IMPORTANT QUALITIES OF DESIGN TEAM IN MANAGING CLIENT BRIEF

Norizan Ahmad, Rahasnan Abdul Rashid, Faridah Ismail
Aini Jaapar

Department of Quantity Surveying,
Univerisiti Teknologi MARA(UiTM)
norizan712@salam.uitm.edu.my

ABSTRACT

Development of sufficient brief is important to ensure successful achievement of expected outcome of construction projects. Client is responsible to deliver required information during briefing. However their lack of knowledge and experiences become a barrier for actively involve during briefing. The paper presents the finding of the questionnaire survey of 104 consultant architects on the importance of client's participation during briefing process and highlighted the qualities of design team as a pre-requisite to improve the attributes of clients during briefing. In this study design team includes the architects, engineers and quantity surveyors. Five related variables tested were found significant to influence the quality of client attributes. There are experience, competency, commitment, ability to understand the client and teamwork within design team. These are the key qualities of the design teams that enable design team to understand the client and foster teamwork which important during briefing process to improve the brief development.

Keyword: Brief, Briefing Process, Client, Design Team, Project Success

1.0 INTRODUCTION

Briefing is a process of identifying and analyzing the needs, aims and constraints (the resources and context) of the client and relevant parties and formulating it into realistic accommodation solution by the designer (BSI., 1995) . Generally, there are two main types of brief documents prepared during briefing i.e. a strategic brief and a project brief. A strategic brief, which is compiled and delivered by the client, sets out the broad scope and purpose of the project. It is based on the clients' organization needs and its key parameters, including the overall budget, priorities and programme.

Barret and Stanley (1999); Blyth and Worthington (2001) CABE (2003), agree that generally a strategic brief should include:

i) A mission statement which expresses the reason for undertaking the project
ii) A statement of objectives which sets out how the mission could be accomplished
iii) Measures to enable the result to be evaluated, both the building and business outcomes
iv) Priorities of the construction project for both business and design. This is one of the most important issues for clients
v) The pattern of change and growth of the client's organization
vi) A systematic decision-making framework, in terms of authorized persons and procedures. A clear decision-making framework is important to ensure smooth running of the process as well as the success of the project

On the other hand, a project brief is prepared by the design team, who translate the strategic brief into construction terms, putting initial sizes and quantities to the elements and gives them an outline budget. It should be prepared by the design team but in close cooperation with the client to validate the strategic brief.

Latham (1994) stated that better briefing is a key process to the success of a project. However, 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; Mac Kenzie, 1979 cited in Bowen, et al., 1999; Brown 2001; CABE, 2003; Takim, 2005). The complexities in identifying and conveying client's requirements accurately to the design team and the immerse magnitude of project information that needs to be considered during the briefing process results in briefs which are often inadequate and not sufficiently explicit (Kelly et al., 2005).

Even though briefing has been a focus of much research for more than 30 years, there has been very little improvement in its effectiveness (Barret & Stanley, 1999). The briefing process is seen as critical to successful construction but problematic in its effectiveness (Banwell, 1964 cited in Barret & Stanley, 1999; Latham, 1994; Yusuf, 1997; Barret & Stanley, 1999; Kelly at el., 2005).

Drawing from the main references of Latham (1994), Hudson and Clift (1998), Barret and Stanley (1999), (Blyth and Worthington (2001), it can be concluded that there are two main problems with briefing. These are inadequate brief and changes of brief at a later design stage, which are caused by poor organization between the clients and the design team during briefing process. Therefore this research focuses on identifying attributes of the clients during briefing and important qualities of the design team that significant in improving the client attributes that help to improve the brief development.

2. RESEARCH METHODOLOGY

The research method adopted were evolving in nature where the questionnaire survey was preceded from exploratory postal survey which first carried out to provide information on formulating the scope of the research. From the census of 2100 of registered Architects in Malaysia, 394 responses were found to be useful for statistical analysis. Having confirmed on the scope of the research, 37 semi-structured interviews were carried out to investigate the process of briefing practiced locally and to validate the identified variables from the literature and explore new variables. The respondents obtained from the exploratory postal survey were further pursued for final questionnaire survey. A total of 104 respondents were found useful for analysis which giving the response rate of 26%.

