

The Variables that Influence the Attributes of Malaysian Construction Clients during Briefing Process

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Abstract

Active participation of clients during briefing is important for accurate development of strategic brief which essential for successful implementation of construction project. The client's participation is depending on their attributes during briefing which likely to be influenced by many factors. This paper presents the findings of the questionnaire survey of 104 consultant architects who involved in the construction project in Malaysia. The finding highlighted the variables used to measure the attributes of Malaysian construction clients during briefing process and factors influencing them. Three categories of client attributes were investigated namely, quality of client's representatives, brief management efforts and commitment of client's organization. Situational factors of types of client, nature of the project and quality of design team were the main variables identified as influencing factors of client attributes. The statistical tests were carried out to identify significant variables that influencing clients attributes.

Keywords

Client Attributes, Briefing process, Variables, Clients

1. Introduction

Better briefing is the key process to the success of a construction project (Latham, 1994). Unfortunately it was discovered that in many projects the process was severely under resourced and neglected as a source of improvement of construction product (Banwell, 1967 cited in Yusof, 1997; Bowen, et al., 1999; CABE, 2003). Clients play an important role during briefing as they are responsible for determining and expressing their requirements on the proposed project to the design team.

During the briefing process, the key tasks of the clients are to deliver information on client requirements and to ensure those requirements are understood by the design team in order to translate that into the concept and detail design of the proposed building. Clients need to prepare a strategic brief and monitor that until the approval of detail design and specification. In delivering these tasks an executive representative who may be the owner or the top management of the client organisation is responsible for formulating the policy of the project that includes decisions on project goals and objectives that support the mission of the organization's business. The executive representative provides approval on major issues such as scope of works and related resources required for the project. These become the parameters

of the project that provides direction for the client's technical representative and other project participants for project implementation.

On the other hand, the technical representative, who is normally the project manager for the clients has, the responsibilities of managing the gathering of functional and operational information for strategic brief development. They also manage the briefing process with the design team in translating the strategic brief into the project brief and the subsequent design for the project.

Their participation depends on the qualities of their representatives which will influence the way they manage the brief development (Ahmad, 2008). Commitment of their organization in terms of providing the necessary resources is also important. The present study measures the attributes of both executive and technical representative as client attributes.

2. Research Finding and Discussion

2.1 The Client Attributes

In this study client attributes refer to client's characteristics qualities during their participation in briefing process. The client's representatives were classified into two, executive and technical representative. The study had identified a total of 31 most important client attributes during briefing process (refer Appendix A). The related attributes were re-categorized into three categories there are quality of client's representative, brief management efforts and commitment of client's organization.

The three categories of client attributes were tested against five sub-variables of project success in an effort to identify significant client attributes during the briefing process on project success. The sub-variables of project success were time, cost, functionality, comfort and impact. The results from the correlation test revealed that there is a strong relationship between quality of client attributes and project success. Almost all related attributes found to be significantly correlated with the project success sub-variables.

The following are the significant related attributes to project success according to order of level of significant:

Category one: Quality of client's representatives:

- i) ability to coordinate and foster team work
- ii) knowledge of their organization's mission
- iii) ability to lead and manage
- iv) ability to communicate and manage the flow of information
- v) understanding of project objectives
- vi) experience in the construction process
- vii) commitment
- viii) understanding of project priority
- ix) awareness of project constraints
- x) understand their roles and responsibilities

Category two: Brief management effort:

- i) developing, documenting and communicating clear brief
- ii) coordinating and monitoring brief
- iii) allocating adequate time for briefing process

- iv) coordinating user groups for brief development
- v) communication within client organization
- vi) allocating adequate time for project
- vii) planning for brief development
- viii) communication with project team
- ix) reducing level of bureaucracy
- x) ensuring changes are evaluated and taken into account
- xi) review brief and sign-off complete brief and spec. that fully meet req.
- xii) organizing client's project team

Category three: Commitment of client's organization:

- i) effectiveness of communication
- ii) promptness of decision making
- iii) maintain active participation in the project
- iv) support from top management
- v) providing full time representative
- vi) providing finance

2.2 Factors Influencing Client Attributes

There were three influencing factors investigated in the present research. They were types of client, nature of the project and quality of the design team. The following are the discussion of the findings.

