses, technology advancement and training. Finally, a systematic monitoring model is proposed by the researcher.

Keywords: *school facilities, school facilities monitoring system, monitoring system, systematic monitoring model, schools*

Introduction

The government department responsible for Education must ensure that quality school infrastructure is accessible to all students in a fair and sufficient manner, thereby enhancing the delivery of educational services and creating conducive learning environments. To achieve this goal, it is essential to evaluate the present state of school infrastructure in the Philippines and identify opportunities for enhancement. A good school facility should be adaptable to evolving educational programs and provide a comfortable, secure, accessible, well-lit, well-ventilated, and visually appealing physical environment as a minimum requirement.

In addition to the building structure and systems, such as mechanical, plumbing, electrical, power, telecommunications, security, and fire suppression, the school facility encompasses a variety of other elements. This includes furnishings, materials, supplies, equipment, information technology, as well as outdoor areas like athletic fields, playgrounds, spaces for outdoor learning, and vehicular access and parking on the building grounds.

The school facility is not just a passive container for education, but an essential element of the learning

environment. Its design and layout can significantly impact the experience of students, educators, and community members. Depending on the quality of its design and management, the facility can influence factors such as ownership, safety, personalization, control, privacy, socialization, spaciousness, or crowding. Therefore, when planning, designing, or managing the school facility, it's crucial to consider these aspects of the place experience. Ideally, the facility planning process should assess functional needs in light of the educational program developed during educational planning, which educators call "educational specifications" and architects refer to as "facility programming."

Feasibility studies, district master planning, site selection, needs assessment, and project cost analysis are all integral parts of facility planning. This process involves determining the spatial requirements and relationships between various program elements. The end result is a public facility program or educational specifications document that outlines physical space requirements, adjacencies, and special design criteria for the school facility. To ensure successful establishment of any educational facility, it is essential to have proper and concise monitoring. This involves ongoing, intermediate, and final assessments to

School facilities, School Facilities Monitoring System, Monitoring System, Systematic Monitoring Model, Schools by pupils. Such a mechanism is commonly referred to as monitoring and is crucial for assessing the effectiveness of any educational facility.

The term "monitoring" is defined differently in scientific sources, including ongoing evaluation, interim evaluation, and summary evaluation (Mertens, 2009); data collection (Mishra, 2005); and a type of evaluation based on collecting specific information (Noh, 2006). Monitoring is closely linked to the implementation of educational policy and objectives, and it helps to determine the timeliness of decision-making and provide accountability and bases for evaluation. By integrating information at all levels, effective monitoring of the educational process provides management and governing bodies with insight into the results of educational activity, which in turn facilitates decision-making by stakeholders of the educational process (Marriott & Goyder, 2009).

The physical infrastructure of a school is crucial in fulfilling its educational objectives and purposes. These facilities play a significant role in enhancing the quality and quantity of education offered. Depending on the level of the educational institution, there are numerous physical facilities available, but some of the most important ones across all levels include the school building, classroom, cafeteria, library, laboratory, common room, electricity, drinking water, audio-visual aids, transportation, dispensary, furniture, exam hall, playground, staff room, principal's office, and clerical office (Khan & Iqbal, 2012). These educational resources encompass all types of facilities that support curricular and co-curricular activities.

The Third District of Quezon, also known as Bondoc Peninsula lies in the southeastern part of Quezon in Calabarzon and most of its municipalities are hilly and coastal areas. Most of its public elementary schools are located in the rural areas of the municipalities and cater learners from every part of the district. In view of the background stated above, this study will examine and assess classroom buildings in schools in the Third District of Quezon. The assessment will present a comparative analysis of the existing DepEd monitoring system and the ideal monitoring system. The findings of the study are expected to be a basis to propose an enhanced systematic monitoring model.

Research Questions

The main objective of this study is to examine and assess the facilities monitoring system implemented by the elementary schools in the Third District of Quezon and answered the following specific questions:

1. What is the description of the monitoring system in terms of:
 - 1.1. Existence; and
 - 1.2. Type of system?
2. How is the physical facilities monitoring system implemented?
3. How is the monitoring system being evaluated in terms of:
 - 3.1. Availability
 - 3.2. Adequacy
 - 3.3. Functionality
 - 3.4. Practicality
 - 3.5. Feasibility
4. Based on the evaluation of the existing monitoring system, what are the challenges noted if compared to ideal monitoring system?
5. What measures are needed to address the challenges?

