

## LEADING THE PROJECT TEAM IN CONSTRUCTION PROJECTS THROUGH TEAM DEVELOPMENT STAGES

APARNA SAMARAWEEERA<sup>1</sup> & SEPANI SENARATNE<sup>2</sup>

<sup>1</sup>University of Moratuwa, Moratuwa, Sri Lanka

*aparna.samaraweera@gmail.com*

<sup>2</sup>Western Sydney University, Australia

*sepanis@yahoo.co.uk*

### Abstract

The importance of teams in construction is an issue of international relevance. For example, several influencing government reports in UK have highlighted this. However, effective teams cannot be created at a stroke, and, they need to be managed effectively to foster successful teamwork and team performance. Construction project management literature is heavily targeted on offering tools and techniques to manage a project to achieve the set project goals. However, it is very superficial on detailing how the construction project team should be led towards the project goals. Drawing on case studies conducted in Sri Lankan construction industry, this paper reports on how project managers lead construction project teams when they go through forming, storming, norming and performing stages. The findings revealed that due to the independent nature of construction project team and mostly the construction project managers acting on behalf of the client rather than the project leader, their leadership role deviated from a general project leader. More case studies are required to compare and contest these findings in different settings. However, since the findings were quite similar across the three case studies, which had different procurement arrangements (separated and design and Build) and different types of clients (public and private), it is expected similar trend would be observed in other construction projects.

**Keywords.** *Project Teams, Project Management, Leadership Roles, Team Development*

### 1. Introduction

The concept of “teamwork” is very much related to construction settings and is an issue of international relevance. Many of the problems with regard to construction projects could be overcome by better team working and collaborative arrangements. According to *Constructing Excellence* (2004,

p4) “construction is a collaborative activity – only by pooling the knowledge and experience of many people can buildings meet the needs of today, let alone tomorrow.” Thus, teamwork in construction is not a choice but a necessity.

Since construction work requires team efforts, leadership should have great impact on the performance of construction work (Odusami et al, 2003). As stated by Cornick and Mather (1999), stirring all project team members to perform to the best of their ability and even more importantly inspiring them to co-operate as and when it is necessary is a major key to success in the management of a construction project. To this end, the project manager has a distinctive role as a leader, since he is liable to drive the whole project team towards its aims and objectives with the use of limited resources supplied to him (Toor and Ofori, 2008). This research study aims to identify how construction project managers (CPMs) lead their team across various team development stages.

## **2. Literature Synthesis**

To be an effective leader, the project manager of a construction project should adapt a style of behavior according to the given situation to meet the needs of the followers as well as the task environment. According to Hersey and Blanchard (1982), as all followers are unique individuals, the manager must treat them accordingly in a given situation in order to be a successful leader, which is the basic argument in situational leadership. Situational leadership stresses that leadership is composed of both directive and supportive leadership roles and each of them has to be applied appropriately in a given situation. Northouse (2007) further described that, directive role helps group members to accomplish goals by giving directions, establishing goals and method of evaluation, setting time lines, defining roles and showing how the goals are to be achieved. . Directive roles are often with one way communication. Supportive roles help group members to feel comfortable about themselves, their coworkers and the situation. Supportive roles involve two way communication. In Meyer’s (2014) research on competencies of a successful project leader, they found communication as the most important competency.

Muller and Turner (2010) indicate that leadership style should change at different stages of a construction project life. They argue that the nature of the work to be undertaken within each work stage will determine the leadership style most appropriate at arriving at the best outcome. On the other hand, Walker (1996) suggests two distinctive styles required by the leader at the start and towards the end of a construction project. At the early stages of a project, the manager has to weld together the range of

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professional specialists involved in the project and lead them in balancing the conflicting objectives, which demands them to adopt a human relations-oriented style of leadership. Once the proposed solution has been defined, the process of developing the solution into working documents becomes a much more structured process, a more task-oriented leadership style is adopted by them. However, more studies are required to identify leadership role of a CPM during different development phases.

Construction project teams, similar to general teams, go through various team development phases with slight deviations (Senaratne and Hapuarachchi, 2009; Senaratne and Samaraweera, 2015). The team development stages as described by the Tuckman (1965) comprise of four phases as; Forming, Storming, Norming and Performing. The forming stage is when a group of people first comes together and members are primarily seeking for structure (orientation), guidance, and a safe environment. The storming stage is when individuals begin to challenge differences, especially as they relate to power and decision-making. The norming stage is when they accept rules, or norms of behavior and show the desire for group cohesion or consensus. The performing stage is where the members begin to relate more deeply to each other and to the group's purpose and task. The research findings of Senaratne and Hapuarachchi (2009) confirmed that construction project teams follow this linear sequence when they develop as teams. However, they found that this is affected when new team members enter into the project or when major changes occur in the scope of the work. Hence, these different stages in team development call for different leadership roles to suit a given situation in each of these stages.

When considering the construction project team development process, it is apparent that the team members have different behaviour patterns in each stage (Senaratne and Hapuarachchi, 2009). This requires a leader to adopt different leadership roles to cater the different leadership requirements in each stage of the team development process. As depicted in Table 1, a rational could be developed to identify the leadership role of the project manager; as either a high/low directive role or a high/low supportive role, using a generic study of Sheard and Kakabadse (2004) on leadership roles with the observable behaviours identified from a study of Senaratne and Hapuarachchi (2009) on construction project team development. Literature that describes leadership styles across the team development phases too proposes different styles that should be adopted at each phase. For example, Cornick and Mather (1999) propose in forming , storming, norming and performing stages of the construction project team, the leadership style that the team leader should adopt are 'directing', 'coaching',

‘supporting’ and ‘delegating’ respectively (see Table 1). Kasapoglu (2011) propose, most of the research on the construction industry’s leadership styles has shown that most employed style is the supportive. However, there is less understanding on how leadership styles of a project leader changes across the project phases.

Table 1 - Predicted leadership role of CPM

<b>Stage</b>	<b>Observable behaviours of the construction project team members</b> Source: Adopted from Senaratne and Hapuarachchi (2009)	<b>Rational for the selection of the required leadership role for the construction project manager (CPM)</b> Source: Adopted from Sheard and Kakabadse (2004)	<b>Predicted leadership role</b>
Forming	<ul style="list-style-type: none"> <li>• Attempts to define tasks, processes and how it will be decided</li> <li>• Politeness</li> <li>• Orienting with others personally</li> </ul>	<ul style="list-style-type: none"> <li>• Leader should provide structure and clear direction to his team members</li> <li>• Leader is not required to provide a high supportive role since team members show a behaviour trying to orient with others personally and being polite in their behaviour</li> </ul>	High-directive Low-supportive  <i>Directing Style</i>
Storming	<ul style="list-style-type: none"> <li>• Arguing among members</li> <li>• Differences in points of view and personal style</li> <li>• Lack of progress</li> <li>• Establishment of unrealistic goals</li> <li>• Concern over excessive work</li> </ul>	<ul style="list-style-type: none"> <li>• Guide team members towards team goals</li> <li>• Improve work progress</li> <li>• Leader should help team members to achieve the team goal</li> <li>• Should address interpersonal issues and utilize interpersonal skills to address sensitive issues</li> <li>• Guide team members towards consensus</li> <li>• Teach conflict resolution methods</li> </ul>	High-directive High-supportive  <i>Coaching Style</i>
Norming	<ul style="list-style-type: none"> <li>• Agreeing of processes and procedures</li> <li>• Attempts to make consensus decisions</li> <li>• Focus and energy on tasks</li> <li>• Setting and achieving task milestones</li> <li>• Shared problem solving</li> <li>• Developing routines</li> <li>• Comfort with relationships</li> <li>• Effective conflict resolution skills</li> </ul>	<ul style="list-style-type: none"> <li>• As the team shows success in setting and achieving the task milestones, the leader would need providing a Low-directive role</li> <li>• Leader should assist the team members to build strong relationships and agreeing on norms and standard behaviours</li> <li>• confront sensitive interpersonal issues</li> <li>• Focus on the effective utilization of interpersonal skills</li> <li>• Reinforce the strengths of each team member</li> </ul>	Low-directive High-supportive  <i>Supporting Style</i>

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Performing	<ul style="list-style-type: none"> <li>• Functioning fully as team</li> <li>• Clear and interdependent roles</li> <li>• Ability of the team members to organize themselves</li> <li>• Flexibility and well-functioning individually</li> <li>• Better understanding of each other's strengths and weaknesses and insights into group processes</li> </ul>	<ul style="list-style-type: none"> <li>• Provide little direction and decisions since the team seems to work with full autonomy</li> <li>• Low amounts of two way communication</li> <li>• Only giving positive reinforcement and support</li> </ul>	Low-directive Low-supportive  <i>Delegating Style</i>
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Hence, case studies were conducted to explore this phenomenon as explained next.

### 3. Research Method

Deep insight into a phenomenon could be obtained by using the case study research approach. Yin (2003) describes that case studies are preferred to study real-life social contexts as the findings are interpreted based on the views and experiences of the case study actors. As Eisenhardt (1989) advocates case study is a powerful research methodology that enables to build novel theoretical versions based on theoretical generalisation.

In view of the facts cited above, three construction projects were selected as case studies as detailed in Table 2. Yin (2003) depicts that external validity of a research can be increased by improving the ability of generalizing the findings beyond the immediate case study. This is mainly achieved while designing the research. Thus, different procurement arrangements and different types of clients were considered under the case selection of this research, to allow the findings to be extended to a wider range of projects improving external validity of the research.

Data collection was mainly done by conducting semi-structured interviews with the project managers of the selected projects and with other three key participants of each project team including architect, client and the contractor. Data analysis was done through code-based content analysis using the N-vivo computer software. The findings are discussed in the subsequent section.

Table 2- Details of the selected cases

Project	Project A	Project B	Project C
Type	A government hospital	A private Institute	A government building refurbishment
Project Cost (Rs.)	215 millions	100 millions	1000 millions
Project Duration	32 months	18 months	14 months
Procurement Method	Traditional method	Traditional method	Design and Build method
Client	NGO	Private-Client	Government-Client
Nature of the team	Project manager and other consultants from the same private organisation and the contractor from a different private organisations	Architects, structural consultant and contractor from different private organisations and project manager and other consultants from a single private organisation	Whole project team from a government organisation with internal divisions for consultancy, architectural and construction

#### 4. Research Findings

The case analysis carried out on the current roles of leadership revealed that some of the leadership roles provided by the CPM are not in line with the identified roles at the literature review stage. Table 3 provides a summary of the leadership roles as verified through the empirical findings. Key findings of each phase are further described in this section.

Table 3 - Existing leadership roles of CPM across the team development process

Stage	Directive Role	Supportive Role	Revealed leadership role
Forming	<ul style="list-style-type: none"> <li>• Providing structure and clear task direction</li> <li>• Active involvement</li> <li>• Not showing how goals are to be achieved</li> <li>• Not making many decisions by the project manager</li> <li>• Not adopting one-way communication</li> </ul>	<ul style="list-style-type: none"> <li>• Not allowing time to get to know each other</li> <li>• Not breaking interpersonal barriers within the team</li> <li>• Creating an atmosphere of confidence and optimism</li> </ul>	<p>Moderate-directive Moderate-supportive</p> <p><b><i>More Directing Style</i></b></p>

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Storming (Just after forming stage or arrival of a new team member)	<ul style="list-style-type: none"> <li>• Get members to assume more task responsibility</li> <li>• Fair amount of clarifying and explaining</li> <li>• Active involvement</li> <li>• Leader consults but make final decision</li> </ul>	<ul style="list-style-type: none"> <li>• Offer support and praise</li> </ul>	High-directive Low-supportive  <i>Directing Style</i>
Storming (Issues giving rise to interpersonal conflicts)	<ul style="list-style-type: none"> <li>• Get members to assume more task responsibility</li> <li>• Fair amount of clarifying and explaining</li> <li>• Active involvement</li> <li>• Leader consults but make final decision</li> </ul>	<ul style="list-style-type: none"> <li>• Offer support and praise</li> <li>• Acknowledge conflict</li> <li>• Guide others towards consensus</li> <li>• Teach conflict resolution methods</li> </ul>	High-directive High-supportive  <i>Coaching Style</i>
Norming	<ul style="list-style-type: none"> <li>• Allow for less structure</li> <li>• Promote discussions</li> <li>• Ask for contribution from all team members</li> <li>• Encourage the team members in decision making</li> </ul>	<ul style="list-style-type: none"> <li>• Giving feedback and support</li> <li>• Collaboration</li> <li>• Continues to build strong relationship</li> </ul>	Low-directive High-supportive  <i>Supporting Style</i>
Performing	<ul style="list-style-type: none"> <li>• Observing</li> <li>• Inquiring</li> <li>• Leader sets goals and team accomplishes</li> <li>• Provide direction and decisions</li> </ul>	<ul style="list-style-type: none"> <li>• Give positive reinforcement and support</li> <li>• Providing two-way communication</li> </ul>	Moderate-directive Moderate-supportive  <i>More Directing Style</i>

## 4.1. FORMING

All the three project managers and majority of the subordinates agreed that ‘providing structure and clear task direction’ to the team members was mostly undertaken, while the leader ‘had an active involvement’ at the forming stage. However, project managers were only involved in ‘making the overall targets’ and the subordinates themselves were given the freedom to prepare their individual goals. Rather than one-way communication, ‘two-way communication’ was more prevalent even at this forming stage. Generally, project managers declared that they ‘did not get the opportunity to make many decisions’ due to independent team members. Hence, it is observed that instead of a high-directive role ‘a moderate-directive role of leadership’ is appropriate at the forming stage of construction project teams.

With regard to the supportive role, majority of the interviewees agreed that project managers ‘did not require allowing time to get to know each other’ and ‘did not require breaking interpersonal barriers within the team’. In addition, all of them have tried their best to ‘create an atmosphere of confidence and optimism’. This was supported by the two-way communication maintained by the leader and team members. Therefore, it is

apparent that a CPM provides a 'moderate supportive role' during the forming stage.

Hence, the CPM seems to be adopting a more 'directing style'. It is very much similar to the 'authoritative style' of leadership, where the leader takes a "come with me" approach stating the overall goal but gives people the freedom to choose their own means of achieving it. But the influence of the client and the architect seem pushed the project manager to act more a role of a coordinator avoiding him giving a high task direction.

#### 4.2. STORMING STAGE

The storming stage, which comes just after the forming stage or which comes with the arrival of the new team members has not been very much apparent externally from the team members to the project managers. Rather, case studies revealed that certain unsolved technical issues led to a storming stage that required CPM involvement. This was evident within the team of the project C, where the senior management has had a conflict over selecting a suitable procurement method, which ultimately has resulted in the whole project team polarizing into two groups. Therefore, the project manager seems acting different leadership roles in each type of storming situations.

Generally, all the three project managers have 'got their members to assume more task responsibility'. Further, they all have provided 'a fair amount of clarifying and explaining' and have 'involved actively' within the team providing the direction. Further, all the three project managers have 'consulted and made the final decisions' in a storming situation, but at varied levels. However, when the storming stage has occurred due to a technical, business or social matter only the project manager had made the final decision after consulting others. Therefore, when considering the directive-roles provided by the CPM in all storming stages, it is apparent that they provide a 'high-directive role'.

It was found that during certain storming situations, in particular, during interpersonal conflicts arising out of technical, business or social problems, all the project managers have 'acknowledged conflicts' and have provided the roles like 'offering praise and support, guiding the team members towards consensus' and 'teaching conflict resolution methods'. But, there was no requirement for them to engage in 'conflict resolution', as most other storming situations were not that severe or apparent. Therefore, it is observed that the CPM provides a 'low-supportive role' during the storming stage which occurs just after a forming stage or with the arrival of



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new team members and provides a 'high-supportive role' in storming stages which occur due to issues giving rise to interpersonal conflicts.

Overall, as most of the members in a construction project team consist of professionals, they require only a working relationship to work as a team unlike a general project team where team members look for personal relationships to work as a team. Moreover, in project teams from government organisation are further governed by rigid hierarchical procedures in case of conflict situations. Therefore, a typical CPM has a less-supportive and a high-directive role in the storming stage which shows a nature of a 'directing style' of leadership again. However, during the storming stage which occurs by various issues giving rise to personal conflicts, the CPM offers a high-supportive role reflecting a 'coaching style' of leadership.

### 4.3. NORMING STAGE

When analysing the directive role in norming stage of the construction project team development process, all the three project managers and majority of the subordinates stated that project managers 'asked for contribution from all team members' and 'encouraged the team members in making decisions' and also 'promoted discussions' which is of 'low-directive role' as required at this stage.

With regard to the supportive role of the project manager in norming stage, project managers 'gave feedback and support' to their team members and there had been 'collaboration' and helped all the team members in 'building up strong relationship' with each other to a great extent which are all seem to be 'high-supportive roles' of leadership as required at this stage.

Therefore, a typical CPM seems adopting a 'supporting style' of leadership during the norming stage. However, in project teams where all the members are from different organisations have a restriction for them to have a close relationship. Nevertheless, it does not seem having a strong effect on building up norms among members and building up the relationship, as most of the project teams have weekly meetings which facilitate them building-up norms.

### 4.4. PERFORMING STAGE

Case studies revealed that at the performing stage, the project managers adopted the roles of 'leader setting goals where the team is accomplishing them' together with 'observing and inquiring' mainly which are in line with a less-directive role of leadership. But, all of them declared that they 'could not still avoid providing direction and decisions.' Therefore,

it could be argued that the CPM offers a 'moderate directive role' in performing stage.

It is further observed that all the project managers have provided 'positive reinforcement and support to their team members' throughout the performing stage which is in line with a less-supportive role of leadership, but contrary to that all the leaders were still 'unable avoid two-way communication between leader and the members', which is a high supportive role. Therefore, it could be argued that the CPM offers a 'moderate supportive role' of leadership at the performing stage.

Such a directive role still at the performing stage has to be adopted by a typical CPM due to the contractual nature of a construction project where he has to administer and protect the contractual obligations of client and the contractor and prevent other consultants attempting to breach any obligations agreed upon. Unlike the manufacturing industry and most of the other industries which produce typical products, the projects in construction industry hold a complex nature and most problems require having a customised approach to solve it. Mostly, the contract period and the contract sum become fixed in construction projects and CPM needs to coordinate the team through regular meetings until the project completion. This avoids them to adopt a low-supportive role and forces them to continue a more directive style towards team performing stage.

## **5. Conclusions**

The case studies findings indicated that leadership roles required for a CPM deviated from the predicted roles for each team development phase based on construction team behavior at each stage.

In forming stage, the CPM adopted a moderate directive role and supportive role of leadership, which is different to what was expected by a leader at a forming stage (high directive and low supportive role). These deviations were mainly due to working with the same level members in the team who are all regarded as experts in their own field.

Three different kinds of storming stages were identified in a construction project team as; the storming stage that begins just after the forming stage, storming stage occurring at the arrival of new team members and the storming stage that occurs due to various issues giving rise to interpersonal conflicts. The CPM adopts a high-directive role and a low supportive role in his leadership in the first two storming stages due to the professional nature of the team members who consider maintaining working

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relationships rather than personal relationships. During the third storming stage, which occurs due to interpersonal issues, it was noted that the CPM has to deviate his leadership role to high-directive and high-supportive.

With regard to the norming stage, the CPM adopts a low-directive role and a high-supportive role where he demonstrates a leadership very much similar to the required leadership at this norming stage. During the performing stage, the CPM demonstrates a moderate directive and supportive role, which is rather different to what is expected at such a stage. The reasons identified were mainly due to CPM acting more on behalf of the client.

Overall, the findings of this study are important to realize how CPMs lead their project teams. More importantly, it shows that due to the independent nature of construction project team and mostly the CPM acting on behalf of the client rather than the project leader, the leadership role deviated from a general project leader. More case studies are required to compare and contest these findings in different setting. However, since the findings were quite similar across the three case studies, which had different procurement arrangements (separated and design and Build) and different types of clients (public and private), it is expected similar trend would be observed in other construction projects.

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