



SATISFACTION LEVEL OF PUBLIC ON MAINTENANCE AND MANAGEMENT OF PUBLIC FACILITIES IN KULIM, KEDAH

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ABSTRACT

Public facilities are administered by the local authority and shared by many people to make everyday life easier, hence they need to be maintained. The local government may have trouble maintaining and managing public facilities owing to several concerns and obstacles. Past research found that the local government received several criticisms on public facilities performance. This research has employed a mixed qualitative and quantitative method which involved distribution of online questionnaire and semi-structured interview to achieve research objectives which are to determine the level of satisfaction on maintenance of public facilities and to identify the current maintenance and management practices carried out by the local authority. The determinants of satisfaction level of public for questionnaire are from analysis of past researches. It was found that the highest level of satisfaction of are the sufficiency of public facilities, condition of public facilities and the maintenance of public facilities. In conclusion, the level of public satisfaction is an important indicator for local authorities to identify areas for improvement, comprehend community needs and preferences, increase engagement and trust, demonstrate accountability, enhance service delivery, and assess policy effectiveness. Local authorities can create a responsive and inclusive environment where public facilities meet the expectations and aspirations of the community, by prioritising public satisfaction.

Keywords: *satisfaction level, public facilities, maintenance and management*

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INTRODUCTION

Community quality of life is significantly enhanced by the presence of public facilities. Parks, playgrounds, and recreational areas that are well-maintained provide opportunities for physical activity, leisure, and social interaction. Infrastructure such as roads, public transport systems, and utilities that are easily accessible and correctly functioning contribute to the convenience and comfort of residents. Apart from that, maintaining public medical and educational institutions is of paramount importance due to the significant impact they have on society. It is essential to maintain public medical and educational institutions to ensure equitable access to healthcare services, provide universal education, foster social mobility, facilitate community development, uphold educational standards, and stimulate economic growth. These institutions are essential pillars of a flourishing society, promoting the well-being of individuals, the advancement of society, and the general improvement of communities. Well-maintained public facilities are of higher quality and aesthetic appeal, enhancing the user experience. Cleanliness, orderliness, and aesthetically pleasing surroundings foster a public-friendly environment. When facilities are aesthetically pleasing and in excellent condition, public satisfaction increases because individuals feel valued and respected by the community.

The degree of public satisfaction is used as a parameter by the Local Authority as a measurement of their own performance in terms of the management and maintenance of public infrastructure. The opinions, criticisms, and compliments offered by users of public facilities serve as measuring instruments that are used in the process of establishing the degree of performance achieved by such facilities. According to past researches it is found that the local government was confronted with a number of critiques and complaints about how they performed in managing and maintaining public facilities, as well as difficulties related to the expenses related to keeping the facilities while managing and maintaining them. Thus, this study intends to investigate the satisfaction level of public on maintenance and management of public facilities.

The fact that the local authority is the principal owner of the assets indicates that it is the government's obligation to ensure that the public facilities are always in excellent operational condition. A significant portion of the infrastructure and public amenities in a community are the responsibility of local authorities, who are responsible for both their construction and maintenance. The best practises in maintenance and management need to be implemented by the local authorities in order to achieve the goals of sustainable and economical maintenance. The management and maintenance of public infrastructure is not an easy job but rather a complicated one. Therefore, this research is also being carried out as to determine the current maintenance and management practice by local authority in maintaining and managing public facilities in Kulim, Kedah.

According to Standard 5 of the Malaysian Property Management Standards, upkeep is a vital part of property management, and it is critical that the construction and the facilities be kept in optimum functioning condition. The standard also states that it is important for the building to be kept in optimal working condition. Standard 5.2.3 of the Malaysian Property Management Standards places a focus on service suppliers, stipulating that adequate upkeep of building facilities and services must occur in order to retain the value of a property. This standard was written with the service providers in mind. Therefore, competent contractors that are highly capable and experienced in their field are necessary in order to guarantee a high level of both service quality and standard.

LITERATURE REVIEW

Importance of Public Facilities

According to Badescu, Branea & Gaman (2016), public amenities enrich the urban environment by providing education, health, and commerce as well as beautifying the neighbourhood. Public facilities offer educational institutions, medical facilities, commercial facilities, greenery, public parking, and other essential services (Nur Syahidatul Asyiqin, 2016). Public facilities simplify public life. Public facilities help citizens with transportation, health, and more. Other attractions include public facilities. Pleasant, attractive, and high-quality open space, recreational, and sports facilities may attract visitors and enhance the area's and local authority's image. Public amenities also create local jobs (Badescu et al., 2016). The network of public amenities will benefit society by employing many people from different backgrounds and with varying abilities. For example, healthcare workers may find work in the area's growing number of hospitals. Thus, since public facilities are so important, they must be carefully maintained and managed to serve the public.

