Value Management in the Malaysian Construction Industry: Addressing a Theory and Practice Gap

Aini Jaapar\textsuperscript{a}, Mardhiah Zawawi\textsuperscript{a,b}, Nor Azmi Ahmad Bari\textsuperscript{a} & Norizan Ahmad\textsuperscript{a}

\textsuperscript{a}Faculty of Architecture, Planning and Surveying, Universiti Teknologi MARA, Shah Alam, Selangor. D.E. Malaysia.
\textsuperscript{b}Faculty of Civil and Environmental Engineering, Universiti Tun Hussein Onn, Batu Pahat, Johor. D.T. Malaysia

Abstract

Of late, value management (VM) has gained greater recognition in Malaysia subsequent to the issuance of the Value Management Circular 3/2009 by the Economic Planning Unit (EPU) of the Prime Minister’s Department, Malaysia. The aim of this study is to review the gaps that exist, particularly on how VM is being practiced in comparison with the published VM body of knowledge. Highly depending on literatures, observations and semi structured interviews, this paper discovered two-fold gaps: the unclear description of current VM applications and the lack of exploration on the behavioural elements of VM workshops. This research aims to provide new insights to enhance understanding of VM implementation in Malaysia.

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1. Introduction

Having originated since the 1940’s in the US manufacturing industry and applied since the 1960’s within the UK construction industry, the concept and application of VM has consequently evolved into a standard service with various tools, techniques and methodology in the UK construction industry (Kelly

* Corresponding author: Tel.: +6-03-55444214; fax: +6-03-55444353.
E-mail address: ainijaapar@salam.uitm.edu.my
et al., 2004). Consequently, the techniques spread to other countries such as Germany, France, India, Japan, Saudi Arabia, Hong Kong, Australia, New Zealand and Malaysia. Researchers from different countries have conducted actively cited researches on VM which have contributed significantly to the development of VM. These researches covered both hard and soft elements of VM such as process improvement, technique innovation, exploration of current practices and the elements of human behavior. However, research on VM in the Malaysian context is still in its infancy and has only explored the basic elements of the application and process improvement. The studies also indicate loose VM integration with other management approaches. Currently, the elements of VM participants’ behavior towards the process and its effects have yet to be explored. As a result of the current surge in VM implementation in public projects, this study intends to explore large scale, implemented VM workshops and the VM participants’ behavior towards the process from the environment-behavior perspectives. This study employed three (3) VM workshop observations and five (5) semi-structured interviews as the methods for collecting environmental behavior data. This study aims to provide descriptive findings of behavioral exploration of VM implementation in the Malaysian context.

2. Literature Review

This section discusses the current practice of VM in Malaysia and the elements of human behavior as guidance for data collection purposes.

2.1. VM practices in the Malaysian Construction Industry

In order to ensure the government implements better value-for-money approaches in public projects, the Economic Planning Unit (EPU) and the Construction Industry Development Board (CIDB) have initiated efforts to utilize VM processes. In December 2009, responding to the need to achieve better value in future public projects, the EPU published a circular entitled “Value Management Guidelines Circular 3/2009” which made it mandatory for public projects valued at RM 50 million and above to implement VM.

Consequent to the enforcement of the VM circular, 71 public projects and programmes have implemented VM which has resulted in 23.53% savings on the total cost (Ahmad, 2011). Additionally, after the launching of the Manual of Value Management Implementation (EPU 2011) in May 2011, the VM teams are able to run VM workshops accordingly. The manual states that the aim of VM workshops is to overcome the problems of poor project justification. At the same time, several government linked companies (GLCs) are also actively promoting and practicing VM workshops in order to evaluate their planned projects. Other private companies, though not involved with structured VM procedures, have also placed ‘Value’ as their main objective apart from applying other management methodologies such as lean construction and six sigma.

Theoretically, Malaysian researchers have defined VM to suit the local Malaysian construction industry scenario (Che Mat 2001; Jaapar 2006; EPU, 2011). Jaapar (2006) through her thesis has defined VM as a multi-disciplinary, team oriented, structured, analytical process and systematic analysis of function, which seeks best value via the design and construction process, to meet the client’s perceived needs. The definition serves to enhance the understanding and perception of VM methodology that clients and practitioners in the local construction scene generally possess.

Furthermore, there are minimal publications and usage of VM knowledge, guidelines and manuals in the local construction industry (Jaapar, 2006; MAHB, 2010; EPU, 2011) which are compatible with international VM methodology. Local researchers have tried to improve VM implementation performance by producing prototype guidelines for VM implementation in the Malaysian construction industry.
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(Jaapar, 2006) as well as ensuring sustainable VM implementation in the Malaysian construction industry by using the Capacity Building concept (Jaapar, 2011). In diversifying VM usage, researchers have added the element of sustainable construction projects (Zainul Abidin & Pasquire, 2005), integrated VM with Risk Management (Abd Karim et al, 2011) and improved the decision making tools of Design and Build procurement methods (Mohamad et al, 2010).

