MINIMIZING CONFLICTS DURING CONSTRUCTION STAGE BY USING BUILDING INFORMATION MODELING

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To Farah Azmin who stood beside her husband at every single step of the way, to Amsyar Darwisy who sacrificed precious time, attention and love with his father, and to people around me especially my parents who constantly encouraged, supported and committed to me
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ABSTRACT

Public Works Department of Malaysia (PWDM) is one of the main governments’ technical agency in Malaysia. PWDM has supervised numerous government projects but still faces problems such as delays and variations due to conflicts during construction. The main study is to investigate the effectiveness of applying Building Information Modeling (BIM) in managing conflicts during construction. The results of the analysis were established from surveys of questionnaires, interviews and lastly from PWDM’s own database. The analysis was based on mixed method which combines the qualitative and quantitative analysis approach and finally comparing it with literatures that discusses conventional projects and projects using BIM. This study which focuses on the conflicts during construction, finds that conflicts are attributed to the lack of communication and coordination which eventually contributes to the project delay. This study was conducted in order to find the root cause of the problem and proposing an action plan that utilises the BIM approach in order to properly manage conflicts during the construction stage. It has also come into attention that although the proposed measures for conflict management through BIM is practical and feasible, it will still encounter some resistance. This form of resistance has been identified and appears in the form of cognitive, resources, motivational and political. The results have also provided evidence that through BIM utilisation, conflicts during the construction stage can be minimized. Other beneficial factors of applying BIM are improved communication and coordination among the projects stakeholders. This research study has also encountered some challenges due to the limitation of BIM expertise and the small number of PWDM projects that actually utilises the concept of BIM. It is with great hope that this research study will spur and generate greater interest for those whom are involved in BIM and Architecture, Engineering and Construction (AEC) industry as it provides an extension of BIM’s current knowledge base especially in the aspect of construction stage conflict reduction.
ABSTRAK