

CHAPTER

7

BIM IN QUANTITY SURVEYING PROFESSION

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7.1 INTRODUCTION

According to Martin (2017), construction industry requires the assistance of information technology for multiple purposes such as project management, procurement of building materials, and computer aided design applications to obtain cost optimisation and competitive advantages. Information technology, according to Rouse (2005), includes the physical devices and processes to create, process, store, secure, and exchange any type of electronic information. Barnes and Davies (2014), described building information modelling (BIM) process as another application in the Information technology to suit the demands of the construction and civil engineering industries. BIM enables all information which was previously written and stored in hard copy form to be stored and produced digitally. According to Olatunji et al. (2010), BIM may reformulate traditional quantity surveyor services.

A quantity surveyor is accountable to provide cost advice service during the whole development of a project precisely and on time to the client. The knowledge and skills of the quantity surveyor are still in high demand among the clients and contractors (Cartlidge, 2009; Chandramohan et al., 2022). According to Abidin et al. (2014), quantity surveying firms in

Malaysia are starting to adapt to the usage of information technology to be able to compete with other quantity surveying firms. Jacky et al. (2005) described that, a quantity surveyor should explore the use of information technology in construction to its full potential as it enhances quantity surveyor professional services. The potential of BIM specifically to the quantity surveyor involves the extended three-dimensional (3D) design models of BIM which is known as 5D model (adding quantities and cost of materials) (Barnes & Davies, 2014).

In a common quantity surveying practice, the quantity surveying firm is not only limited to a quantity surveyor position but consists of an assistant quantity surveyor, a senior quantity surveyor, and a director (Randstad, 2023). An assistant quantity surveyor is known to be amongst the graduates with diploma in quantity surveying (Widad, 2023). The assistant quantity surveyor is known to assist the quantity surveyor in handling traditional measurement works (manual taking off), preparation of preliminary cost estimates, preparation of bills of quantities (BQ) and other related works under the quantity surveyor.

Most of the scope of work that can be completed by BIM seems to resemble the scope of work usually done by the assistant quantity surveyor. Gee (2010) concluded that, with BIM, the role of the assistant quantity surveyor in the firm might not be significant anymore and might eventually be replaced with BIM. Therefore, this research was conducted to identify the scope of work of assistant quantity surveyor in the quantity surveying firms and the adoption of BIM within their scope of work.

This chapter is organised by firstly presenting related work in Section 7.2. This is followed by Section 7.3 which explains the research methodology and Section 7.4 which presents the results and discussion of findings. Lastly, Section 7.5 provides the conclusion drawn from this research.

7.2 ASSISTANT QUANTITY SURVEYOR AND BUILDING INFORMATION MODELLING

Generally, in a quantity surveying practice, the hierarchy puts the position of the quantity surveyor answerable to the project manager or project director. It is therefore important to consider that as a company, a quantity surveying practice consists of an organisation which adopt autocratic style of management, and not only consist of a quantity surveyor position but also include other positions (Jennings & Betts, 1996).

According to Hackett (2016), a quantity surveying practice consists of Commercial Director, Managing quantity surveyor, Senior quantity surveyor, quantity surveyor, and Assistant quantity surveyor. Therefore, the organisation does not depend solely on a single quantity surveyor position but also on other members of the organisation. These members are required in a quantity surveyor practice to utilise their different degree of time, skills, and knowledge available in order to achieve success for the organisation (Jennings & Betts, 1996).

Focusing on the lowest position in the hierarchy of a quantity surveyor practice, Collins (2023) defines an assistant as an individual who is responsible in assisting and supporting the higher level of authority. An assistant is known to be present to make their superior's life easier and at the same time practicing and learning the profession. Similarly, an assistant quantity surveyor holds the position to assist the senior quantity surveyor or managing quantity surveyor in a quantity surveyor practice firm (Hackett, 2016). Thus, it is apparent that the assistant quantity surveyor position exists in the quantity surveying practice.

7.2.1 Qualification of Assistant Quantity Surveyor

An assistant quantity surveyor in Malaysia is mainly amongst the graduates with Diploma in Quantity Surveying (Widad, 2023). These graduates are obligated to go through three years of education including practical training and academic base which covers the syllabus of quantity surveying field. The syllabus includes basic mathematics,