Moreover, VM is practiced in a way that suits industry needs. For example, among the current VM implementation processes used is the “Hybrid VM” workshop process which involves a team of facilitators who are able to handle more than one project simultaneously. This approach fulfils the clients’ intention to value manage as many projects as possible at the initial stage. Moreover, the VM Workshop job plans are flexible depending on the project size and work stage. For remarkably small projects, the workshop can be conducted in a short time (1 or half day). Hybrid VM may not be feasible for voluminous and complex projects as the VM workshops need to be conducted in a longer duration and require a more structured facilitation process. Furthermore, complex projects also may require the integration of other construction management philosophies (e.g. risk management, sustainable construction) whenever requested by the clients.

2.2. The knowledge gap

From the literature, none of the studies has considered the behavioral elements of VM implementation specifically in the Malaysian context. As suggested by Leung et. al (2003), consideration of human behaviour in VM workshops is equally vital in order to obtain a holistic view of the entire management process. In other countries, several researchers (e.g. Green (1999); Leung and Chu (2003) have explored this particular behavioral element. Hence, this study is significant as a starting point to explore the behavioral elements in the local context of VM.

2.3. Behavioral Elements of VM participants in workshops

The main characteristics of the VM system, as identified by Leung and Wong (2000), are participation, communication, interaction, conflict resolution and feedback during VM process implementation. By simplifying the complex reality of the observation purposes, thus the element in environmental behavior observation can be described in terms of actor, act, significant others, relationships, context, and setting. In this case study, the observed workshops can be describes as below (Zeisel, 1984; Stangor, 2011):

| Who is involved? | VM Team Facilitator, VM Participants and External Participants |
|------------------|-------------------------------------------------------------|
| Doing what?     | VM study                                                   |
| Who with?       | VM Team Facilitator, VM Participants and External Participants |
| What kind of relationship? | Aural and Visual |
| What context?   | Hybrid VM workshop                                         |
| Where?          | VM workshop venue                                         |

3. Research Methodology

This research solely used the qualitative approach which utilised two (2) methods: Observation and semi structured interview. Using the researcher as the major instrument for observations and interviews, techniques of tape recording, taking pictures and writing comments were employed. The data will be
nominal in nature in that it describes and differentiates the multiples snapshots of environment behaviour which naturally takes place in the VM workshop.

According to Holt (1997 p.85), any improvement to existing practices cannot be properly considered until the existing condition(s) and problems surrounding them are fully understood. Hence observation greatly complements the literature review as it yields some understanding of how a process is conducted. On the other hand, semi-structured interviews provide better understanding of the perceptions towards the process.

4. Findings and Discussion

The following are the general observations of the VM workshops processes and the VM participants’ behaviour throughout the duration of the VM processes at their respective venues.

The workshops started with welcoming remarks from the clients as well as the VM team facilitators (VMTF) to all the VM workshop participants. After sharing a simple explanation about the VM process and objectives of the VM workshop, the workshops were divided into several groups. This was followed by the project brief given by the VM client for each VM workshop. The presentation was assisted with slide presentations on project details. After the presentation, the VMTF requested the client representatives to provide the related details in accordance with the provided template. During this stage, the consultants and decision makers were requested by the VMTF to clarify pertaining issues whenever required.

Introduction sessions were followed by brainstorming sessions where the functions of each component of the project were critically discussed. During this stage, the VMTF asked the VM team participants to produce FAST diagrams for their respective projects. Based on the observation, all the VM participants managed to provide the required FAST diagram with the assistance of the VMTF. The team identified the WANTS and the NEEDS function, followed by the judgement stage. Then, they discussed and highlighted the importance of the project and the possible alternative options to replace the existing design or plan. After extensive discussions, the process was followed by the evaluation, development and presentation stages of VM workshops. It was noted that the VM participants relied heavily on the presence of the VMTF in order to complete the given tasks accordingly. Table 1 summarises the information on the VM workshops:
Table 1. The details of VM workshops

| DETAILS                  | WORKSHOP 1  | WORKSHOP 2  | WORKSHOP 3  |
|--------------------------|-------------|-------------|-------------|
| Type of Project          | Infrastructure | Apartment | Flood Irrigation |
| No of VM Workshops at the Venue | 4           | 3           | 8           |
| Type of Client           | Public      | Public      | Public      |
| Impact of VM Workshop on cost | Reduce    | Reduce      | Increase    |
| Type of VMF Involved     | External & Internal | Internal | Internal |
| Implementation Stage     | Conceptual Design | Conceptual Design | Conceptual Design |
| Type of Participation    | VM Participants, External Participants & VMTF | VM Participants, External Participants & VMTF | VM Participants, External Participants & VMTF |
| Duration of Workshop     | 7 days      | 4 days      | 4 days      |
| Venue of VM Workshop     | Neutral Venue | Neutral Venue | Client Venue |
| Number of Participants   | 18          | 10          | 7           |

Table 2 details the behavioural observation of the VM workshops’ participants in accordance with the criteria listed by Leung & Wong (2000).