Factors Influencing Satisfaction Level of Public People on Management and Maintenance of Public Facilities

One of factors influencing the satisfaction level of public people on management and maintenance of public facilities is walkable distance. Walking distance to services affects public amenities satisfaction (Oladosu, Gana, and Bwala, 2015). People are happier when they can stroll to public facilities. Because public facilities can be accessed quickly, Hafazah (2008) suggests considering facility location and distance, implying facilities within one kilometre as ideal. Apart from that, the number of facilities provided also affects the satisfaction of customers. Oladosu et al. (2015) found that public infrastructure including access roads, recreational facilities, and others were markers of fulfilment. Nur Syahidatul Asyiqin (2016) found that majority Baru Bangi,

Selangor residents are happy with public transportation, recreational and sports amenities, and educational facilities.

Furthermore, condition of public facilities additionally influence satisfaction. Public facilities in poor shape, unattractive, or unclean will make people uncomfortable. Nur Syahidatul Asyiqin (2016) found that public facility conditions in Bandar Baru Bangi, Selangor affect people's satisfaction. Facility managers must maintain facilities in top shape (Lucas, 2017). Recreational facilities managers must guarantee sufficient equipment, acceptable condition, and proper operation. People cannot utilise damaged equipment. Mong, Saidin Misnan and Sarajul Fikri (2019) noted that public community facilities and markets promote socio-economic activities, thus they must be effectively maintained and managed for sustainable performance.

Construction materials also guarantee public facilities' strength and durability, affecting people's satisfaction. Marques, Salgado, Santos (2007) stated that building materials should have the least environmental effect during their lifetime. Construction distance, thermal performance, budget, simplicity of operation, and maintenance determine material choices (Ualfrido, 2002).

Lastly, public facilities are for the public including disabled individuals. Thus, the service provider and facilities management must likewise priority their facilities. Nur Syahidatul Asyiqin (2016) said that public facilities nowadays do not prioritise disability access. In 2016, Md. Sayuti Ishak and Norhidayu MadSah suggested that the Local Authority standardised disabled-friendly public facilities. The service provider must guarantee disabled people can easily access premises, rooms, and recreational places (Erdmann WS, 2018). Maintenance is crucial to ensuring that public facilities are accessible and inclusive for all users, including those with disabilities or special requirements. Maintaining ramps, elevators, accessible lavatories, and other accommodations on a regular basis ensures their accessibility and usability. When public facilities accommodate a variety of requirements and are well-maintained for accessibility, it promotes inclusion and improves public satisfaction. Table 1 illustrate the matrix table on factors that influence the satisfaction level of maintenance and management of public facilities.

Table 1: Matrix Table on maintenance and management of public facilities

Factors/ Authors (year)	Walkable distance	Availability	Condition	Construction material	Design for People with Disabilities
Marques et. al (2007)				√	
Hafazah Abdul Karim (2008)	√				
Oladosu R.O., Gana	√	√			

B. A. and Bwala H. B. (2015)					
Syahidatul Asyiqin Amran (2016)		√	√		√
Md. Sayuti Ishak and Norhidayu Madsah (2016)	√	√			√
Lucas H. (2017)			√		
Erdmann WS (2018)					√
Mong S. G. et. al (2019)			√		

(Source: Researcher, 2023)

Current Maintenance and Management Practice by Local Authority

Local authority utilises a variety of strategies and procedures to effectively maintain public facilities. Among these are preventive maintenance, asset management, outsourcing, community engagement, technology integration, budgeting, and performance evaluation. By adopting these practises, local authority seeks to ensure the functionality, safety, and satisfaction of the public while optimising resource utilisation and improving the overall quality of public facilities. Mong, Sarajul Fikri Mohamed, Mohd Saidin Misnan (2019) found that today's managers of maintenance must undertake enough management activities to avoid wasting resources, manpower, and money. It is found that the current maintenance management is flawed (Mong et al. 2019). The government seldom maintains public infrastructure (Norehan Norlida, Yusof, Aida Affina, Siti Norsazlina, 2011).

The local government should prioritise practises and maintenance to maintain public infrastructure. However, local authorities in Malaysia have good executive and top management, policy, standards, and guidelines, organisational management, planning and scheduling, and resource management (Mong et al. 2019). Lastly, most municipal governments use manual recordkeeping. Most local governments know that information management may improve maintenance policies and actions but still, most of them ignored it for various reasons. One of the reasons is because information technology is expensive.