Methodology

Research Design

The study used the mixed method of qualitative and quantitative design. This is a combination approach involving collecting, analyzing, and interpreting both numerical and non-numerical data in order to better understand a research question or problem. The quantitative component involves the collection and analysis of numerical data using statistical methods to establish patterns and relationships between variables. This component is often used to measure the prevalence of certain phenomena, test hypotheses and even quantify the impact of an intervention. The qualitative component however, involves the collection and analysis of non-numerical data such as text, images or observations to provide a deeper understanding of the contexts and complexity of the research question. The component is often used to explore the meaning, attitudes, perceptions and experience.

This mixed method of research allows the researcher to complement each other's strength and weaknesses, providing a more comprehensive understanding of the research problem than either approach could provide alone. It also helped to triangulate findings, or cross-validate results by comparing and contrasting the

results from the two approaches.

Research Locale

This study was conducted in the Third Congressional District of Quezon, more commonly known as Bondoc Peninsula. The district is composed of 12 municipalities namely: Padre Burgos, Agdangan, Unisan, Pitogo, Macalelon, General Luna, Mulanay, Catanauan, San Narciso, San Andres, San Francisco and Buenavista. It is located in the southernmost part of Quezon, on the western part of the Bicol region. Among its municipalities, only Catanauan and Mulanay are categorized as first-class municipalities. And though there are poblacion areas in every municipality, most of the barangays in the district are still considered as rural communities. The researcher chose this locale considering his area of assignment, and having deep concern for the schools in the third district of Quezon in terms of school classrooms in particular.

Population, Sample Size and Sampling Technique

The study used a non-probability sampling which selects samples based on characteristics of a population and the objective of the study. In purposive sampling, the researchers rely on their own judgment when choosing members of population to participate in the study. The researcher wished to select participants who have the experience in facilities monitoring, but among the teachers, there were few who have none. The study considered at least five schools from each municipality in the Third District of Quezon. This gave a total of 60 schools.

The respondents of the study were from three categories: School administrators, teachers and experts from the DPWH. They were selected according to their experience in school facilities monitoring. A total of 60 schools administrators, 120 teachers (2 respondents per school) and 12 experts from the DPWH (and municipal engineering office of each municipality)

Research Instrument

For this study, interview guide was the primary instrument. relative to the purpose and statement of the problem. The first part of the open-ended questionnaire answered the participants' evaluation of the existing monitoring system. The second part asked for their differences between the existing DepEd monitoring system and the enhanced monitoring system in order to identify the gaps. While the third

part asked the schools administrators of the challenges, they encounter in the existing monitoring system.

The research instrument was validated by a school administrator, a representative from the Division Office of DepEd Quezon, an expert from the LGU and from the DPWH. Copies of the guide questions were provided to the validators. The results of the validation helped in the final formulation of the guide questions.

Data Gathering Procedure

The researcher applied exploratory factor analysis since it is one method of checking dimensionality with regard to qualitative data. Prior to this method, the researcher sought permission from the division office of DepEd for the conduct of the study. A copy of guide questionnaire was subject for validation. The interview was conducted on an individual-basis. The questionnaire and interview were administered by the researcher. Some respondents were interviewed via google meet. The interview and all responses were recorded and transcribed for analysis.

Ethical Considerations

The researcher gives ethical considerations to the participants of the study. The researcher made sure that their participation was voluntary in sharing their experiences and insights during the survey. The participants were informed about their right to withdraw at any time, without stating a reason, and are guaranteed confidentiality and the anonymous presentation of findings. Fictitious names were used in the presentation of the results. The researcher also acknowledges the authors of all the references and materials used in this study.

Results and Discussion

Description of Monitoring System

Table 1. *Existence of Monitoring System*

<i>Responses</i>	<i>Frequency</i>	<i>Percentage (%)</i>	<i>Rank</i>
With Existing Monitoring System	56	93.33%	1
Without Existing Monitoring System	4	6.67%	2
Total	60	100%	

Table 1 shows the existence of Monitoring systems in public elementary schools. Data shows that among schools considered in the study, 56 schools have existing monitoring systems, while 4 responded having none. It only implies that 90% of the schools is implementing a monitoring system.