2.2.1 Types of client

Two main types of client investigated in the study i.e. public and private clients. An interval data was obtained from the survey, which was measured on the scale of 1 to 5, where scale 1 represents "very low", 3 represent "moderate" and scale 5 represents "very high" quality of attribute. The results obtained from 104 consultant architects of which 60% of them involved in public projects and remainders 40% involved in private projects.

The result indicated that the qualities of the client's representatives for both public and private clients were good, where the average means were between moderate to high (3.91 and 3.54 respectively). However the attributes of the private clients were slightly higher which the t-test carried out showed that 15 out of 31 related attributes tested were found significantly different (refer Appendix A). These is due to a number of factors such as public clients were more complex due to their hierarchical in nature compared to flatter structure of private sector client. These likely contributed to high level of conflict within the public client organization, resulting in poor understanding of project objectives among their project teams compared to private sector clients (Chern and Bryant 1984; Walker, 1995 and Green 1996).

The flatter structure of private client's organization allows direct involvement of the top management which reduces bureaucracy compared to public clients. Direct involvements of the top management provide effective and efficient communication with the project team. Private clients were profit oriented; therefore they were very committed in achieving their goals compared to benefit and obligatory oriented public clients (Green, 1995).

2.2.2 Nature of the project

The study had identified four main variables under the nature of the project there were complexity, priority, constraints and certainty. These variables were tested against the client attributes during briefing. Refer Appendix A for details of variables measured under this category.

Appendix B highlights the results of the association test between client attributes and nature of the project. Three variables of project nature were found significant, the complexity, priority and certainty of the project.

The significant sub-variables related to complexity of the project were complexity in technology and design requirements. These sub-variables were significantly correlated to related attributes of coordinating user requirements, communication within client organization and coordinating and monitoring brief. The results reflected that the need for the client representative to provide accurate information and convey the information on specific requirements clearly was very crucial if the requirement is complex. Therefore good communication, coordination and monitoring within client organization to determine the accurate user requirement is most important attributes when the degree of the project complexity is high. The commitments of client's organization also important as most of the sub-variables on this category were found significantly correlated.

All the sub-variables on priority of the project i.e. the importance of the project, functionality and quality were found significant. The variables were significantly correlated to the similar client attributes as complexity of the project but including the sub-variables of allocation of adequate time and organization of client's project team. The results suggest that if the project is a priority to the client they will set-up very organized team, complete brief documentation, good and effective communication and a strictly monitored briefing process.

Certainty of the project is the most significant variable of project nature as most of the related client attributes were found significantly correlated to all sub-variables of the certainty of the project. The results of the correlation test on the certainty of the project were consistent with the literature. Barret and Stanley (1999) and Blyth and Worthington (2001) agreed that certainty is most important in the project delivery process. Clients need to be certain on their requirement and genuine in implementing the project. Certainty of the project is important not only to motivates the client's representatives but also all the project participants to be seriously committed to the project.

2.2.3 Quality of the design team

Three main professional teams who normally involved during briefing process were investigated. They were the architects, engineers (civil and structural and mechanical) and quantity surveyors. Two main tasks that needed to be performed by the design teams during this phase were gathering and capturing the client's requirements and translating them into a concept for project solution. Appendix A listed the measured variables on the qualities of design that influence the level of client attributes during briefing.

Appendix C presents the score of the association test between client attributes and the quality of design team. All the variables tested were found significant, however not all sub-variables of the quality of design team were significantly correlated to the client attributes tested.

The experience in managing brief with the client was significant to influence the client's commitment and level of communication within client's organization. The commitment of the architect is the most important to influence the client attributes in terms of quality of representative and the levels of client's organization commitments. On the other hand on the competency of the design team, only degree of specialization was found significant to influence the most of client attributes. Teamwork within designer's team and the ability to understand client were also important to influence the attributes of the clients.

3. Summary

Drawing from the results the positive attributes of clients during briefing is important for successful implementation of the project. The client's representative needs to possess leadership skills, knowledge in

construction process and their organization mission in order to effectively manage the process of the briefing. These are the key qualities required to positively contribute to a successful briefing as well as project success. On the other hand client's organization must be committed to provide necessary resources and support to their personnel and design team.

The performance of the clients during briefing was found to be influenced by the types of client, the nature of the project and the qualities of the design team that works with them. Private clients were higher in quality of attributes compared to public client. This is due to the nature of the private organization.