According to past research, local authorities are burdened by the cost of maintenance, which depends on federal and state government approval to increase revenue to support the maintenance budget (Norehan Norlida, Yusof, Aida Affina, Siti Norsazlina, 2011). Proper budgeting and resource allocation are necessary for the maintenance and management of public facilities. Local governments need to

allocate funds based on the condition and priority of facilities, taking into account factors like public demand, safety concerns, and asset management information.

By allocating sufficient funds for maintenance, local governments can ensure that facilities are well-maintained, thereby increasing public satisfaction and optimising the use of available funds. According to Mong, Sarajul Fikri Mohamed, Mohd and Saidin Misnan (2019), local authorities faced maintenance expense concerns in maintaining and operating facilities, resulting in poor management. According to Azlan, Chua and Dg Badariah Ag Ali (2016), it is found that building managers struggled to estimate maintenance work quantities and costs. In addition, Mong et al. (2019) found that building age and finishes and materials were the biggest impediments to maintenance management practises, implying building age promotes depreciation and structural flaws.

Furthermore, older buildings cost more to maintain (Gokbudak, 2017). Local authorities and property managers also often struggle with labour shortages. Increases in public amenities and technologies need more qualified and trained property managers (Cockerham, 2021). The organization's lack of maintenance policy and knowledge worsened the problem. When only emergencies were handled, maintenance issues were ignored (Adnan H, Fazry Z, Fauzi M, Rahmat I and Supardi A, 2012).

RESEARCH METHODOLOGY

This study applied mixed of qualitative and quantitative to achieve the research objectives. Quantitative study analyses facts, whereas qualitative research examines words and their meanings (Streefkerk, 2019) Researchers may explore deeper human and societal ties using quantitative and qualitative methods (Malina, Norreklit and Selto, 2010). This study's research designs include questionnaire and semi-structured interview. The questionnaire for this research has been distributed to public who uses public facilities. The questionnaire was designed with demographic profile in Part A and two parts measured by likert scale namely Part B and C. Semi-structured interview was carried out with local authority that responsible in managing and maintaining public facilities in Kulim, Kedah. The interview questions addressed research objective which is to identify the current maintenance and management of public facilities.

This study employed simple random sampling since it will include many users of public amenities in Kulim, Kedah. Therefore, it is simpler to use basic random selection for the purpose of gathering data and feedback for this study. Based on the calculation of sample size using Slovin's formula, the total sample recommended for this study is 100 – 204 respondents.

Reliability

Before distributing the questionnaire to respondents, a pilot survey and Cronbach's alpha test shall be carried out to verify the questions. Cronbach's Alpha is a reliability metric that compares an instrument's covariance to its overall variance. If the instrument is reliable, components should have high correlation relative to variance (Collins, 2007). Consistent findings indicate data reliability (Jain and Angural, 2017). For this research, the 0.9 result indicated that the questions are reliable, consistent and easy to understand by the respondents. For questions validity, the questions have been extracted from literature review of past research that relates to the research and it has been proofread by one of the academic staffs.

Data Analysis

The data collected from the questionnaire were analysed descriptively, and the Relative Importance Index (RII) was used in determining the rank of attributes of the satisfaction level of public on maintenance and management of public facilities in Kulim, Kedah. Descriptive analysis organises data summaries by explaining the connection between variables and samples or population (Yellapu, 2018). While, for semi-structured interview, the research interview was thematically analysed. Thematic analysis helps identify, organise, and understand data patterns (Braun and Clarke, 2012).

FINDINGS

Types of public facilities in relation to maintenance and management practice in this study includes public community, recreational and sports facilities, public health facilities, religious facilities, public transportation facilities and security and emergency facilities. As these public facilities are being used by many numbers of people, it is crucial for the local authority to ensure they are always in fair and good condition and can function well according to their purposes and satisfy the need and wants of the people.

Findings from questionnaire

There are five factors that has been identified that could influence the satisfaction level of public on maintenance and management of public facilities in Kulim, Kedah which are location of public facilities, sufficiency of public facilities, condition of public facilities, maintenance of public facilities and management of public facilities. Table 2 shows the top three ranking of the satisfaction level of public people on maintenance and management of public facilities. Based on Relative Importance Index all attributes were found to be at high level when RII scores were found to be more than 0.7.

Table 2: Ranking of satisfaction level.

Factors	Rank	Relative Importance Index (RII)
Sufficiency of Public Facilities	1	0.7871
Condition of Public Facilities	2	0.7845
Maintenance of Public Facilities	3	0.7796
Management of Public Facilities	4	0.7754
Location of Public Facilities	5	0.7524

The researcher found that the sufficiency of public facilities ranked first, the condition of public facilities ranked second and maintenance of public facilities ranked third. The number of public facilities influence the public satisfaction (Oladosu, Gana, and Bwala, 2015). The number of public facilities available in a community has a direct effect on public satisfaction by meeting the diverse requirements of the population with a variety of services and amenities. A larger number of well-maintained public facilities contributes to higher levels of resident satisfaction by improving their accessibility, convenience, and quality of life. In contrast, inadequate public facilities can result in dissatisfaction, restricted access to essential services, and diminished community engagement.

Public facility condition was ranked second. The public prefers pleasant and well-maintained public facilities. Nur Syahidatul Asyiqin (2016) states that local authorities must maintain public facilities to an appropriate quality. Facilities that are properly maintained and run enhance user satisfaction and foster a sense of community pride and fulfilment. On the other hand, facilities that are not properly cared for or are in bad condition might cause frustration, unhappiness, and a poor impression of the local authority in charge of maintaining them.

Another third-ranked issue is maintenance. Public satisfaction levels are directly impacted by the upkeep of public amenities. Regular upkeep keeps facilities functioning, secure, and aesthetically pleasant, improving the user experience as a whole. When public facilities are well-maintained, the community feels more secure and trusted, which fosters a favourable opinion of the local government and raises levels of public satisfaction. Vandalism and building materials are included under the maintenance of public facilities. According to Mong et al. (2019), vandalism is another major obstacle that prevents the maintenance team from completing lengthy and costly public facility maintenance duties. Lack of public facility security encourages vandalism (Simpeh, 2022). According to Nur Syahidatul Asyiqin (2016), the public's dissatisfaction with Bandar Baru Bangi's public transportation facilities is due to neighbourhood vandalism.

Findings from interview

The findings from the semi structured interview (see Table 3) revealed that the department responsible for the maintenance works in Kulim Kedah is the Engineering Department at Majlis Perbandaran Kulim, Kedah. The local authority carries out maintenance and inspection once they receive a complaint from E-Aduan. E-Aduan is a platform where the public people in Kulim can report their complaints and feedbacks so that the local authority can fix and solve the problem. The respondent stated that the local authority will carry out the maintenance activities, however if there is a need of outsourcing, they will carry out open tender. Local Authority also is planning to increase their maintenance work. Not only Engineering Department that plays the role in maintaining and managing the public facilities, but they also collaborate with other departments such as Building Department and other government agencies in order to give the best performance of public facilities to the people. In hiring staffs in maintenance and management department, the local authority is prioritizing skills, experiences and educational qualifications.

Table 3: Current Maintenance Practices

Questions	Summary findings from interview
Public facilities that are under management and maintenance of <i>Majlis Perbandaran Kulim Kedah</i> .	<ul style="list-style-type: none"> • Station bus • Market • Dataran Putra, Kulim, Kedah. • Taman Tasik Kulim
Importance of public facilities	<ul style="list-style-type: none"> • Social: Help with their daily life. • Economic: Helps in economic growth
Current maintenance and management strategies	<ul style="list-style-type: none"> • Planning to increase maintenance work. • Local authority carries out maintenance and inspection every day. • The first strategy is the maintenance activities will be carried out through insource first, repair internally. If the cost is too high, allocation is needed. • Outsourcing third party through open tender for repair works. • Collaboration between Engineering Department and other departments.

Frequency of maintenance activities being carried out	Carry out repair works once complaints are received. Once the complaints are received, a maintenance schedule will be prepared.
Software that used by <i>Majlis Perbandaran Kulim Kedah</i> .	E-Aduan and Kulim Integrated Database System (KIDS). Other than that, GIS system to identify the location of the defects.
Strategies of <i>Majlis Perbandaran Kulim Kedah</i> in increasing the number of users of public facilities and improving the performance.	<ul style="list-style-type: none"> • The place that sells fish becomes eroded because of the fish water, so the Majlis needs to implement an initiative for these places that sell fish, where concrete will be used • For the station bus, there was a proposal to make it two levels and construct a bigger space. • For recreational parks, the local authority is planning to increase the number of equipment, jogging tracks and increase the number of parking lots. • Recently the local authority asked for high bay lights for the stadium for the community if public want to jog at night, however the local authority is still waiting for the money from the government.
Important criteria that need to be prioritised in recruiting maintenance and management staff.	<ul style="list-style-type: none"> • Skilful • Experienced • Well knowledge staffs.

