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DETERMINANT FACTORS IN DEVELOPMENT OF MAINTENANCE CULTURE IN MANAGING PUBLIC ASSET AND FACILITIES

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Abstract

Malaysia is a fast growing developing country and its vision is becoming a developed country with a first class infrastructure. Towards this vision, the assets and facilities were developed especially buildings, constructions and infrastructures to fulfill the need of society and organization. However, the assets especially public buildings and infrastructures are not maintained properly because of the lack of maintenance culture. Thus, developing the maintenance culture is essential to increase the awareness about maintenance activity on public facilities and assets in Malaysia. Regarding to this, maintenance culture should studied through examining and identifying the determinant factors which influence the development of maintenance culture. This paper aims to review the determinant factors which influence the development of maintenance culture. The determinant factors are leadership; communication; rewards and recognition; teamwork; training and education; motivation; involvement; empowerment; policy systems strategy and work planning; and organization structure.

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1. Introduction

In line with the national development goals for improving the quality of services in the public sectors to become "The Developed Countries by the year 2020" have a first class infrastructures on the agenda for the this country. Apart from this, many facilities such as buildings and public infrastructures are built
to fulfill administrative and social needs as well as economic responsibilities to the general public. (Shardy et al., 2011). The government assets and facilities should be managed properly with maintenance work to ensure the functioning assets, minimum cost of repairing and providing a safe environment for the user. Maintenance work is defined as the combination of technical and administrative actions to be taken to preserve or protect a structure, system or equipment to function properly (British Standards Institute, 1974). It as a work process or work activity programmed by an individual or group to be undertaken to protect, preserve and maintain the function of a facility.

Assets and facilities are essential to an organization's resources, thus improving the working environment and well-being of their maintenance is an important aspect that should be given serious attention. This is where the need for the roles of each member of the organization involved in maintenance tasks with a clear understanding that regard to maintenance work. However, the present maintenance problem has become an important agenda for the country and pressure on the government aspect of managing its assets and facilities (Annies, 2007). This is based on the rising cost of real estate management and maintenance due to lack of maintenance culture of assets and facilities in Malaysia. Many public assets and government-owned facilities are not well maintained and in poor condition. In addition, each year the management and maintenance costs have increased for the repair process assets and facilities that have been damaged. This situation has brought public criticism from the public for services provided by the government. The arrival time problem is solved by a maintenance culture on assets and facilities in Malaysia, where the maintenance is the practice of each individual in the maintenance of assets and facilities. This is because the failure of maintenance at present due to the attitude on the individual. The maintenance culture is necessary to improve the skills, tenacity, and diligence in maintenance work.

Thus, maintenance culture has been recognized as an important aspect to increase the quality of maintenance work to extend the life capacity of the assets and facilities. Hence, this paper discusses the determinant factors that influence the development of maintenance culture based on the review of previous research. Therefore, this finding can contribute the endeavours for improving the quality of maintenance activities to the public assets and facilities in Malaysia through developing of maintenance culture.

2. Rationale for the study of maintenance culture

Maintenance culture defines the values, way of thinking, behaviour, perception, and the underlying assumptions of any person or group or society that considers maintenance as a matter that is important (priority) and practices it in their life. When a person or group has maintenance culture, they would have the attitude to maintain, preserve and protect the public facilities. The attitude in question is towards the maintenance work, which is embedded in each individual or group, although in practice, the maintenance tasks have been programmed, planned and scheduled, it is only when one understands the responsibility entrusted to implement it that creates a proper awareness of maintenance work and whereby it is done automatically, spontaneously without any direction and thought (Suwaibatul et. al, 2012). Maintenance culture is not universal in nature, it is usually derived or learned through a person making maintenance a natural daily practice that can be followed and emulated by others (Florence, 2011). These cultures are not easy to develop. It takes time and occurs in response to changes to the individual himself/herself. Thus, it is not something that is impossible to implement if the method made the maintenance culture is known to be performed. When the determinant factors of maintenance of development are identified, the maintenance will be a daily practice that is understood by each individual about what their duties are. This paper makes a modest contribution to discuss the factor that should be implemented in the developing maintenance culture. It reviews and synthesizes the scattered pieces of evidence from more detailed studies about previous research in other field. The study of culture is very less maintenance in the field of research knowledge in the field of maintenance, facility management, asset management and others. Recent studies discuss many aspects, processes, implementation strategies and help to
maintenance. But at the mention of the cultural aspect or maintenance practices that form the basis of a maintenance process is often overlooked (Oedewald and Reiman, 2003; Mohd Saidin and Samidah, 2012; Brendan J Smith, 2006).