The flatter structure of private client's organization allows direct involvement of the top management which reduces bureaucracy and provide effective and efficient communication with the project team. Private clients were profit oriented; therefore they were very committed in achieving their goals compared to benefit and obligatory oriented public clients.

Three criteria of project nature were found important to influence the performances of the clients during briefing, the complexity, priority and certainty of the project. Certainty of the project was found the most important where it motivates the client's representatives as well as all project participants to be seriously committed to the project.

Specialization, teamwork and ability to understand client were the important qualities of design team to influence the client attributes during briefing. The architect played an important role during briefing process.

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Appendix A: Comparison on the Attributes of Client between Public and Private Client

Client Attributes	Public Client N=62	Private Client N=42	T-Test
Quality of Client's representative			
Knowledge in construction process	3.48	3.57	0.67
Experiences in construction process	3.40	3.50	0.65
Knowledge of their organization mission	3.92	4.19	0.11
Commitment	3.90	4.40	*0.00
Authority in decision making	3.60	4.17	*0.00
Ability to lead and manage project	3.44	3.74	0.11
Ability to coordinate and foster teamwork with project team	3.35	3.64	0.14
Ability to communicate and manage flow of information	3.40	3.76	*0.03
Degree of trust in designer's team	3.98	4.29	0.06
Understanding of project objectives	4.06	4.52	*0.00
Understanding of project priorities	4.03	4.36	*0.05
Awareness of project constraints	3.79	4.12	0.06
Understand their roles and responsibilities	3.76	4.24	*0.00
Brief Management Effort			
Organizing of client's project team	3.53	3.57	0.83
Allocating adequate time for project	3.31	3.57	0.17
Planning for brief development	3.24	3.40	0.39
Allocating adequate time for briefing process	3.19	3.40	0.29
Coordinating user group for brief development	3.10	3.40	0.10
Developing, documenting and communicating clear brief	3.13	3.50	0.06
Coordinating and monitoring of brief	3.24	3.60	0.09
Communication within client organization	3.39	3.62	*0.03
Communication with project team	3.58	3.93	*0.04
Reducing level of bureaucracy	3.19	3.76	*0.00
Ensuring changes are evaluated and taken into account	3.44	3.88	*0.01
Review brief and sign-off complete brief and specification that fully meet requirements	3.37	3.88	*0.00
Commitment of Client's Organisation			
Providing finance	4.15	4.31	0.35
Providing full time representative	3.71	4.12	*0.04
Maintain active participation in the project	3.65	4.29	*0.00
Support from top management	3.92	4.14	0.18
Promptness of decision making	3.18	3.90	*0.00
Effectiveness of communication	3.37	3.95	*0.00
Average/ No. of significant attributes	3.54	3.91	15

List of Situational Factors

Code	Project Nature	Code	Quality of Design Team
P1	Complexity in terms of engineering services to be accommodated	Q1	Experience in managing brief with the client
P2	Complexity in terms of accommodating various functions of spaces	Q2	Experience in managing brief of similar type of building
P3	Technology required to be accommodated	Q3	Competency of the Architect's team
P4	Complexity in design requirements	Q4	Competency of the Engineer's team
P5	Budget constraint	Q5	Competency of the Q.S.'s team
P6	Time constraint	Q6	Commitment of the Architect's team
P7	Abiding with government policy	Q7	Commitment of the Engineer's team
P8	The important of the project to client	Q8	Commitment of the Q.S.'s team
P9	Priority in fulfilling specific functional requirements	Q9	Degree of specialization in the specific type of building
P10	Priority in fulfilling specific quality	Q10	Teamwork within designer's team
P11	Client certainty on the scope of works	Q11	Ability to understand the client
P12	Client certainty to implement the project		

Appendix B: The Association between Project Nature and Client's Attributes During Briefing Process