In carrying out the maintenance activities, it is found that the major challenge faced by the local authority is the cost of maintenance. If there are not enough money resources, the local authority will not be able to carry out the maintenance activities properly. Budgeting and resource allocation are essential to the maintenance of public facilities and have a direct effect on public satisfaction. Effective budgeting requires the allocation of adequate funds to address the maintenance requirements of public facilities based on their condition, priority, and utilisation. By considering factors such as public demand and safety concerns, local authorities can ensure that adequate resources are allocated to maintain facilities in accordance with the expectations and requirements of the community.

Important maintenance resource allocation enables local authorities to resolve issues promptly, ensuring that facilities remain functional, secure, and aesthetically pleasing. By designating resources based on asset management data and condition assessments, authorities can prioritise maintenance activities, concentrating on critical areas that have a substantial effect on public satisfaction. This targeted allocation of resources optimises maintenance efforts and ensures that limited funds are effectively utilised to address the most urgent requirements. When facilities are accessible, functional, and aesthetically attractive, public satisfaction increases, which in turn increases the community's trust and confidence in the local authorities responsible for their maintenance.

In addition, effective budgeting and resource allocation for upkeep contribute to the efficient use of available funds. Local authorities can reduce the likelihood of costly, extensive repairs or replacements in the future by allocating sufficient resources to preventive maintenance and timely repairs. This proactive approach not only reduces long-term maintenance costs, but also ensures that public facilities consistently meet or exceed the expectations of the community, resulting in higher levels of public satisfaction.

In addition to budgeting and resource allocation, maintaining and administering public facilities presents several other challenges for local authorities. These challenges may include vandalism, user attitudes, personnel constraints, and unpredictability of the weather. Overcoming these obstacles is essential for assuring the maintenance and optimal operation of public facilities. Local authorities must take a proactive and comprehensive approach to addressing these challenges. To ensure the effective maintenance and administration of public facilities, a combination of preventative measures, community involvement, adequate staffing, and contingency planning is required. By overcoming these obstacles, local governments can provide well-maintained, safe, and pleasant public facilities that contribute to the community's satisfaction, well-being, and pride.

CONCLUSIONS

This study is aimed to determine the satisfaction level of public facilities and their relation to the maintenance and management. Data was collected through a distribution of questionnaire to public people in Kulim, Kedah. The sufficiency number of public facilities were ranked as the main factor influencing the satisfaction level of the people, followed by the condition of public facilities and the maintenance facilities, implying that the local authority shall pay attention to these factors in order to keep the people satisfied with public facilities provided.

While for current maintenance strategies, the researcher found that the current maintenance management practices for local authority in Kulim, Kedah is depending on the complaints they received. Despite inspection is being carried out every day upon receiving the complaints or issue, the local authority is also currently struggling with inadequate allocation of money resources to carry out the maintenance strategy. The appropriate budgeting and resource allocation for maintenance are essential for increasing public satisfaction with public buildings.

Local authorities can ensure facilities are well-maintained, safe, and aesthetically pleasing by allocating funds based on condition, priority, and community requirements. This targeted allocation of resources optimises maintenance efforts, fosters public confidence, and maximises the efficient use of available funds, ultimately contributing to greater public satisfaction and well-being.

An information regarding the satisfaction level of public towards facilities provided could help the local authority in improving the maintenance and management of public facilities in the future. The data received during this research and study could help the local authority to determine the strategy to give the best for the public people. More improvement on maintenance and management strategies could be developed and planned by the local authority in order to ensure the public facilities provided can perform its function well and could bring benefits for the people.

Future research on other dimensions and place could provide a more robust results, allowing deeper insight into satisfaction level of public. In conclusion, the maintenance and management of public facilities are essential for public safety, community development, economic growth, environmental sustainability, and community satisfaction. These facilities contribute to the well-being and liveability of communities as a whole. Local authorities foster thriving, inclusive, and sustainable communities where individuals can thrive and experience a high quality of life by investing in their maintenance and effective management.

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2. Adalah dimaklumkan bahawa pihak kami ingin memohon kelulusan tuan untuk mengimbas (*digitize*) dan memuat naik semua jenis penerbitan di bawah UiTM Cawangan Perak melalui Repositori Institusi UiTM, PTAR.

3. Tujuan permohonan ini adalah bagi membolehkan akses yang lebih meluas oleh pengguna perpustakaan terhadap semua maklumat yang terkandung di dalam penerbitan melalui laman Web PTAR UiTM Cawangan Perak.

Kelulusan daripada pihak tuan dalam perkara ini amat dihargai.

Sekian, terima kasih.

“BERKHIDMAT UNTUK NEGARA”

Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

nar

Setuju.

27.1.2023

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