

SOWING THE SEEDS OF MISUNDERSTANDING IN THE BRIEFING PROCESS: A CASE STUDY OF A NEW HOSPITAL PROJECT

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Briefing has been long recognized as a critical yet problematic stage in the development process where the seeds of misunderstandings about key project objectives can be sown. Using a Comparative Cause Mapping the paper longitudinally explores the briefing process in a major hospital project. It argues that knowledge about building requirements is not merely technical and 'given' information but is cultural and learnt. It concludes that projects would better meet client needs if the briefing process was reconceptualised as an organic and cyclical process whereby project actors gradually converge upon a shared meaning of each other's values, beliefs and needs over time.

Keywords: briefing, cause mapping, culture, hospitals, learning.

INTRODUCTION

Research into the briefing process has repeatedly highlighted its importance to project success but has also exposed a variety of problems which tend to undermine its effectiveness including: the exclusion of important stakeholders; rushing; an unstructured approach; client politics; clients not understanding their own needs; poor communication and learning problems associated with unfamiliarity between the project participants, who on many occasions may be working together for the first time (Kelly *et al.*, 1992, Barrett and Stanley 1999, Barrett *et al.*, 2004). The aim of this paper is to explore the process of learning in the briefing process in more detail. More specifically, it is to more deeply explore the learning process in order to better understand what aspects of learning may be particularly problematic during the briefing process.

LEARNING IN THE BRIEFING PROCESS

Learning, a social constructivist perspective, is the process through which people continually strive to make sense of their world through conversations and the interactions between people as they negotiate and share meanings within and between their social groups (Vygotsky, 1978). During these interactions existing knowledge is exchanged and new knowledge created bringing about cognitive changes (and hopefully alignment) in the minds of the people who participate in this process (Shrivastava and Mitroff, 1982; Fiol and Lyles, 1985). In the context of the briefing process, the project (as a temporary organisation) merely provides the formal

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governance structure and resources necessary to facilitate the flow of knowledge that is necessary to enable this learning to occur (Nonaka *et al.*, 2001). The ultimate objective of this learning is to acquire an intimate understanding of the client's organisation's priorities and objectives (Payne, 2000) which is complicated by the fact that the individuals involved in the briefing process are also acting as agents for their employing organizations and as such, have to represent an array of personal and organizational interests which can often conflict.

To help us understand the types of knowledge that are being exchanged during this process Sackmann's (1992) work is particularly helpful. According to him, there are four main types of knowledge exchanged in organisations which do not exist in isolation but which form an integrated gestalt, namely: dictionary, directory, recipe and axiomatic. *Dictionary knowledge* refers to hard functional data about the size of rooms, space layouts and other facility requirements. *Directory knowledge* refers to commonly held practices and widely held beliefs about patterns of authority, chains of events and cause and effect relationship. *Recipe knowledge* refers to actions relating to how a certain problem should be solved which in the context of hospital briefing may refer to conversations about what the facility needs and how these are translated into facility requirements. *Axiomatic knowledge* refers to why things happen or are done in the way they are and take the form of reasons why clients need certain space configurations etc.

As Bood (1998) points out, *axiomatic knowledge* represents the foundation of organisational culture since it defines the fundamental beliefs, values, assumptions and stories which underpin an organisation. For construction team members working under time pressures and who are likely to have superficial and periodic insights into the workings of the health service, this form of knowledge is the hardest to observe, acquire and decipher. This is one of the reasons why it is often neglected in favour of more tangible forms of knowledge in the briefing process. Axiomatic knowledge exists independently of individuals, is tacit, difficult to formalise, not obvious and hidden behind more explicit and tangible forms of knowledge meaning that it often becomes subsumed and downplayed in interactions as being common sense to observers (von Krogh *et al.*, 2001). In the context of interactions within the briefing process, it means that apart from what may appear "on the surface", there are many more subtle exchanges of knowledge that underlie what is being said that are likely to go unnoticed, partly because people do not have the relationships, inclination, time and resources to detect them but also because people do not have the skills to articulate them effectively. We argue that this is one of the main problems underpinning problems in the briefing process – that an important dimension of knowledge needed to effectively communicate clients needs between project participants is likely to be missing. The evidence for this is compelling but it has never been articulated in this way. For example, according to von Krogh (2000), time is particularly important for the exchange of tacit cultural knowledge which primarily occurs through a process of socialisation. Unfortunately, evidence from research into the briefing process indicates the socialisation time needed to facilitate cultural exchange is often not accounted for (Kelly *et al.*, 1992; Loosemore and Davies 1994; Kamara *et al.*, 2002). In addition to time pressures, a lack of opportunity for socialisation can also hold back the exchange of cultural knowledge. Unfortunately, Ng *et al.*, (2002) found that project participants are often constrained in their actions by strictly imposed processes and procedures and even predetermined design solutions which severely restrict opportunities for open and serendipitous dialogue and cultural

learning. Nonaka *et al.*, (2001) argue that this creative chaos is important to cultural learning because it forces organisational actors to move outside established routines, habits and cognitive frameworks and explore new solutions and ways of working together. Instead, according to Kelly *et al.*, (1992), designers typically often adopt an “information rejection strategy” to deliberately reduce any redundancy and time restrictions during the briefing process almost always preclude any full exploration of alternative solutions. A further important enabler of cultural learning in any organisation is experience (Bood 1998). Bood found that people’s past shared experiences of working together and of participating in social processes enables them to have a dialogue through which tacit knowledge can be more easily exchanged. However, as Chan *et al.* (2004) pointed out, that early in a construction project where project relationships are young, people are forced to rely on preconceived rather than demonstrated values and interests, making the building of trusting and open relationships difficult.

The consequence of these problems is that exchanges during the briefing process are likely to be restricted to the physical brief and to technical issues in neglect of tacit cultural information which is more difficult and time consuming to acquire but equally, if not more important to fully understanding client needs (Brown 2000, Barrett *et al.*, 2004). As Lilley (2001) pointed out, organisational goals may be written down but the language used to explain those goals is often complex and context-specific, requiring an understanding of the underlying assumptions, values and beliefs that make up those goals.

METHOD

To investigate the process of cultural learning we adopted a case study approach because it enabled us to study the learning process in depth and longitudinally over time. Our case study was a new AU\$135 million hospital project. We chose a hospital because hospitals are widely recognised to be extremely complex and politicised organisations comprising a wide array of stakeholder groups with varying objectives and interests. As Longest *et al.*, (2000: 43) point out, “the health system is an amalgamation of many different agendas” where there is no single source of governance, health policy, nor any single set of shared values or goals. New hospital projects are relatively rare and the curative space opportunities they bring for each stakeholder group represent one of the most contested resources for which these groups compete. For the project team responsible for delivering a new hospital project, a new hospital project becomes a challenging arena where all the inherent tensions that exist in the health sector are acted out, perhaps more passionately than in any other context because of the criticality and rarity of space opportunities offered. Members of the construction project team which include designers, contractors and sub contractors, suppliers, manufacturers and facility managers, must work within this highly emotive environment and within subtle, existing and often assumed power structures which while unchallengeable in the health sector, are not necessarily conducive to effective project delivery.

To explore the learning process a branch of cognitive mapping called “comparative cause mapping” was used. Comparative cause mapping provides a method to visually represent the process of cognitive alignment between people around certain topics (referred to as “key concepts”) such as the design of a new hospital (Mohammed *et al.*, 2000). A typical cognitive map is shown in Figure 1. Each map has *content* and *structure*. The “content” of a cause map captures the subject and meanings of a

communication that an individual (or group) perceives as being relevant to a particular key concept. The “structure” of a cause map captures the relationships among the content within a map and how they relate to each other. These are represented by arrows which show the causal links between two concepts, with positive number indicating the number of responses pertaining to such links while negative number signifying negative relationship.

Laukkanen (1994) proposes a two-step approach to the construction of cognitive maps. Step one involves identifying the key concepts and the step two involves eliciting subjective concepts and causal beliefs. Key concepts for our cognitive maps were identified by attending a “start-up” workshop which was designed to enable project participants to first meet and discuss each other’s expectations and needs. The workshop participants involved a number of different groups, namely the hospital planners (administrators and managers, health planners, and client representatives), the clinicians (represented by the director of the department, doctors, and nurse managers), the contractors (project manager, construction manager, cost manager, design managers, and health planners), and the consultants (designers and engineers). The key concepts to emerge from this process were:

- Success (for example, a purpose-built facility for patients and staff, positioning of the hospital for future delivery of services).
- Partnership (for example, a good partnership process, no disputes and no variations to avoid re-workings, a process that can be emulated).
- Communication (for example, a collaborative process leading to a facility that meets needs, to have everybody’s knowledge and experiences shared)
- Budget (for example, design within budget: a balance of needs and costs, achieving the project on time and on budget, producing good facilities).
- Disruption to existing staff during the project (for example, a smooth transition, manageable and beneficial impacts on staff).

These five key concepts formed the basis for the next step of data collection, involving semi-structured interviews at the first and final stages of the briefing process, from which cultural interpretations of these key concepts between the hospital and project management groups were obtained, measured, and compared. A total of 38 interviews were conducted to construct cause maps of the hospital and project management teams, as depicted in Table 1. All of the interviews were recorded, transcribed and coded using the NVivo software that helped ensure consistency by maintaining links to the raw data. In addition to the interview data, observational data (see Chandra 2007) were also collected in all ten briefing meetings to understand the exchange of cultural knowledge during the briefing process.