3. RESEARCH FINDING AND DISCUSSION

3.1 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 were 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 was 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 project
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

From the results it can be concluded that client representative need to possess leadership skill, knowledgeable in both the business of an organization and the technical knowledge of construction process. Knowledgeable client with the advice of the design team will enable them to strategically manage their briefing. Client must realize that a commitment in delivering prompt information during briefing is required besides their financial commitment.

3.2 Qualities of design team

Design teams are the professionals that form a temporary multi-disciplinary team to design and manage the implementation of the project for the clients. Traditionally design teams include architects, structural and services engineers, quantity surveyors and other related professionals (e.g. landscape architects, lighting designer etc.). Architects are normally the leaders of the design teams. The architects play an important role and are most involved during briefing process. As leader of the team, the architect will manage and coordinate the design contribution of other professional consultants. The architect's responsibilities are extended to the effective performance of the whole building after its completion.

O'Reilly (1987), Salisbury (1998) and Barret and Stanley (1999) pointed out that the quantity surveyor and engineers are the supporting consultants to the architect. The quantity surveyor acts as a cost adviser as the design progresses during briefing. The cost planning exercise will take place to ensure the designer's design meets the client's budget. The engineer provides structural design in accommodating the structural requirements and engineering systems of the proposed building.

The briefing process investigated in the present study focused on the period from the inception to the design scheme phase of project delivery process. Two main tasks that need to be performed during this phase are gathering and capturing of the client's requirements and translating them into a concept for project solution. The scheme design produced with the creation of a building form that comprises its shape, size and arrangement of spaces and elements. It is presented through scale drawings and models or multi-media presentation for reviewing satisfaction of requirements. Once the design is accepted a detailed design and specifications will be developed.

Three main professional teams who normally involved during briefing process were investigated in this study. They were the architects, engineers (civil and structural and mechanical) and quantity surveyors. There were five main variables related to quality of design team namely experiences, commitment, competency, teamwork and understanding of client were tested against client attributes variables. Appendix A listed the details of sub-variables on the qualities of design team and Appendix B presents the association test between client attributes and the quality of design team.

3. EXPERIENCES OF THE DESIGN TEAM

Two sub-variables were tested on experiences of the design team there were "experience in managing brief with the client" and "experience in managing similar type of building". Experience was significant qualities of the design team as 15 variables were found significantly correlated with the client attributes (refer Appendix B). The results reflected the fact that, experienced design teams were able to guide the clients and helped them understand their project objectives and helped foster teamwork within their organization for better information gathering during briefing. It is obvious that experienced design teams could be expected to play their roles more effectively and were able to gain high a degree of trust from the clients.

Experienced design team was found significant in guiding the clients to organize their team and strategically manage the brief development process. Experienced design team will employ appropriate approaches in supporting the client to develop the brief and appreciate the proposal (Barret & Stanley, 1999; Ali, 1992; Salisbury, 1998).

All six related attributes of commitment of the client's organization were found to be significantly correlated with experiences of the design team. Experience is one of the important qualities required for a design team in order to obtain commitments of the clients during briefing process.

3.4 Commitment

The commitment of the design team refers to the level of attention and responsiveness of the design team given to the project during briefing process. Three sub-variables tested were commitments of the three key professionals who are the architect's, engineer's and quantity surveyor's teams. The results confirmed the important function of the architect as the lead professional during the briefing process, where 16 (refer Appendix B) client attributes were found significantly correlated.

On the other hand, the commitment of the engineers' and the quantity surveyor's team were important to support the architect's team in gaining the trust from clients in the design team. In addition, involvement of the engineers' team in the design helped explain the situation that was important for the client to understand the objectives of the project on structural and services functions of the project. This enabled the clients to play their roles and undertake their responsibilities in delivering the required information during the briefing process. The commitment of the quantity surveyor's team in advising the cost as the design progress enabled the clients to appreciate the cost implications and manage their briefing process in a realistic manner by balancing with the constraint and objective of the project.