Client's Attributes	Complexity				Constraints			Priority			Certainty	
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
Quality of Client's Representatives.												
Knowledge in construction process	.03	.11	.05	.01	-.06	.05	.06	.08	.11	-.04	.24*	.18
Experiences in construction process	.11	.20*	.02	.05	.14	.02	.05	.09	.10	.04	.27**	.22*
Knowledge of their organization mission	.10	.07	.08	.04	.12	-.07	.15	.29**	.26**	.18	.33**	.20*
Commitment	.08	-.03	.23*	.09	.03	.06	-.04	.14	.20*	.12	.19	.28**
Authority in decision making	.08	-.00	.19*	.01	.00	.04	-.08	.03	.01	.01	.24*	.34**
Ability to lead and manage project	.13	.01	.20*	.06	.02	.06	.00	.17	.10	.12	.42**	.26**
Ability to coord. and foster teamwork	.19*	.44	.25*	.11	.03	-.05	.10	.17	.17	.10	.43**	.25*
Ability to comm. & manage flow information	.23*	.10	.26**	.11	.12	.04	.08	.07	.17	.16	.42**	.33**
Degree of trust in designer's team	.16	.11	.10	.16	.21	.12	.19	.18	.15	.14	.20*	.23*
Understanding of project objectives	.12	.09	.06	.12	.25	.13	.16	.26**	.20*	.13	.40**	.28**
Understanding of project priorities	.13	.11	.12	.17	.05	-.01	.22	.31**	.15	.17	.40**	.33**
Awareness of Project constraints	.12	.10	.18	.07	.16	-.03	.09	.17	.23*	.20*	.38**	.33**
Understand their roles and responsibilities	.20*	.10	.16	.01	-.06	.05	.06	.17	.24*	.19	.44**	.36**
No. of attributes sig.	3	1	5	0	0	0	0	3	5	1	12	12
Brief Management Effort												
Organization of client's project team	.07	.10	.23*	.05*	.06	.15	.28*	.16	.32**	.31**	.42**	.28**
Allocating adequate time for project	.03	.00	.12	.15	.13	.02	.30	.25*	.30**	.15	.19	.27**
Planning for brief development	.00	.05	.05	.07	.13	.15	.14	.23*	.18	.10	.35**	.25**
Allocating adequate time for briefing process	.01	.02	.12	.07	.07	.17	.20	.28**	.021*	.10	.25*	.20*
Coordinating user group for brief development	.19	.12	.26**	.13	.03	.20	.31	.21*	.25*	.21*	.28**	.08
Dev. doc. and comm clear brief	.10	.06	.16	.17	.02	.05	.24	.24*	.24*	.20*	.42*	.27**
Coordinating and monitoring of brief	.19	.10	.23*	.20*	.00	-.11	.19	.24*	.24*	.20*	.36**	.25**
Comm. client organization	.14	.11	.24*	.21*	-.02	-.05	.24	.29**	.32**	.25*	.38**	.29**
Comm. project team	.06	.12	.12	.25*	.02	.03	.17	.46**	.33**	.26*	.42**	.36**
Reducing level of bureaucracy	.05	0.06	.08	.14	-.08	.00	-.04	.18	.03	.07	.34**	.21*
Ensuring changes evaluated & taking acct.	.18	.00	.16	.10	.07	.00	.12	.16	.09	.22*	.46**	.12
Review brief and sign-off	.09	.06	.13	.09	-.03	-.08	.04	-.13	.14	.21*	.46**	.28**
No of attributes sig.	0	0	4	4	0	0	1	8	8	8	11	10
Commitment of Client's Organization												
Providing finance	.01	.09	.02	.03	-.05	-.13	-.05	.25*	.17	.21*	.12	.13
Full time representative e	.16	.01	.24*	.17	-.03	.06	-.11	.22*	.09	.05	.25**	.20*
Maintain active participation	.13	.04	.25*	.13	.00	.07	-.01	.24*	.17	.20*	.28**	.27**
Support top management	.17	.12	.35**	.31**	-.03	.08	-.01	.28**	.31**	.23*	.23*	.28**
Prompt decision making	.16	.01	.28**	.12	-.06	-.02	.01	.13	.11	.08	.34**	.28**
Effectiveness comm..	.14	.10	.27**	.25**	-.06	.15	-.01	.30**	.23*	.24*	.48**	.33**
No. of attributes sig.	3	3	5	4	0	0	0	2	2	4	5	5
Total no of attributes sig.	3/31	3/31	14/31	8/31	1/31	0/3	1/31	13/31	15/31	13/31	28/31	27/31

Appendix C: The Association between Quality of Design Team and Client Attributes During Briefing Process