Table 2. *Types of Monitoring System*

Type of Monitoring System	Frequency	Percentage (%)	Rank
Facility Monitoring System	48	80%	1
Compliance Monitoring System	4	6.67%	2
Inventory	4	6.67%	2
No monitoring system for facilities	4	6.67%	2
Total	60		

Table 2 presents the types of monitoring system being used by the elementary schools in the Third District of Quezon. Data shows that 48 schools use facility monitoring system, 4 are using compliance monitoring system, 4 are using inventory monitoring system, while 4 having none at all. The result implies that the implementation of monitoring system in their schools is useful enough.

According to Willms (2003), both facility monitoring system and compliance monitoring systems are important tools for organizations to ensure that they are operating efficiently and effectively, while also complying with relevant regulations and standards. By investing in this system, organizations can reduce the risk of downtime, damage, fines and reputational harm, while also improving overall performance and productivity.

Implementation of the Monitoring System

Table 3 shows the thematic statements of the respondents regarding how the monitoring system is being implemented based on how the implementation is done, the process is being done, how the monitoring system is like and their description of why hard and easy. Monitoring a building is an ongoing process that requires careful attention to detail and a commitment to ensuring the safety, security, and efficient operation of the building.

Table 3. *Implementation of the Monitoring System*

	Thematic Statement	Frequency	Percentage (%)	Rank
how is the monitoring system implemented?	as mandated	40	66.67%	1
	assist in the implementation	10	16.67%	2
	Follow procedures	6	10%	3
	None	4	6.67%	4
Total		60		
Is the process of monitoring being done?	data gathering and results	28	46.67%	1
	regular inspection	10	16.67%	2
	follow procedures	8	13.33%	3
	address issues	5	8.33%	4
	gather data and reports	5	8.33%	4
	None	4	6.67%	4
Total		60		
how is the monitoring system look like?	recording and documenting	22	36.67%	1
	inventory-like	17	28.33%	2
	by mandate	17	28.33%	2
	None	4	6.67%	3
Total		60		
hard and easy	easy	44	73.33	1
	hard	16	26.67	2
Total		60		

The building should be regularly inspected by engineers to ensure that it is in good condition and that there are no potential safety hazards. This can include inspections of the electrical system, plumbing, and other critical components.

According to the DepEd Order No. 28 series of 2008, the guidelines for coordination and monitoring of DPWH-constructed school building facilities, there is a mandate of consolidating monitoring reports of all school building facilities. That means, the school facilities monitoring system is utilized as mandated.

Overall, monitoring a building is an ongoing process that requires careful attention to detail and a commitment to ensuring the safety, security, and efficient operation of the building. The building should be regularly inspected by engineers to ensure that it is in good condition and that there are no potential safety hazards. This can include inspections of the electrical system, plumbing, and other critical components.

Evaluation of the Physical Facilities Monitoring System

There were 120 teacher-respondents who were interviewed to evaluate the existing Physical Facilities Monitoring System in terms of the five criteria (availability, adequacy, functionality, practicality and feasibility). Based on the responses in questions pertaining to Availability, the researcher inferred how many of the respondents are aware of the existence of a monitoring system within their institution.

Table 4. *Availability of the Monitoring System*

	<i>Frequency</i>	<i>Percentage</i>	<i>Rank</i>
Available	106	88.33%	1
Not Available	14	11.67%	2
Total	120	100%	

Based on the results, 88.3% of the respondents agreed to have a monitoring system available within their institution. However, 14 or 11.67% of the respondents responded having no available monitoring system.

Table 5. *Normality test for Availability*

<i>Normality Test: Shapiro-Wilk Test ($\alpha = 0.05$)</i>	
Statistic	0.3731
P-Value	2.0542×10^{-20}
Result	Non-Gaussian / Non-Normal

The researcher conducted a normality test for availability using the Shapiro-Wilk test. This is a statistical test to determine if a given dataset follows a normal or Gaussian distribution. The null hypothesis for this test is that the dataset is normally distributed.