However, only two brief management efforts related attributes were found to be significantly correlated with the commitment of the design team. There were "organizing the client's project team" and "coordinating user group for briefing development". The results suggested that the commitment of the design team dose not influenced the efforts of the clients in managing the brief. The result was unexpected as the literature suggested the committed design team will employ various approaches to guide and support the client during the briefing process. However the finding from the semi-structured interview revealed that clients tend to behave that, briefing is the duty of the design team. They place less attention on the process and prefer oral brief rather that a written brief. In many cases the design teams develop and compile the brief and seek the client's approval. The client allocates very little time for briefing process and is anxious to proceed on site.

On the other hand the result also suggested that the commitment of the design teams during briefing is able to convince the clients to be committed during briefing. However, the design teams have to explore and develop the brief on the clients' behalf.

3.5 Competency of the Design Team

Competency of the design team refers to the ability of key professionals within the design team to play their roles and carry out their responsibilities during the briefing process. Four sub-variables were tested for competency of the design team, of which three sub-variables measured the competency of each key professional team involved during briefing. They were architects, engineers and quantity surveyors. The fourth variable measured the degree of specialization of the design team as a whole.

Only a few client attributes were found significant with the competency of the design team. This is perhaps due to the attitude of the client and general practice in Malaysia that brief development is the responsibility of the design team. Therefore the diligent of the design team were toward enhancing the client's trust and their understanding on the project objective. Therefore the clients were committed in providing finance and support from the top management.

On the other hand, the variable "degree of specialization" was found to be significantly correlated with 26 out of 31 related attributes tested. The degree of specialization refers to specialist skills that involve the specialist job and complex project that are normally features of a specific building such as hospital, airport or factory building. Clients normally have limited knowledge of the technical aspect of a building, even though they may be well versed in the operational requirements. Therefore the design team plays a lead role in guiding the clients by providing all the necessary information during the briefing process.

3.6 Teamwork within the design teams

Teamwork is defined as a group whose members has complementary skills and is committed to a common goal for which they hold themselves mutually accountable (Conti & Kleiner, 1997 and Austin et al., 2002). The results reveal that 17 out of 31 client related attributes tested were significantly correlated to sub-variable of teamwork within the design team. The results suggest that teamwork make a significant contribution to the client during the briefing process. Good teamwork within the design team enables the client to understand their organization's mission and also the construction process. Understanding of these two aspects enables the client to understand the project's objective and related issues such as constraints and therefore increases their commitment and trust in the design team.

3.8 Understanding of the Client

Understanding of the client during briefing is to assess their knowledge and experiences and their requirements on the proposed project. These will reflect the type of client and the complexity of the proposed building (Barret & Stanley, 1999; Blyth & Worthington, 2001). The results revealed that 19 out of 31 related attributes tested were significantly correlated with the sub-variable of ability to understand the client. The results indicated that the sub-variable of ability to understand the client by the design team was an important sub-variable influencing the quality of client's representatives during the briefing process.

These findings were supported by the earlier studies which found that understanding the clients during briefing was one of the fundamental issues that needed to be addressed by the design team (Barret & Stanley, 1999; Blyth & Worthington, 2001; Salisbury, 1998; Ali, 1992). This would enable the design team to choose the appropriate approaches of briefing techniques to capture the clients' requirements and support them to appreciate the proposal (Ali, 1992; Salisbury, 1998).

4. Conclusion and Recommendation

Research findings highlighted that, client representative need to possess leadership skill, knowledgeable in both the business of an organization and the technical knowledge of construction process. These qualities with the advice of the design team will enable them to actively participate and strategically manage their briefing. Client must realize that commitment in delivering prompt information during briefing is important besides their financial commitment.

All five variables tested are important qualities of design team to influence the quality of client attributes. There are experience, competency, commitment, ability to understand the client and teamwork within design team. There are two main tasks that need to be performed during the briefing process. They are gathering and capturing the client's requirements and translating them into a concept for the project solution. In performing these duties, there are two main issues that need to be addressed by the design team; to understand the client and to foster good teamwork within the design team and with the clients. This reflects that the sub-variables of experiences, competency, and commitment of the design teams are the key qualities of the design teams that enable them to understand the client and foster teamwork within the project team.