Three dimensions of structure were explored within our research: *centrality* and *comprehensiveness* and *density*. *Centrality* indicates a group’s focus or weighted importance of the variables in relation to a key concept. This is obtained by calculating the highest number of in-degrees (inward links) and out-degrees (outward links) among the variables which is indicated by the numbers attached to the arrows. It is valuable in exploring cultural learning because, by measuring how ‘central’ variables are, centrality indicates similarities and/or differences of the perceived importance of those variables. *Comprehensiveness* is obtained by counting the number of variables in a map, which reveals a group’s common understanding of a concept by reflecting the multidimensionality of the group’s view pertaining to the concept. This

is important because it indicates the depth and breadth of the actors’ understanding in relation to a key concept. Finally, *density* is obtained by calculating the ratio of the number of links and the number of concepts in a map. A dense map indicates a well-understood key concept, whereas a low density means a simpler cognitive task/problem or way of structuring (Laukkanen 1994).

Table 1: Sample structure

Group	Subgroup	Stages of project		Total
		Start of briefing	End of briefing	
Hospital	Clinicians	7	6	13
	Planners	5	5	10
	Total	12	11	23
Project	Contractors	4	4	8
	Consultants	4	3	7
	Total	8	7	15

DISCUSSION OF RESULTS

Although the process of cultural learning across all five key concepts was explored in this research, we focus here on the key concept “success” to illustrate in detail the value of comparative cause mapping in understanding cultural learning within the briefing process. For illustrative purposes we also restrict our analysis to the cultural learning process at a sub-group level by comparing the cause maps of the interactions between clinicians and consultants (readers are referred to Chandra 2007 for a complete comparative analysis of cause maps between all combinations of respondents involved in the briefing process - consultants, planners, clinicians and contractors). The cognitive maps of the clinicians and consultants are shown in Figures 1 and 2 along with relevant structural measures in Table 2 as discussed above.

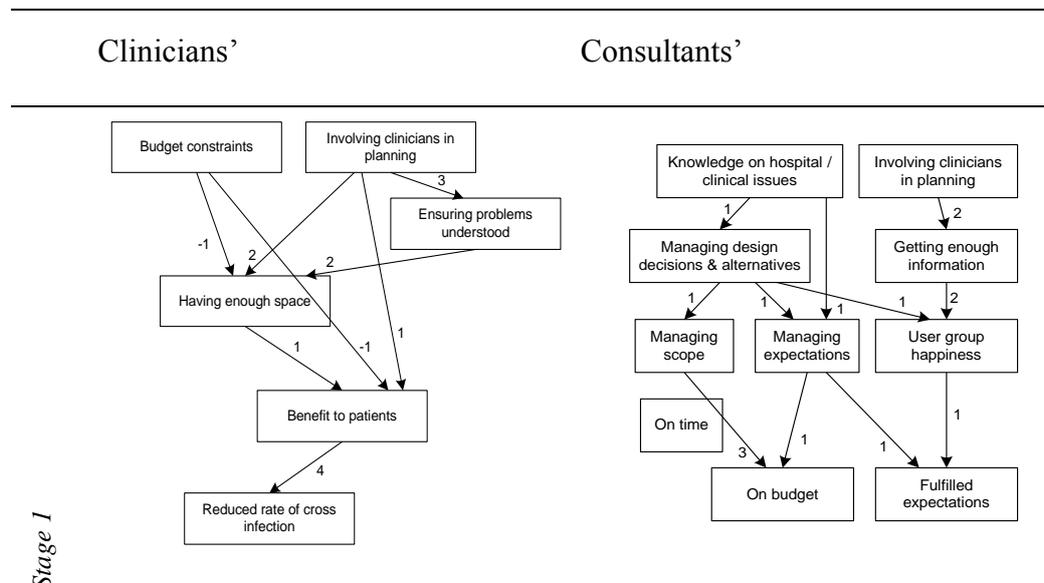


Figure 1 Cause maps of project participants for Stages 1 on key concept “Success”

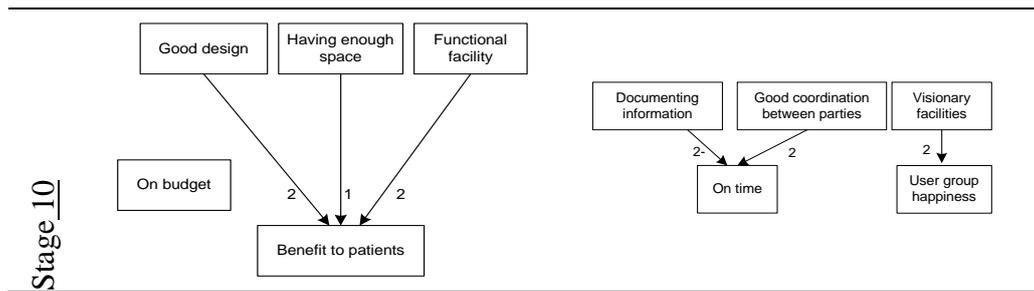


Figure 2 Cause maps of project participants for Stage 10 on key concept “Success”

