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## Assessing Score of Applicability and Importance on Functional Performance Criteria for Historical Building

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### Abstract

Historical buildings in Malaysia represent the ancient building culture and need to be preserved for the country's future generation. Refurbishment work is carried out to ensure the building fit for occupation. Evaluation after refurbishment is vital a procedure to assure the performance of building meet the user requirements. The objectives of this study are to assess the score of importance and applicability of the functional performance criteria. Secondly, to identify the correlation scores between importance and applicability of functional performance criteria. Finding shows that the correlation relationships between score of importance and applicability of all criteria have positive relationship.

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*Keywords:* Score of importance; score of applicability; functional performance; historical building

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### 1. Introduction

Historical buildings in Malaysia is one of the most enduring assets that represent our history and culture and also play an important role in generating income and besides boosting tourism potential. Kamarul, Lilawati & Ghafar (2008), state that these buildings gives us a sense of wonder and makes us want to know more about people and

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culture that produced it. In Malaysia, there are many historical buildings such as the National Textile Museum, Sultan Abdul Samad Building, Penang Municipal Hall, The Perak Museum and others.

Generally it is found that most of the historical buildings being left over and in a state of dilapidation and deteriorated. The physical quality of the building is slowly declining and not performing the way it was intended to. Refurbishment is becoming one of the most important sectors to enable the building to be fit for its purpose of use. Azlan and Rohayati (2012) states refurbishment is an act of upgrading, alteration and renovation of an existing building to improve the facilities and increase building lifespan. Building to be refurbished needs to go evaluation assessment to ensure the building meets user's requirement and performance standard. Post Occupancy Evaluation (POE) is a method of building evaluation in a systematic way after the building has been completed and occupied for some time. POE requires feedback from occupants based on occupants comfort experienced regarding the building performance. POE is intended to look into positive consequences of design input that will be use in future to build a better building. There are few types of the element of building performance. They are technical performance, behavioral performance and functional performance This study will only focus on the functional performance element.

### *1.1. Problem statement*

Currently refurbishment is becoming one of the most important sectors that enable the building fit for its purpose of use. Refurbished building needs to have evaluation assessment to ensure the building meet user's requirement and performance standard. However, the common problems faced in refurbishment functional performance work are space management planning and change in aesthetic value (Ahmad, Hasnizan & Shahrul, 2012). Other than that, it is also constrained by heritage regulations and restrictions (Siti, 2011). Moreover, fire safety management in buildings is inadequate due to improper guideline (Salleh & Ahmad, 2009). Finally, the life cycle cost of operating historical building is high, due to high energy consumption (Syahrul & Raha, 2011) and also high in maintenance cost (Syahrul, Emma & Aiman, 2011).

Based on the above issue, it shows that there are many problems that encircled functional performance element and criteria in POE. Therefore, this study will focus and highlight on the score of importance and score of applicability of each criteria in functional performance element.

### *1.2. Research aims*

The objectives of this research are to assess the score of importance and applicability of functional performance criteria. Secondly, to identify the correlation scores between importance and applicability of functional performance criteria. Meanwhile, the aim of this study is to extend and improve the design requirements which related to functional evaluation requirements.

### *1.3. Scope and limitation of the research*

Semi-structured interviews and survey questionnaires were distributed to related professionals, public agencies, local municipality and relevant interested parties in historical building management. This study involves 31 no of respondents. The methodologies also include review literature from secondary data. The evaluation done is centred in functional performance criteria only. Eight (8) criteria of functional performance used for refurbished historical building and the criteria are; space, aesthetics value, comfort, amenity, services, safety, operational management and life-cycle cost.

## **2. Literature review**

### *2.1. Post occupancy evaluation*

Post-occupancy evaluation (POE) is the process of systematically comparing actual building performance, with explicitly stated performance criteria (Preiser, Harvey & Edward, 1988). In addition, RIBA (1991) reported that

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