The research confirmed that the architects were the most important professional involved during briefing process, compared to engineers and quantity surveyors. However quantity surveyor can add value to their services by taking opportunity to change the attitude of client to be proactive during briefing process and improve the brief development. Client currently leave the responsibility of preparing strategic brief to the design team particularly the architect. The knowledge of the quantity surveyor in construction and cost enable them to provide a feasible project parameter and accommodation requirements to the client which are the main component of the strategic brief. Earlier development of strategic brief parallel to the business plan may improve the accuracy of the brief as well as provide an accurate accommodation that supports the client's business.

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Appendix A: List of Sub-Variables for Quality of Design Team

Code	Quality of Design Team
Q1	Experience in managing brief with the client
Q2	Experience in managing brief of similar type of building
Q3	Competency of the Architect's team
Q4	Competency of the Engineer's team
Q5	Competency of the Q.S.'s team
Q6	Commitment of the Architect's team
Q7	Commitment of the Engineer's team
Q8	Commitment of the Q.S.'s team
Q9	Degree of specialization in the specific type of building
Q10	Teamwork within designer's team
Q11	Ability to understand the client

Appendix B: The Association between Quality of Design Team and Client Attributes During Briefing Process
**Correlation is significant at the 0.01 level (2-tailed).* Correlation is significant at the 0.05 level (2-tailed)

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	.28**	.21*	.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	.20*	.28**	.25**	.25**	.22**	.20*	.28**	.22*	.32**	.34**	.35**
Understanding of project objectives	.25**	.27**	.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.	3	3	10	3	3	3	3	1	9	7	7
Brief Management Effort											
Organization of client's project team	.32**	.46**	.26**	.17	.32**	.28**	.19*	.18	.41**	.31**	.26**
Allocating adequate time for project	.13	0.34*	.07	.06	.08	.10	.07	.07	.38**	.21*	.26**
Planning for brief development	.11	0.19*	.12	.06	.14	.12	.11	.13	.30**	.23*	.16
Allocating adequate	.15	.18	.12	.08	.14	.12	.13	.10		.29**	.17

time for briefing process									.36**		
Coordinating user group for brief development	.19*	0.20*	.20*	.08	.24*	.14	.10	.15	.32**	.32**	.18
Dev. doc. and comm clear brief	.22*	0.24*	.10	.12	.12	.08	01	.04	.33**	.19*	.21*
Coordinating and monitoring of brief	.22*	.18	.09	.13	.11	.05	-.01	.05	.34**	.17	.24*
Comm. client organization	.21*	.36**	.14	.02	.11	.06	.03	.05	.29**	.11	.23*
Comm. project team	.24*	.21	.16	.16	.13	.15	.09	.03	.26**	.14	.25**
Reducing level of bureaucracy	.16	.05	.06	.01	.03	.04	.00	.03	.19	.14	.17
Ensuring changes evaluated & taking acct.	.25**	.06	.08	.10	.03	.08	.01	.05	.22*	.13	.23*
Review brief and sign-off complete brief	.25**	0.25**	.07	.14	.11	.05	-.00	.01	.26**	.13	.26**
No. of attributes sig.	8	7	2	0	2	1	1	0	11	6	8
Commitment of Client's Organization											
Providing finance	.29**	.31**	.23*	.27**	.25**	.15	.20*	.29**	.20*	.16	.16
Full time representative e	.251*	.16	.15	.09	.17	.07	.12	.13	.22*	.09	.09
Maintain active participation	.30**	.26**	.22*	.24*	.29**	.15	.13	.12	.33**	.23*	.23*
Support top management	.32**	.23*	.25*	.22*	.28**	.23*	.18	.19	.39**	.23*	.23*
Prompt decision making	.21*	.16	.18	.06	.16	.11	.09	.10	.28**	.23*	.23*
Effectiveness comm..	.32**	.31**	.20*	.18	.16	.14	.12	.06	.34**	.25**	.25**
No. of attributes sig.	6	4	4	3	3	1	1	1	6	4/9	4
Total no of attributes sig.	15/31	14/31	16/31	6/31	8/31	5/31	5/31	2/31	26/31	17/31	19/31