The Shapiro-Wilk Test statistic value, which is a measure of how much the dataset deviates from a normal distribution. In this case the value is 0.3731. While the P-value, which is the probability of obtaining the test statistic value assuming that the null hypothesis is true, yet in this case, the p-value is very small which is 2.0542×10^{-20} , indicating strong evidence against the null hypothesis. The table therefore concludes that the dataset is non-Gaussian or non-normal. In summary, the interpretation of this table is that the dataset being tested for normality (Availability) is not normally distributed, as indicated by the very small p-value.

According to Boros, et.al. (2019), the availability of a school monitoring system can be extremely important as it ensures the safety and security of the students and the staff, as well as the visitors. A monitoring system can also identify potential hazards and address them

promptly, reducing the risks of accidents and incidents.

Table 6. *Adequacy of the Monitoring System*

	<i>Frequency</i>	<i>Percentage</i>	<i>Rank</i>
Adequate	106	88.33%	1
Not Adequate	14	11.67%	2
Total	120	100%	

Figure 6. .

In the case of Adequacy, the table shows that 88.33% of the respondents agrees that the adequacy of the physical facilities monitoring system is adequate, while 11.67% agrees to be not adequate.

Table 7. *Normality Test for Adequacy*

<i>Normality Test: Shapiro-Wilk Test ($\alpha = 0.05$)</i>	
Statistic	0.3731
P-Value	2.0542×10^{-20}
Result	Non-Gaussian / Non-Normal

The researcher conducted a normality test for Adequacy using the Shapiro-Wilk test. This is a statistical test to determine if a given dataset follows a normal or Gaussian distribution. The null hypothesis for this test is that the dataset is normally distributed.

The Shapiro-Wilk Test statistic value, which is a measure of how much the dataset deviates from a normal distribution. In this case the value is 0.3731. While the P-value, which is the probability of obtaining the test statistic value assuming that the null hypothesis is true, yet in this case, the p-value is very small which is 2.0542×10^{-20} , indicating strong evidence against the null hypothesis. The table therefore concludes that the dataset is non-Gaussian or non-normal. In summary, the interpretation of this table is that the dataset being tested for normality (Adequacy) is not normally distributed, as indicated by the very small p-value.

According to Chiesa and Grosso (2015), the adequacy

of school facilities monitoring system is determined through evaluation of several factors which include comprehensiveness, accuracy of the data collected and the responsiveness of the system to identified issues, as well as the efficiency of the system in addressing those issues.

Table 8. *Functionality of the Monitoring System*

	<i>Frequency</i>	<i>Percentage</i>	<i>Rank</i>
Functional	106	88.33%	1
Not Functional	14	11.67%	2
Total	120	100%	

In the case of Functionality, the table shows that 88.33% of the respondents agree that their physical facilities monitoring system is functional, while 11.67% is not functional.

Table 9. *Normality Test for Functionality*

<i>Normality Test: Shapiro-Wilk Test ($\alpha = 0.05$)</i>	
Statistic	0.3731
P-Value	2.0542×10^{-20}
Result	Non-Gaussian / Non-Normal

The researcher conducted a normality test for Functionality using the Shapiro-Wilk test. This is a statistical test to determine if a given dataset follows a normal or Gaussian distribution. The null hypothesis for this test is that the dataset is normally distributed.

The Shapiro-Wilk Test statistic value, which is a measure of how much the dataset deviates from a normal distribution. In this case the value is 0.3731. While the P-value, which is the probability of obtaining the test statistic value assuming that the null hypothesis is true, yet in this case, the p-value is very small which is 2.0542×10^{-20} , indicating strong evidence against the null hypothesis. The table therefore concludes that the dataset is non-Gaussian or

non-normal. In summary, the interpretation of this table is that the dataset being tested for normality (Functionality) is not normally distributed, as indicated by the very small p-value.

According to Wang (2015), the functionality of a school facilities monitoring system typically involves tracking the usage and condition of these facilities, and providing alerts or notifications when there are issues that require attention.

Table 10. *Practicality of the Monitoring System*

	<i>Frequency</i>	<i>Percentage</i>	<i>Rank</i>
Practical	74	61.67%	1
Not Practical	46	38.33%	2
Total	120	100%	

For Practicality, the table shows that 61.67% of the respondents agree their school facilities monitoring system is very practical, while 38.33% agree to have not practical school facilities monitoring system.