Table 2: Centrality and complexity measures of key concept “Success”

		Clinicians	Consultants
Centrality	Stage 1	Benefits to patients	On budget User group happiness Getting enough info Managing expectations Managing scope Managing design decisions/ alternatives
	Stage 10	Benefits to patients	On time
Complexity	Comprehensiveness	Stage 1	6
		Stage 10	5
	Density	Stage 1	2.50
		Stage 10	1.20

It is evident from Figure 1 that the clinicians and consultants definitions of success are quite different and remain different. In stage 1 the primary concern of the clinicians is the interests of their patients and having enough space to serve these. There is very little sense of focus on or engagement with the project and there is a sense that the clinicians are struggling to move their minds into the project context. In complete contrast, the patients do not feature in the consultants’ definition of success which are more “project delivery” focused, relating to managing the decision making process, client expectations and project scope. It appears that the opposite is true of the consultants in that they are struggling to move their minds into the health delivery context. As one of the consultants said they considered their key role as being “*about synthesizing, bringing things together and making a decision*” (Interview 1: design consultant). So the data shows a clear gap in thinking between these two groups and the need for a considerable degree of cognitive adjustment if a meeting of minds is to occur and the project start moving forward towards a mutually agreeable solution. Another distinctive difference between the consultants and the clinicians are the comprehensiveness and density measures in Table 2. The lower figures in stage 1 for clinicians compared to consultants illustrates that there was a higher sense of unity among clinicians about their objectives compared to the consultants who were clearly still in the process of resolving what these were. The high comprehensiveness score of

the consultants was probably the result of their role in the project, which involved consolidating many conflicting goals: *“I have to split between having a successful outcome for the users and... for the project teams. In terms of assuring that the users are happy, we have to take on board everything {from the user group}... for the project team, I think it is working together with the group and trying to tie in the demands of the users with the project constraints, which is never particularly easy”* (Interview 1: design consultant). *“It is very difficult... you certainly can't please everybody, and we never will”* (Interview 2: design consultant). In stage 10, what is evident from the comprehensiveness and density data is that both groups had become much more focussed on their objectives and priorities for this project (although the success criteria they were focussed on were quite different). After many briefing meetings, while the clinicians started to consider project delivery issues such as the budget, their focus remained firmly on patient welfare. While the consultants also started to think about the user happiness as a success factor, their main interest revolved around the timeliness of project delivery. As one of the consultants said, *“a lot of it is now under the pressure of time... we have to spend the money and the cash flow at the rate being determined by the treasury. So deadlines are always pushing constantly”* (Interview 2: design consultant). This data illustrates that while there appeared to be some convergence of the cognitive maps of the consultants and clinicians over time they were focussed on different criteria and therefore will have left the briefing process with key differences in their respective meanings of project success, laying the seeds for potential conflict and misunderstanding later in the process.

CONCLUSION

The aim of this paper was to explore the process of learning in the briefing process using cognitive mapping as a way of illustrating the thought processes within and between different groups of actors. More specifically, it was to more deeply explore the learning process in order to better understand what aspects of learning may be particularly problematic during the briefing process. Using the case study of one hospital project the above analysis illustrates the divergence in thinking which can persist through throughout the briefing process. Conceptually, because we have only presented the results for one key concept (success) across a single (albeit important) project group interface (consultants and clinicians) we have only provided a very limited picture of the real complexity of learning imbedded within the many relationships and concepts that have not been discussed in this paper but which were explored in this research. These are fully discussed in Chandra 2008). This research illustrates the importance to project managers of seeing the briefing process as a cognitive rather than mechanical process through which project participants interact to socially construct common understanding of project objectives and requirements. Those managers that can effectively control these interpersonal interactions over an extended and fragmented period are more likely to achieve a shared cultural understanding about facility needs and requirements and therefore better project outcomes. In particular, our research revealed that conflicts and disagreements in early stages of the briefing process are useful in triggering the exchange of cultural knowledge and increasing the dynamics of social interactions among the participants, which in turn encouraged cultural learning to occur. Conflicts and disagreements not only increased the dynamics of interactions, but they multiplied such interactions in which every individual was indirectly encouraged to express their opinions and share their knowledge. The outcome of this process further facilitated openness by allowing

the participants to express their respective concerns about their facility needs and requirements, thus reinforcing the process of cultural learning in relation to these needs and requirements. The implication for the Facility Managers is to encourage and manage early conflicts and disagreements during briefing meetings and to view them as opportunities for encouraging the process of cultural learning.

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