

A Proposal of Community based Facility Management Performance (CbFM) in the Education System of Batubara District in Indonesia

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Abstract—The primary education system in Indonesia involved the community recognized as the school committee, to take a part in the process of achieving the quality of education via the school facility performance, the low level of school committee involvement in the education system has become the issue in the development of education and reflected to the quality of education. This paper will discuss the conceptual framework and methodology for the performance of school committees within the management of school facilities in Batubara district of Indonesia. The concepts of Community based Facility Management (CbFM) and Logometrix are used as a basis to measure the school committee performance in order to address the needs of quality school management. The data will be taken from questionnaires distributed for those who work and use school facilities spread over seven sub district of Batubara, Indonesia. The result of this study is expected to provide a guide for evaluating the performance of existing school committee in improving the quality of education in Indonesia.

Keywords—community based facility management; School facility management; School committee performance.

I. INTRODUCTION

THIS Indonesian school system is immense and diverse. With over 50 million students and 2.6 million teachers in more than 250,000 schools, it is the third largest education system in the Asia region and the fourth largest in the world (behind only China, India and the United States)[1]. Education is central to the Indonesian Government's development agenda. Education spending has increased significantly in the years since the economic crisis. In real terms, education spending doubled between 2000 and 2006. In 2007, spending on education was more than for any other sector, reaching an equivalent US\$ 14 billion, or more than 16 percent of total government expenditure [1]. In order to achieve quality of life through education system, the Law on National Education and the Constitution Amendment III emphasize that all Indonesian citizens have the right to

education; that the Government has an obligation to finance basic education without charging fees; and that the Government is mandated to allocate 20% of its expenditure on education [1]. It is expected to equip the education system with a good learning environment.

Nowadays, the education system, particularly for the primary school implements school based management which emphasizes the involvement of the community in school policy. The Indonesian law under no.044, gives the opportunity for parents and society, under the partner organization recognized as the school committee to take part in the education system, however the quality of its role and contributions has become a controversial issues [2].

In Indonesia, School Committees are recognized as a forum where the school and community take essential decisions related to planning, implementing, and education program evaluation carried out by the school [2]. And at the same time, parents and stakeholders are the factors which have the potential influences towards the school performance as a system [2]. This paper aims to discuss about the framework and methodology to measure the performance of school committee in the school facility management within the public primary school in Batubara district of Indonesia.

II. RELATED WORKS

The facility management issues across the numerous business and non business environment, including the facility management in the education system. Moreover, the improvement of facility management led to the community engagement. Community based Facility Management (CbFM) is the concept where those involved explore opportunities for the development of a socially inclusive approach to facilities management [3].

The role of Facilities Management (FM) should be defined by the relationship of facilities to the core business of an organization in which success is measured by the degree and quality of support they provide to achieving key business objectives [4].

On the school level, the quality of education is reflected from the quality of school facility management. Extensive research work on school facility management has been carried-out throughout the world. The Education Department of USA reported that decaying environmental conditions such

as peeling paint, crumbling plaster, non functioning toilets, poor lighting, inadequate ventilation, and inoperative heating and cooling systems can affect the learning as well as the health and morale of staff and students [5]. According to Earthman, student and teacher performance and effectiveness are associated with the quality of the school facilities in which they work [6]. Quality of school facilities can play important part for the quality of learning environment. The age of the facility, the thermal atmosphere, the ventilation within the facility, the acoustical environment, the amount and type of lighting found in classrooms, the cleanliness and maintenance of the facility, the availability of technology, and sufficient instructional materials and resources directly affect the adequacy of learning environment [7]. The age of a public school facility has been noted as a determining factor in the effectiveness of the educational process with increases in student achievement, increases in attendance, and improved instruction noted in newer facilities [8][9]. The adequacy of school facilities is also address the achievement of school to produce the quality of education. The students attending school in the newer school building had significantly better educational achievement than those attending the older building, and they encouraged decision makers to consider the benefits of modern facilities [10]. Lemaster's (1997) analysis reviewed the relationship between student achievement and school facilities. Her investigation found that students had higher achievement scores in newer facilities [9]. Lemaster's also found that as the condition of the facility improved, achievement improved [9]. The condition of a school's facilities affects academic work. Adequate heating, ventilation, and air conditioning are necessary for comfortable teaching and learning [10]. By knowing that facility management defined as the process by which an organization delivers and sustains support services in a quality environment to meet strategic needs [4], an integrated approach to operating, maintaining, improving and adapting the buildings and infrastructure of an organization in order to create an environment that strongly supports the primary objectives of that organization is needed[4]. Generally, facility management characteristics in teaching and learning environment encompass six main factors as follow:

- a. Providing a comfortable and effective environment
- b. Minimizing use of diminishing resources
- c. Providing quality and cost-effective services;
- d. Supporting a dynamic situation;
- e. Enhancing organizational effectiveness; and
- f. Involving multi-disciplinary activities and management [4] [11].

It thus, aims to provide end-users with comfortable, effective and quality environment with minimum resources (cost effective and human services) to enhance organizational effectiveness and successfully implement multi-disciplinary activities [11]. From the learning and teaching aspects Hakim found that facilities plays a significant role on teaching and learning process. A good facility will help the students to be more focus on learning process, and also to increase the quality as a student [12].