3. The determinant factors which influence the development of maintenance culture

Suwaibatul (2011; 2012) has explored, analyzed and presented some major factors affecting the maintenance culture based on the previous research. From this study, ten determinant factors can be implemented to the maintenance culture development. These factors include leadership; communication; motivation, reward systems and recognition; empowerment; involvement; policy system, strategy and work planning; teamwork; training and education, organizational culture. Every factor will be discussed below.

3.1 Leadership

Maintenance culture development can be achieved through the implementation of the leadership factors that should be done by someone who was called leaders toward culture maintenance practices among all his followers. According to Gary Yukl (2006), who defines leadership as “the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives”. This means that leadership is based on the commitment of the top management acting as internal resources to expedite the attitude a person has to perform and understand the maintenance tasks very well. Maintenance tasks will not be regarded as a burden, but as a good practice that should be implemented for the next stake. This is where the need of the leadership qualities in a leader by showing a serious commitment to the work done by providing a work plan that can be easily understood and followed by everyone.

3.2 Communication

Maintenance Culture development process can be achieved through communication factor. Communication is the transfer of information from one person to another that involves the exchange of facts, ideas, suggestions and emotions with two or more people. Additionally, it also involves the interaction of stimulus meanings through giving and receiving messages. Communication is an essential part of human life when something needs to be done at work (Stephen, 2005). Communication plays an important role which involves delivering information on maintenance work practices for all members of the organization so that the importance of facility and asset maintenance is understood by every individual in the organization.

3.3 Rewards and Recognition

Rewards and recognition is one of the factors that can develop a maintenance culture. The rewards and recognition would only be effective if it is meaningful and given an acknowledgment to the work produced (Mohd Saidin et al., 2008). It is what is received by an employee as a reward for the work they have done. The recognition is defined as some sort of public acknowledgement for superior performance on quality activities and rewards are benefits such as salary increases, bonuses and promotions due to an individual’s performance on improving the quality aspects of his or her job (Viljoen and Waveren, 2008). Rewards and recognition is the best as it is a powerful motivator, because when a person is rewarded they will feel guilty, so a person will be motivated to perform the work in earnest.
3.4 Teamwork

Teamwork comprised a group of people working together to achieve a goal. Salas et al. (1992) defining that teamwork may conceive a team to be a distinguishable set of two or more people who interact dynamically, interdependently, and adaptively toward a common and valued mission, who have each been assigned specific roles or functions to perform, and those who have a limited life-span membership. Interest group collaboration can increase the effectiveness of work than working individually where doing things together will facilitate the work being completed or was completed. In addition, each individual in the group will feel comfortable sharing opinions on a more effective strategy.

3.5 Training and Education

Another factor that influences developing of maintenance culture is education and training. Training is the development of attitudes, knowledge and specialized skills required by the employees to perform their duties properly (Mahmood Nazar, 2005). Education was for the promotion of learning and as an added value to the generic knowledge to the development of individuals and organizations (Mohd Hizam and Zafir, 2002). Training should not be limited to transfer of technical skills and knowledge necessary for optimum performance of the task. Rather it is an ongoing need to improve the skills and knowledge of workers that will increase productivity maintenance. Through training and education of an individual will have the self-awareness to keep the assets and facilities, enhance the skills and knowledge of maintenance work and an individual is more motivated in doing the job well.