Table 2. Environment Behavioral Findings

|                     | Workshop 1                                                                 | Workshop 2                                                                 | Event 3                                                                 |
|---------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------|
| The Participation   | Not all the decision makers participated in the VM workshop at the beginning of the workshop. However, due to unsolved issues, then only they attended the workshop. | The decision maker participated throughout the VM workshop. Unfortunately, the VMTF and External Participants are being shared by other groups. Hence, the discussion was inconsistent. | The decision maker was available throughout the process. Unfortunately, the VMTF and External Participants are being shared by other groups. Hence, the discussion was inconsistent. |
| The commitment      | VMTF: Participated in the discussion along the process. VM Participants: Fully committed towards the VM exercise. External Participants: Participate whenever needed, whenever being asked by the VM participants & VMTF. | All the External Participants attended. The VMTF diverted his attention towards other VM workshops which had more critical issues after guiding the VM team and justifying their project scope. | All the related consultants participated as VM participants throughout the VM process. VMTF: guides the group on project justification. VMTF needs to divert his attention towards other critical VM workshops which were running concurrently. |
| Interaction         | The VM participants interacted accordingly among each other in order to resolve the related issues. | The group itself is not the main focus of VMTF due to the uncritical conditions of the project. VM participants and External Participants interacted with each other but they were not fully utilised by the VM workshop due to their lack of “know what to do” and “know how to do” along the | Lack of interaction between VM participants with the VMTF due to uncritical conditions of the project. |
The participants faced difficulties in distinguishing the NEEDs and WANTs functions of the projects components. It was only resolved after the main decision maker attended the session.

The group does not have critical issues due to the nature of the project. However, VM workshops contribute in that, the participants gain clearer understanding on project justification from the very early stage of the project cycle.

The group does not have critical issues due to the nature of the project, but they were concerned about the limited budget for the project. Hence, the VM workshop is beneficial to the project in that, the project was organised and divided into several phases depending on the importance of each project component. The uncrirical project component will be executed next time.

Feedback

Positive. All the participants declared that they learnt new knowledge and processes through this workshop.

VM participants’ perceptions towards the VM workshop leaned towards cost cutting processes. However, it is interesting to note that the Client gained clearer project justifications through the VM workshop.

Negative. VM participants have negative perceptions towards the VM process despite their success in organising the project into several phases to comply with the limited budget.

The findings were synthesized into a table which was headed according to the behavioral factors as suggested by Leung & Wong (2000) and the simplified elements of environment-behavior observation. The observation revealed that the VM processes were smooth and the job plan methodology was followed accordingly whenever the VMTF was available. Based on the observation process, having a certified VMF definitely pays. However, due to expertise and resources constraints, the expert need not necessarily be a certified VM specialist. Having a VMTF and several team members with experience in handling VM workshops should be sufficient.

Moreover, through semi-structured interviews with the VM participants, it was found that the involvement of construction practitioners from the private sector is very low. It was also discovered that the majority of the VM workshop participants had minimal knowledge in VM and its application. This hindered the VM process.

5. Conclusion

As a conclusion, it was discovered that VM workshops specifically implemented for public projects followed the VM framework provided by Kelly & Male (1998). The VM processes heavily leaned towards the VM manual published by EPU (EPU, 2011) which seeks to improve project justifications and differentiate the NEEDS and WANTs functions in order to accelerate the decision making process and provide a platform for better interaction between project stakeholders. While the experiences gained from
VM workshops did not increase the knowledge and acceptance of VM participants as a whole, it is interesting to discover that some VM participants agreed with the beneficial outcomes of VM workshops. It was also discovered that there is a gap between VM implementation theories and how VM is currently being conducted. Thus, this affects VM participants’ perceptions towards the VM process. It can be surmised that in order to fulfill the government’s aspiration towards better value for money for procured projects, flexibility is needed for VM to be effective in each situation.

6. Limitation and future research

The study consists only three (3) of the public projects that implemented the VM processes. The data was gathered through the VM workshops which were implemented at the initial stage of the project cycle. None of the data represents VM implementation of the private sector in Malaysia. Hence, it is not viable to generalise the findings for the Malaysian construction industry as a whole.

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