Hakim also described five important components identified in providing learning facilities in order to create the optimal teaching and learning environment:

- a. Size and lay out related to flexibility and adjustment. Flexibility in the classroom can support teaching and learning.
- b. The acoustic system
- c. Good lighting system expected providing an optimum learning environment.
- d. Climate and ventilation
- e. Color establishes a pleasing learning environment.

Joseph and Michael also emphasized the particular items on learning environment such as sitting arrangement, size, door and window, electricity, sound effect, lighting system, temperature and ventilation, color and white board [13].

Facilities are products or services that assist an organization to achieve its objectives. Facilities generally form part of the properties in an organization for supporting occupants to achieve business goals [4]. Within the context of education, such as school, it is aimed to create supporting teaching and learning environment for students, teachers, and other users around the school.

The integrated efforts are needed to achieve the quality of education, both supported from government and the community itself. Schools play a symbolic role in their communities, and their appearance carries a strong message about community values and the importance of education. They provide a setting where students, teachers, parents, and the community at large interact [14]. Edwards investigated that the condition of the school was directly affected by parent involvement and that condition of school affected student achievement [15]. In addition, Lackney (1999) stated, "first, schools are much more than bricks and mortar-they are symbols of our commitment to education...physical settings can motivate us or discourage us"[16].

Within the school facility management, research on the involvement of community is not yet addressed, thus in this paper the concept of CbFM and logometrix are used as the basis to measure the performance of school committee. Those concepts are adjusted to the standard of primary school facilities under the Ministry of Education.

Conceptual Framework

Community based Facility Management (CbFM) Framework
The CbFM framework consists of three factors, which are [3]:

1. Governance and engagement

This factor addresses the importance of sound business principles, transparency, values and ethics in governing an organization and its engagement with stakeholder, regarding its sustainable issues.

2. Environmental focus

This factor addresses the organization's use of natural resources in the production of its good and services and the importance of the organization embedding environmental principles in its product or service development.

3. Socio economic development

This factor addresses the organization's commitment to the capture of economic benefits within the community where the organization is operating, as well contributing to the economy, to the social development of the community (beyond economic development) and to providing a safe, high-quality work environment for its employees-including management and staff-and contract labor.

Logometrix

What follows is the general explanation of the Logometrix Perspectives in relation to their strategic objectives and Elements [17]

Service Perspective; aimed to provide facilities that enable the effective delivery of services that are appropriate and meet the needs of the community

Physical Perspective; aimed to provide buildings that are fit for the purpose for which they are being used

Community Perspective; aimed to provide facilities that support and facilitate the delivery of services that meet the needs of the community

Financial Perspective; aimed to provide facilities that are economically sustainable and are affordable to the community

Utilization Perspective; aimed to provide facilities that are available to the community at times of demand and that are well utilized

Environmental Perspective; aimed to provide facilities that are environmentally sustainable

Thus, by considering the educational factors, the concept of community based facility management and logometrix adjusted with the standard of school facility explained above is the potential concept to be implemented for school committee and expected to meet its objective to play the significant role in achieving the quality of education and at the same time to increase its performance.

Overall, The principles of CbFM are implemented in the relation with the improvement of quality of life, socio-economic objectives. In this case, facilities management can assume as a people-based discipline, the proponents of CbFM suggest using FM as a vehicle for achieving local socio-economic objectives [18], and considering as well the primary function of FM is the management and integration of various professions to support a core process [19].

The concept of CbFM recently focused on economic and environment, but its principal strategic which emphasize on the involvement of community could be implemented in the context of school committees, considering that school committees are the representative of community which have the responsibility of educational quality improvement.

III. METHODOLOGY

A survey questionnaire was developed to determine the perception of school stakeholder on the level of school committee performance in playing its role on the school facility management. The distribution of 350 questionnaire will apply the concept of logometrix and community based facility management as the basis measurement, the facility

indicators on those concepts adjusted to Indonesian school facility standard.

A five point likert-scale of 1 to 5 to adopted to assess the degree of the perception of school stakeholder. The questionnaire will be distributed through the 10 public primary schools, and the discussion also will be carry out with some respondents to clarify certain issues. And the data will be analyzed by using SPSS software version 16.

The measurement formula will be implied for school committee performance described as follow:

The scale will be devised from poor (1) to excellent (5). The level of school committee was designed as shown in the table. The instrument has the interpretation as follows:

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TABLE I LEVEL OF SCHOOL COMMITTEE PERFORMANCE

Scale	Level of Performance	Description
1	Poor	Failure to carry out the roles
2	Need improvement	Role is insufficient
3	Fair	Role is insignificant
4	Satisfactory	Role is suitable and sufficient
5	Excellent	Role is outstanding

IV. CONCLUSION

Education is the shared responsibility of students, teachers, parents, tertiary educators and the community. The urgency to reveal the performance of school committee is basically needed due to the education system required the engagement of community to the education process in Indonesia. Thus, this paper has discussed the framework and methodology to be applied in order to measure the school committee performance in the school facility management. It is expected that this research will give the benefit for the improvement of quality education in Indonesia.

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