Table 11. *Normality Test for Practicality*

<i>Normality Test: Shapiro-Wilk Test ($\alpha = 0.05$)</i>	
Statistic	0.6163
P-Value	3.1001
Result	Non-Gaussian / Non-Normal

The researcher conducted a normality test for Practicality using the Shapiro-Wilk test. This is a statistical test to determine if a given dataset follows a normal or Gaussian distribution. The null hypothesis for this test is that the dataset is normally distributed.

The Shapiro-Wilk Test statistic value, which is a measure of how much the dataset deviates from a normal distribution. In this case the value is 0.6163. While the P-value, which is the probability of obtaining the test statistic value assuming that the null

hypothesis is true, yet in this case, the p-value is very small which is 3.1001, indicating strong evidence against the null hypothesis. The table therefore concludes that the dataset is non-Gaussian or non-normal. In summary, the interpretation of this table is that the dataset being tested for normality (Practicality) is not normally distributed, as indicated by the very small p-value.

According to Lackney (1999), a school facilities monitoring system is practical when it can help schools identify and address maintenance issues more quickly, which can reduce repair costs and prevent more serious problems from developing.

Table 12. *Feasibility of the Monitoring System*

	<i>Frequency</i>	<i>Percentage</i>	<i>Rank</i>
Feasible	85	70.83%	1
Not Feasible	35	29.17%	2
Total	120	100%	

In terms of feasibility, the table shows that 70.83% of the respondents evaluate their school facilities monitoring system to be very feasible, while 29.17% agrees their school facilities monitoring system is not feasible.

Table 13. *Normality Test for Feasibility*

<i>Normality Test: Shapiro-Wilk Test ($\alpha = 0.05$)</i>	
Statistic	0.5699
P-Value	3.6891×10^{-17}
Result	Non-Gaussian / Non-Normal

The researcher conducted a normality test for feasibility using the Shapiro-Wilk test. This is a statistical test to determine if a given dataset follows a normal or Gaussian distribution. The null hypothesis for this test is that the dataset is normally distributed.

The Shapiro-Wilk Test statistic value, which is a measure of how much the dataset deviates from a

normal distribution. In this case the value is 0.5699. While the P-value, which is the probability of obtaining the test statistic value assuming that the null hypothesis is true, yet in this case, the p-value is very small which is 3.6891×10^{-17} , indicating strong evidence against the null hypothesis. The table therefore concludes that the dataset is non-Gaussian or non-normal. In summary, the interpretation of this table is that the dataset being tested for normality (Feasibility) is not normally distributed, as indicated by the very small p-value.

According to Porter (2014), a school monitoring system is feasible because it can be designed and implemented using various technological solutions that are readily available today. Such a system would enable school administrators to track and manage various aspects of their educational institutions, such as student attendance, academic performance and behavior. One of the main reasons why a school monitoring system is feasible is due to the availability of internet-connected devices and software applications that can be used to collect, store and analyze data.

Among the five categories, only the Availability category received the highest scores at its Level 4 scale instead of its highest-level scale. This can be explained due to the infrequent mobilization of monitoring systems as reported by the respondents. Although the systems are impactful, which is evident based on the Adequacy, Feasibility, Practicality, and Functionality criteria, several respondents claimed that the monitoring is not very frequent. Not all respondents are also actively involved in the monitoring process.

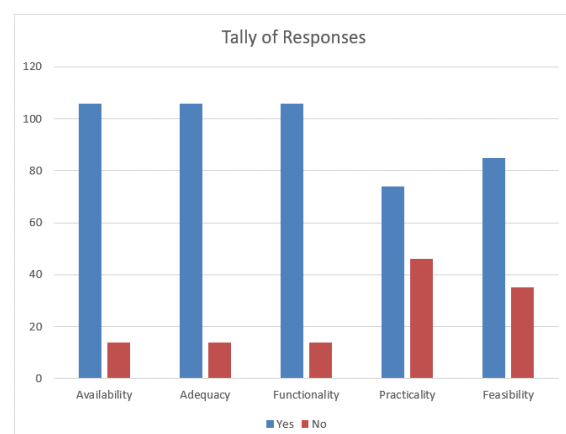


Figure 1. *Overall Tally of Responses*

The researcher conducted the Friedman Test to determine significant difference in the five criteria. It was conducted since the dataset came out to be non-Normal. The Friedman Test is a statistical test used to determine if there is a significant difference between multiple groups across several related criteria.

Table 14. *Friedman Test to determine Significant Difference in the five criteria*

<i>Friedman Test</i>	
Statistic	203.15
P-Value	7.903 ⁻⁴¹
Result	Significant

In this case, Table 15 shows the results of a Friedman Test conducted on five different criteria. The test statistic for this analysis is 203.15, which is a measure of the difference between the mean rank of the groups. The P-value is reported as 7.903-41, which is a very small value. This indicates that the probability of obtaining a test statistic as extreme as 203.15 by chance alone, assuming there is no significant difference between the groups, is extremely low.

As a result, the Friedman Test showed that the with the P-Value of 7.903⁻⁴¹, which is less than the standard threshold, the difference between the scores in the five treatments or survey categories are statistically significant.

Challenges Encountered by the School Administrators in the Existing Monitoring System

This part of the results and interpretation was answered by the 60 school administrators

Table 15. *Challenges encountered in the existing monitoring system*

Theme	Response	Frequency	Percentage (%)	Rank	Interpretation
Inadequate Data	I guess, there is inadequate data analysis tools. Even with access to data, we may not have the tools or expertise to effectively analyze the data and extract meaningful insights from it. With the increasing amount of data being collected during monitoring, there are concerns around data privacy and security, and ensuring that data is being used in compliance with regulations and policies.	10	16.67%	1	The first theme is "inadequate data," which is mentioned as a possible reason why it may be difficult to extract meaningful insights from available data. The text suggests that despite having access to data, we may not have the necessary tools or expertise to analyze it effectively. This theme appears to be relevant in a general sense, where lack of proper data analysis tools or skills may hinder the ability to derive insights from data
Limited Accessibility	We may have limited access to school facilities data, making it difficult to track progress, identify areas of concern, and make data-driven decisions. Actually, our monitoring system for facilities is limited in terms of accessibility, so it's difficult for administrators to track multiple problems.	8	13.33%	2	It states that the monitoring system for facilities has limited accessibility, which makes it challenging for administrators to track multiple problems. This could imply that the monitoring system is not efficient enough in terms of accessibility, which creates difficulties in identifying and addressing

Outdated Technology	There may be resistance to implementing new monitoring systems, particularly if they require changes in existing processes or systems, or if there is a perception that they are invasive or intrusive. Well, we have outdated or inadequate technology, which can hinder administrators' ability to monitor and manage the school's operations effectively. Our school facilities monitoring systems do not provide real-time data on the updates regarding the performance of the school facilities.	10	16.67%	1	facility-related issues.
		6	10%	3	This theme discusses issues related to outdated or inadequate technology in school facilities monitoring systems, and highlights how outdated technology can hinder administrators' ability to effectively manage school operations, while the third sentence emphasizes the lack of real-time data in monitoring the performance of school facilities. The last sentence further reinforces the idea that limited access to timely information can make it difficult for administrators to make informed decisions quickly.
	We, School administrators often face the challenge of limited access to real-time information about the school's facilities operations. This lack of timely information can hinder administrators from making informed decisions quickly.	4	6.67%	4	

Table 15 shows the challenges encountered in the existing monitoring system. Three themes were drawn from the eight challenges cited: inadequate data, limited accessibility and outdated technology.

According to Arnaboldi, et.al. (2015), a monitoring system relies on accurate and up-to-date data to function effectively. If the system lacks sufficient data or the data is incomplete or inaccurate, it may not be able to provide accurate information or make reliable predictions. This can lead to false alarms, missed alerts or inefficient use of resources.

While, according to Jonjo (2017), an outdated monitoring system may lack the necessary capabilities to effectively monitor and respond to changing conditions. Older systems may not be able to integrate

with newer technologies or may not have the processing power to handle large amounts of data. This can limit the system's ability to provide timely and accurate information, leading to missed opportunities or increased risks.

Furthermore, Cheng and Tam (2007) stated that a monitoring system that is not easily accessible from a limited number of devices or locations, it may not be able to respond quickly to changing conditions or provide real-time updates to relevant stakeholders. This can result in delays, missed opportunities or increased risks.

Measure Needed to Address the Challenges

Table 16. Measures to Address the Challenges

Theme	Responses	Frequency	Percentage (%)	Rank
Identify Weakness	I think we need to identify areas of weakness of our monitoring system.	23	38.33%	1
	improve the mechanisms	7	11.67%	4
Technology Advancement	I can recommend to invest in more advanced technology	10	16.67%	2
	advancement in technology is a recommendation.	7	11.67%	4
Training	I suggest training the team to become experts in the process	8	13.33%	3
	but everyone in the school should be well versed regarding the regulations and policies in terms of monitoring the school building facilities	5	8.33%	5

Table 16 shows the measures to address the challenges encountered in using the existing monitoring system. There were three thematic statements generated from the responses of the respondents: identify weaknesses, technology advancement and training.

The responses are divided into different themes based on the keywords used. The most common theme in the responses is the identification of weaknesses in the monitoring system, which has been mentioned by 23 people. Additionally, 7 people have suggested improving the mechanisms to address the identified weaknesses. Another recommendation mentioned by 10 people is to invest in more advanced technology to improve the monitoring system. Seven people have specifically mentioned that an advancement in technology is a recommendation.

Training is another theme that has emerged in the

responses, with 8 people suggesting that the team should be trained to become experts in the process. Finally, a few people have mentioned that it is essential for everyone in the school to be well-versed regarding the regulations and policies related to monitoring school building facilities. Five people have mentioned this recommendation in their responses.

According to Halak and Poisson (2007), identifying weakness in a monitoring system allows for the implementation of solutions to address these issues. This includes identifying areas where the system may be vulnerable to breaches, errors or technical malfunctions. By addressing these weaknesses, the system can be improved to better meet the needs of the organization or individuals it is designed to serve. In identifying weakness, the respondents think it is needed to identify the areas of weakness of the monitoring system and improve the mechanisms. In employing technology advancement, the respondents recommend investing in more advanced technology. While, in providing training as measure, the respondents suggest that the team should be trained to be expert and everyone in school should be well-versed regarding the regulations and policies in terms of monitoring the school building facilities.

While, according to Pettigrew, et. al. (2015), technology advancement can greatly improve the effectiveness and efficiency of a monitoring system. This includes advancements in software, hardware, and other technology-related tools. New technology can provide better data analysis, faster processing times, improved accuracy, and enhanced functionality. By staying up-to-date with the latest technological developments, a monitoring system can be optimized for peak performance and adapt to changing needs over time. Furthermore, they also stated that training is essential for ensuring that the people responsible for operating the monitoring system are equipped with the knowledge and skills required to use it effectively. This includes providing training on the proper use of the system, as well as providing ongoing education and support to ensure that users are aware of any updates or changes to the system. Effective training can help reduce errors, improve user confidence and increase the overall efficiency of the system.

In general, according to Lackney (1999), employing measures to address the challenges encountered in the existing monitoring system may involve gathering feedback from teachers, staff and students who use the system, and analyzing data on system usage and performance. Lackney also suggested that sometimes

challenges with a system can arise from a lack of understanding or proficiency among users. Providing training sessions or tutorials can help users become more comfortable with the system and improve their ability to use it effectively.

Overall, the responses suggest that there are multiple ways to improve monitoring systems, including identifying weaknesses, improving mechanisms, investing in advanced technology, providing training to the team, and ensuring that everyone is aware of relevant regulations and policies.

Conclusion

Based from the summary, the following conclusions were drawn:

1. There is a school facility monitoring system in schools and they simply call it school facilities monitoring system. In terms of the five criteria, the Friedman Test showed that the difference between the scores in the five treatments or survey categories are statistically significant.
2. The gaps between the existing monitoring system and ideal monitoring system include outdated and slow technology, inadequate data, and long process of monitoring. An ideal monitoring system includes the characteristics of technology advancement, fast and real-time.
3. The challenges encountered by the respondents with their existing monitoring system include inadequate data, limited accessibility and outdated technology, and none of them was able to employ any measure to address those issues.

Based from the conclusions, the following is recommended:

1. It is advised to pinpoint the monitoring system's weak points, as mentioned by the responders.
2. Considering the results of the analysis it is suggested that the schools should invest in a more advanced technology.
3. According to the results of the evaluation of the responders, it is advised that the monitoring team receive extensive training and orientation about the entire procedure.
4. Due to the limitations of the study the future researchers, it is recommended to conduct the same study and focus on the benefits and drawbacks the implementing monitoring system.

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