3.6 Motivation

Motivation is one of the main elements influencing the development of a maintenance culture. Motivation is considered as the process of shaping a person’s personality can be encouraged to act in a certain goal. Motivation can be created such as recognition, reward systems, and support by management commitment, individual motivation. In addition, the motivation can be given in terms of training and education, the involvement of top management, performance measurement and the encouragement, and support. Motivation can create a work environment that is filled with passion and each member will be more serious with the task they received. Additionally, also through motivation regarded as psychological processes that gave rise to passion, direction, persistence and through voluntary action for the maintenance of a confidence boost and encourage, and promote carrying out a quality work.

3.7 Involvement

Maintenance of cultural development can be achieved through the involvement of factors. Employee participation in the organization is a process that demands the workers participating in actions and in the organization. Involving individuals in each maintenance activity is necessary to ensure that each individual clearly understand the maintenance tasks imposed upon them. The combination of employee involvement and top management is able to develop a maintenance culture. If there is involvement of all organizations, it is certainly capable of creating a work environment that emphasizes maintenance. In addition, this involvement also instills employees to develop themselves through a commitment that shows in every job and even the desire to lead a larger staff in taking decisions and bear the risk of any improvement on the quality of maintenance.
3.8 Empowerment

The authorization also contributes to the development of a maintenance culture. Authorization is the process of delegating decision-making authority to lower levels in the organization. Employees are encouraged to take the initiative and expand their scope. Mark et. al., (2006) stated that empowering employees is essential in order to create commitment in the minds of the employees for this purpose, and also stated how to achieve the goals and targets which are set ambitious but realistic. When an employee is authorized to carry out maintenance work, the employees will be committed to engage in solving the maintenance problems that occur without waiting for instructions from the top management. This situation will cause an execution of maintenance work to be easy, effective and fast.

3.9 Policy systems, Strategy and Work Planning

Policy system, strategy and work planning as part of determinant factor that influence the maintenance culture development. According to Sadus and Griffiths (2004), the policies and strategies that comprised the mission statement and slogan must be used to promote communication media, for example posters, exhibitions, and other internet to every members in the organization. The role of this factor as a policy system to comply with all regulations due to work is a program of policies, standards and the belief that the rules must be followed by an individual in an organization to achieve goals. The system policy consist the simple statement and give clear and distinct explanation on the core values and beliefs about common goals that want to be achieved. Therefore, these factors are crucial to the developing of maintenance culture, a person’s behaviour depends on the objectives needed to be achieved, if the policy system, strategy and work planning are clear and easy to understand, each individual will be more motivated to carry out maintaining the assets and facilities.

3.10 Organization Structure

One of the important aspects must be considered on the development of maintenance culture is the organization structure. The organization structures is a framework of rules and power relations that exist formally to control and coordinating human action and motivate individuals to achieve the organization’s goals. It typically hierarchical, which an organization arranges its lines of authority and communications, and allocates rights and duties and has been illustrated by the organizational chart. Organization structure is vital as a guideline to clarify the sense of duty and activities for everyone in organization. The process development of maintenance culture requires a comprehensive the organizational management structure to represent the practice of the maintenance work that should be executed by each member in the organization. Furthermore, the functional of organization structure as an advisory body, the administration and controlling the activities of maintenance work in the organization.

4. Conclusion

Generally, developing a strong maintenance culture on assets and facilities in Malaysia are crucial as a way to resolve the maintenance issues in Malaysia. Maintenance culture is necessary to ensure that each individual does not neglect the responsibilities to maintenance the assets and facilities. Even though, the development of maintenance culture is difficult and will need some time but when the determinant factors for the development of maintenance culture are implementing, it will succeed without fail. The listed ten factors that can be executed to accomplish the maintenance culture development include leadership; communication; teamwork; training and education; motivation; recognition and reward; policy, system and work planning; involvement; empowerment and organization structure.
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