Client's Attributes	Experience		Commitment			Competency				Team work	Unders client
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11
Quality of Client's Representatives.											
Knowledge in construction process	.01	-.10	.06	.03	.08	.12	.01	.00	.09	.28**	.06
Experiences in construction process	.18	.06	.10	.09	.13	.12	.11	.08	.11	.17	.13
Knowledge of their organization mission	.10	.07	.20*	.09	.13	.15	.18	.05	.30**	.21*	.26**
Commitment	.12	.07	.21*	.04	.18	.12	.14	.07	.34**	.29**	.24*
Authority in decision making	.03	-.08	.18	.01	.14	-.01	.01	.02	.04	.14	.03
Ability to lead and manage project	.14	-.03	.27**	.07	.24*	.13	.02	.08	.23*	.23*	.18
Ability to coord. and foster teamwork	.21	.15	.29**	.10	.23	.28**	.21*	.10	.37**	.33	.28**
Ability to comm. & manage flow information	.04	.11	.20*	.09	.16	.09	.13	.08	.19	.19	.17
Degree of trust in designer's team	.01	.10	.25**	.25**	.22**	.20*	.28**	.22*	.32**	.34**	.35**
Understanding of project objectives	.19	.12	.28**	.25**	.16	.25**	.27**	.00	.38**	.27**	.31**
Understanding of project priorities	.06	-.07	.23*	.13	.16	.15	.03	.18	.24*	.19	.26**
Awareness of Project constraints	.09	.12	.26**	.09	.18	.12	.13	.09	.19*	.19*	.26**
Understand their roles and responsibilities	.08	.03	.25**	.22*	.22*	.18	.11	.10	.19*	.15	.18
No. of attributes sig.	0	0	10	3	3	3	3	1	9	7	7
Brief Management Effort											
Organization of client's project team	.33**	.46**	.26**	.17	.32**	.28**	.19*	.18	.41**	.31**	.26**
Allocating adequate time for project	.22	.34**	.07	.06	.08	.10	.07	.07	.38**	.21*	.26**
Planning for brief development	.11	.23	.12	.06	.14	.12	.11	.13	.30**	.23*	.16
Allocating adequate time for briefing process	.17	.18	.12	.08	.14	.12	.13	.10	.36**	.29**	.17
Coordinating user group for brief development	.15	.21	.20*	.08	.24*	.14	.10	.15	.32**	.32**	.18
Dev. doc. and comm clear brief	.24	.27*	.10	.12	.12	.08	.01	.04	.33**	.19*	.21*
Coordinating and monitoring of brief	.21	.18	.09	.13	.11	.05	-.01	.05	.34**	.17	.24*
Comm. client organization	.32*	.36**	.14	.02	.11	.06	.03	.05	.29**	.11	.23*
Comm. project team	.32**	.21	.16	.16	.13	.15	.09	.03	.26**	.14	.25**
Reducing level of bureaucracy	.17	.05	.06	.01	.03	.04	.00	.03	.19	.14	.17
Ensuring changes evaluated & taking acct.	.17	.06	.08	.10	.03	.08	.01	.05	.22*	.13	.23*
Review brief and sign-off complete brief	.13	.10	.07	.14	.11	.05	-.00	.01	.26**	.13	.26**
No. of attributes sig.	3	4	2	0	2	1	1	0	11	6	8
Commitment of Client's Organization											
Providing finance	.28*	.20	.23*	.27**	.25**	.15	.20*	.29**	.20*	.16	.16
Full time representative e	.29*	.13	.15	.09	.17	.07	.12	.13	.22*	.09	.09
Maintain active participation	.36**	.16	.22*	.24*	.29**	.15	.13	.12	.33**	.23*	.23*
Support top management	.40**	.23	.25*	.22*	.28**	.23*	.18	.19	.39**	.23*	.23*
Prompt decision making	.17	.05	.18	.06	.16	.11	.09	.10	.28**	.23*	.23*
Effectiveness comm..	.32*	.24	.20*	.18	.16	.14	.12	.06	.34**	.25**	.25**
No. of attributes sig.	5	0	4	3	3	1	1	1	6	4/9	4
Total no of attributes sig.	8/31	4/31	16/31	6/31	8/31	5/31	5/31	2/31	26/31	17/31	19/31

**Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed)