

# Conflict Handling Styles used by Design Team Leaders During Post Contract Stage of Building Construction Projects in Sri Lanka

**R.M.K.K. Nuwandhara**

Sri Lanka Institute of Information Technology, Colombo, Sri Lanka  
kulunu6789@gmail.com

**G.H.S.P. De Silva**

Sri Lanka Institute of Information Technology, Colombo, Sri Lanka  
priyanwada.d@sliit.lk

## ABSTRACT

In comparison to other industries, construction sector encompasses a distinct, complex, and a competitive environment. It enriches the community with improvements when individuals with diverse perspectives, abilities, and degrees of construction expertise collaborate with each other. In this highly competitive multiparty context, conflicts have been labeled as one of the key constraints that prevent the success of construction projects. Conflict is a fact that everyone must deal with on a regular basis. Construction projects are therefore not an exception. It entails different types of conflicts. To handle these different types of conflicts, construction professionals use different conflict handling styles. Therefore, the aim of this study is to investigate design team leaders' preference of conflict handling styles and its impact on team spirit of the members of the design team during the post contract stage of building construction projects in Sri Lanka.

To collect data, an e-based, closed-ended questionnaire was used incorporating the conflict handling styles introduced in Rahim's Dual Concern theory. The questionnaire was answered by 56 professionals who have the experience of working in the design team during the post contract stage. The study was limited to the building construction projects in Sri Lanka. To analyze the gathered data, descriptive statistics such as mean, percentage, count correlation co-efficient etc. were used.

The study has revealed that during the post contract stage, the design team leaders use all five conflict handling styles of Rahim's Dual concern theory: integrating style, obliging style, dominating style, avoiding style, and compromising style in different frequencies to handle conflicts among design team professionals. The design team professionals often use compromising style and rarely use integrating style, obliging style, dominating style, and avoiding style to handle conflicts among the design team professionals during the post contract stage respectively.

Furthermore, the study indicates that these styles bring different levels of impact to the team spirit of design team professionals during the post contract stage of building construction projects in Sri Lanka. The team spirit of design team members is shown to be strongly affected by the compromising style. In contrast, the other four conflict handling styles, integrating style, obligating style, dominating style, and avoiding style, were identified to moderately impact team spirit. Moreover, findings revealed that all these five conflicts handling styles show a strong relationship with the team spirit of design team members during the post-contract stage of building construction projects in Sri Lanka.

The research findings may assist construction industry design team leaders and other stakeholders to manage conflicts in a more efficient way and provide an insight to the way to handle conflicts to improve the team spirit of the design team during the post-contract stage of building construction projects in Sri Lanka.

**KEYWORDS:** *Conflicts, Conflict Handling Styles, Building Projects, Design team, Construction industry, Post contract stage.*

## 1 INTRODUCTION

Conflicts are an inevitable aspect of every organization, but how the organization defines and controls the underlying causes of the conflicts is crucial (Choi, 2021). In highly competitive multiparty construction contexts, conflict is one of the key constraints that prevents the success of the construction projects (Yousefi, Hipel, & Hegazy, 2010). Complexity, high working pressure and for many other

reasons, construction sector has become vulnerable to conflicts (Lingard & Francis , 2005) and it has been influenced by the associated negativity (Simon Tolson, 2013 July).

Conflicts may occur at every stage of the construction process. Failure to offer possession of sites, changes in legislations, frequent design changes in the designs, ambiguities in the contracts, delays and scope changes are major factors that cause conflicts and disputes in the construction industry (Weerasooriya, 2020). Construction design changes may lead the project to impracticability, design flaws, and changes in the client's needs, the conflicts that may be noticed in the pre-contract phase are likely to be seen in the post-contract stage (Skitmore & Ng, 2000). Therefore, it is crucial to have a clear understanding of effective handling of conflicts throughout the post-contract stage, as it has a direct negative impact on the project's performance (Ogunlana & Awakul, 2002).

Building design is no longer a one-person job as the complexity of large-scale design and construction exceeds the capabilities of any individual (Serag-Eldin, 2010). The design team leader is an important stakeholder, whose services are required from the inception to the completion of the construction project as his or her decisions may directly affect the performance and the success of the building construction projects (Tham, 2007). In construction projects, there are different types of conflicts, and these conflicts must be handled with due care (Bendersky, 2003). Based on the responsible party, Acharya and his team (2006), classified conflicts in a project into five basic conflict categories. They are consultant evoked conflicts, owner evoked conflicts, contractor evoked conflicts, third party evoked conflicts, and other project evoked conflicts. (Acharya, Lee, & Im, 2006). Conferring to the levels at which the conflict occurs, Rahim (2011), categorized organizational conflict as intrapersonal, interpersonal, intragroup, and intergroup conflict (Rahim, 2011). Another classification used to classify construction conflicts is task conflicts, relationship conflicts, and process conflicts (De Church, Hamilton, & Hans , 2007; Desivilya , Somech, & Lidgoster, 2010).

Resolution of conflicts strongly depends on the conduct of the parties involved, it is preferable to utilize a behavior-based approach instead of a standard method (Giritli, Balci, & Sertyesilisik, 2009). However, stress and anxiety level in reaching an agreement, power imbalances, work complexity, team culture, and leadership models used by team leaders have an impact on how conflicts should be managed (Ludin & Soderholm, 1995). Thus, to solve a conflict effectively, one must select the most appropriate conflict managing style (De Silva & Sandanayake, 2022). In consideration of different impacts of ways of handling conflicts, many researchers have introduced different theories of conflict management. Some of these theories are Mary Parker Follett Model (1940), Hall's Win-Lose Approach (1969), Thomas Kilmann, Conflict Mode Instrument (1977) and Devito Model (1995) (Giritli, Balci, & Sertyesilisik, 2009). In addition, various studies have identified different conflict handling styles and models to manage conflicts with their construction organizations. (Vigil- King , 1999).

Moreover, considering the uniqueness and associated risks of each construction project, the researchers have examined the factors and causes of different types of construction conflicts (Mannix & Jehn., 2001). Conflicts can affect the success of a building project either negatively or positively, depending on how they are being managed (De Silva & Sandanayake, 2022). Conflicts can impact in many ways which will eventually impact overall project progress. Conflicts could also weaken the alliance and cooperation required for the efficacy of teamwork. Team spirit is an essential factor in the success of a construction project (Chan, Scott, & Chan, 2004). Taking it into account, in the global context, different researchers have examined the impact of conflicts on team coordination and performance of project teams. The study revealed that the multicultural project team effectiveness can be enhanced by using the avoiding style (Thabassi, Abdullah , & Bryde, 2018; Ayoko, 2016; Banks, Pollack , & Seers, 2016).

While there is a substantial corpus of literature on the broad topic of conflicts and different conflict handling styles, related to construction projects, a gap is observed in examining the conflict handling styles used by Design Team Leaders during post contract stage of building construction projects and its impact on team spirit of design teams in Sri Lanka. Thus, this study is undertaken to investigate the conflict handling styles used by Design Team Leaders and its impact on team spirit of the members of the design team during the post contract stage of building construction projects in Sri Lanka.

## **2 LITERATURE REVIEW**

### **2.1 The conflict**

Conflict is a natural occurrence in human life whilst some may claim that conflict is both essential and unavoidable (Zhai, Anita, Liu1, & Xiaofeng, 2011). It is a common occurrence in group of activities and fundamental to a wide spectrum of team members' interactions (Mannix & Jehn., 2001). Conflicts arise when there is a deformation of ideas or goals to be accomplished by individuals or the parties concerned. (Anita Rauzana, 2016).

In the early days of management research and theory, conflict was often seen as a negative and undesirable component of organizational life. However, presently it is widely understood that conflict is unavoidable and that it is not always or necessarily negative for an organization ( Lazarus, 2014). If properly managed, conflicts may contribute to the creation of innovative ideas as well as group internal cohesion. Therefore, recognizing and successfully managing conflict for the benefit of the organization is critical to its success ( Lazarus, 2014). Organizations may benefit from conflict in both positive and negative directions, which is why a robust conflict management strategy is required. Conflict can lead to the success of construction building projects by developing team spirit and mutual understanding among construction organization participants. (Serag-Eldin, 2010).

### **2.2 Conflicts among design team members**

Conflicts inevitably occur in large-scale building projects due to the presence of a diverse range of stakeholders with multiple objectives (Abdul-Raman., Berawi, Berawi, & Moh, 2006). In a building construction project, multidisciplinary teams may cause conflicts among the design team members. Conflict and disputes appear to be an inherent aspect of the construction business, especially since the majority of construction projects are complicated and unpredictable. (Jaffar, Tharim, & Shuib, 2011).

The rate of occurrence of conflict situations among design team members in the building construction projects has significantly grown as a result of the massive development of the construction sector of Sri Lanka. (Heenkenda & Chandanie, 2012). Construction project conflicts and disagreements will obstruct timely completion, reduce productivity, and hinder achieving value for money (Yan, Kuphal, & Bode, 2000). Construction industry of Sri Lanka, on the other hand, is structured in such a way that it approaches ADR (Alternative Dispute Resolution) directly rather than avoiding it through good conflict management. Moreover, Conflict management receives more attention today in order to save money and time later in the project's life cycle (Heenkenda & Chandanie, 2012).

### **2.3 Conflicts at post contract stage**

Conflicts develop throughout the post contract stage, as project members enter and leave at different times. Teams working on construction projects are made up of a variety of experts and parties, including contractors, suppliers, engineers, architects, and quantity surveyors (Leung, Liu, & Ng, 2005). On the other hand, every construction project management team might evaluate the project's progress and current conditions differently (Gudiene, Banaitis, & Banaitiene, 2013). Based on the conflict initiator, Acharya and Lee (2006) categorized the causes of conflicts into five types. Acharya and his team found out six main reasons for the occurrence of conflicts in the construction sites (Acharya, Lee, & Im, 2006). They are, different site conditions, local people obstructions, change order and evaluation differences, design errors and omissions, exclusive number of works, and double meaning in specifications (DeChurch, Hamilton, & Haas, 2007).

### **2.4 Conflict Handling Styles**

Conflict handling approaches have been referred to in a variety of ways by different researchers. Different conflict handling approaches have been proposed by researchers such as Conflict Model Instrument by Thomas and Kilmann (1974), Devito model by Devito (1995), and Marry Parker Follett model by Mary parker (1940) (Jandt, 2016)

### 2.4.1 Dual Concern Theory by M. Afzalur Rahim

Dual Concern theory is widely accepted among conflict management research due to its inherent characteristics such as ease of use, easy interpretation, and effective prediction ability. (Vu & Carmichael, 2009). The dual concern theory (DCT) is a theoretical framework that explains how people's behavioral inclinations influence their approach to conflict resolution. It is based on Blake and Mouton's theoretical foundation and managerial grid. Integrating (problem solving), obliging, dominating (forcing), avoiding, and compromise are the five conflict management styles (Chou & Yeh, 2007).

**Integrating Style:** Conflict is considered as an issue that demands a solution in this strategy, thus both parties make an effort to find a solution while enhancing their creativity and talents (Chou & Yeh, 2007; Verma, 1998), **Obliging style:** Low concern for self and strong concern for the other person are the two dimensions evaluated in this method (Chou & Yeh, 2007), **Dominating style** - Chou and Yeh (2007) define this style as having a high concern for oneself and a low regard for the other person (Chou & Yeh, 2007), **Avoiding style:** This technique was defined by Cheung and Chuah (1999) and Akiner (2014) as denying or disregarding the existing or impending conflict between the parties (Cheung and Chuah, 1999; Akiner, 2014), **Compromising style** - Moderate care for self and others at the same time by presenting a mutually acceptable conclusion are the two characteristics examined for conflict management in this technique (Cheung and Chuah, 1999; Akiner, 2014)

## 2.5 Impact of conflict handling styles on the team spirit of construction industry professionals

Construction industry participants will need to employ conflict handling styles in the near future. Conflict resolution has the ability to improve a construction company's performance, team, spirit and efficiency (Simons & Peterson, 2000). As the construction industry is a temporary multi-organization, team spirit directly affects the performance of the team (Abuja, 2018).

### 2.5.1 Team Spirit

"The Team" can be defined as a collection of individuals who are complimentary, cohesive, and harmonic. The team achieves collective achievements through the collective contributions of all members. As a result, "team spirit" refers to the collaborative approach in which team members work together to achieve the team's goals and objectives. Obligation is the treatment for team spirit; thus it becomes the work force to encourage team members and inject vitality into the task (Gao, 2014). Project success is determined by impacting factors such as timeframes, pricing, quality, requirements, and process satisfaction (Barki & Hartwick, 2001). The impact on the team would be enhanced or reduced creativity, efficiency, and performance (Thomas, 2009).

### 2.5.2 Conflict handling styles and team spirit

Construction industry's rapid global development of complex projects has resulted in several inter-organizational disputes (Hu, Chen, Gu, Huang, & Liu, 2017). Depending on the factors including the leader's conflict management style, the nature of the disagreement may have a beneficial or an unfavorable influence on project performance (Wu, Zhao, & Zuo, 2017). According to the literature, the success or failure of dealing with conflict has a direct influence on the execution of temporary organization's projects and the team spirit (Muller, Turner, Andersen, & Shao, 2016).

Project managers and managers in the construction sector use a conflict handling style that is more open to coping with disagreement. Mutual dependence allows cooperative conflict settlement, which might lead to better project collaboration (Chen, & Tjosvold, 2002). As a result, differing approaches to handling conflict in team environments may have an impact on how teams collaborate (Thabassi, Abdullah, & Bryde, 2018).

Therefore, considering the conflict handling styles used by the design team leaders of the design team during the post contract stage of building construction projects in Sri Lanka, to increase the team spirit of the design team, following hypothesis can be developed.

H1 -Integrating conflict handling style used by the design team leaders during the post contract stage of building construction projects in Sri Lanka will create a strong relationship between the conflict handling style and the team spirit of the design team.

H2 -Obliging conflict handling style used by the design team leaders during the post contract stage of building construction projects in Sri Lanka will create a strong relationship between the conflict handling style and the team spirit of the design team.

H3 - Dominating conflict handling style used by the design team leaders during the post contract stage of building construction projects in Sri Lanka will increase the team spirit of the design team.

H4 -Avoiding conflict handling style used by the design team leaders during the post contract stage of building construction projects in Sri Lanka will create a strong relationship between the conflict handling style and the team spirit of the design team.

H5- Compromising conflict handling style used by the design team leaders during the post contract stage of building construction industry in Sri Lanka will create a strong relationship between the conflict handling style and the team spirit of the design team.

### 3 RESEARCH METHODOLOGY

The background study was carried out to identify the exact research gap. Subsequently, a comprehensive literature review was carried out using books, journals, research articles, etc., identifying different conflict handling styles that can be used by the design Team Leaders in construction projects. Conflict is a global phenomenon, unique to every individual (De Silva & Sandanayake, 2022). The study was focused on the conflict handling styles used by the design team professionals during the post contract stage of building construction projects in Sri Lanka, and to collect data, a quantitative approach has been adopted. Statistical data was collected through a questionnaire survey since the findings of the research were focused on observing the conflict-handling styles used by the design team leaders (affected people) in the construction industry. A purposive sampling technique was used, hence by using a selected sample of professionals, this study can be assessed more accurately and thereafter a sample of 100 professionals was chosen, especially design team leaders and members engaged in the building construction projects in Sri Lanka were chosen for this questionnaire survey. Consequently, 56 completed responses were gathered. The data collected through the questionnaire survey was analyzed using the Mean-weighted rating formula and the following Table 1 shows the Likert scales and ranges.

Table 1: Likert scale for identifying the Frequency and impact of using conflict handling styles by the design team leaders to handle the conflicts within the design team during the post contract stage of building construction projects in Sri Lanka

Value	Range	Likert scale for	
		Frequency of using conflict handling styles	impact of using conflict handling styles
1	1.00-1.08	Very low	Very low
2	1.81-2.60	Low	Low
3	2.61-3.40	Rare	Moderate
4	3.41-4.20	Often	High
5	4.21-5.00	Very Often	Very High

Finally in order to establish a relationship between the conflict handling styles and the team spirit of the design team during the post contract stage of building construction projects in Sri Lanka, data was analyzed using the Spearman's Correlation analysis.

Table 2: Correlation coefficient interpretation

Spearman's coefficient	Correlation relationship
$\geq 0.70$	Very strong
0.40 – 0.63	Strong
0.30 – 0.39	Moderate
0.20 – 0.29	Weak
0.01 – 0.19	Negligible

## 4 DATA ANALYSIS AND DISCUSSION

The questionnaire survey was carried out according to the purposive sampling technique while distributing the survey among the selected professionals such as architects, engineers (civil, structural, MEP), quantity surveyors, project managers and draft men who have experience in working in the design team during the post contract stage of building construction projects in Sri Lanka via Google Forms.

### 4.1 Demographic Information of Respondents

Table 3 shows the summary of the professions of the people who were participants in the survey.

Table 3: Classification of professions

Profession	Percentage
Architects	36%
Civil Engineers	16%
Draft Men	2%
MEP Engineers	4%
Project Managers	12%
Quantity Surveyors	26%
Structural Engineers	4%

The most common profession among the survey participants was architects, with 36% as a percentage. Civil engineers accounted for 16% of the total respondents, while project managers were 12%. The least number of participants were draft men, and it shows 2% as a percentage of the total number of respondents in this survey.

### 4.2 Frequency of usage of conflict handling styles by the design team leaders to handle conflicts within the design team during the post contract stage of building construction projects in Sri Lanka

In this study, data was collected on a Likert scale related to the 5 conflict handling styles in the dual concern theory on the frequency of usage of conflict-handling styles by the design team leaders to handle conflicts within the design team during the post contract stage of building construction projects in Sri Lanka.

Table 4 demonstrates the weighted mean values of conflict handling styles used by design team leaders during the post contract stage of building construction projects in Sri Lanka.

Table 4: Frequency of Usage of Conflict Handling styles by the design team leaders to handle conflicts within the design team during the post contract stage of Building Construction Projects in Sri Lanka.

Conflict Handling style	Mean	Likert Scale Vale
Integrating style	3.08	Rare
Obliging style	2.86	Rare
Dominating style	2.62	Rare
Avoiding style	2.62	Rare
Compromising style	3.64	often

According to the collected data, the design team leaders often use compromising style to handle conflicts within the design team members. Further, integrating style, obliging style, dominating style and avoiding style are rarely used by the design team leaders to handle conflicts within the design team during the post contract stage of building construction projects in Sri Lanka.

### 4.3 Impact of conflict handling styles of design team leaders on the team spirit of the design team during the post contract stage of building construction projects in Sri Lanka

Table 5 shows the analyzed statistical data collected from the respondents to identify the impact of conflict handling styles of design team leaders on the team spirit of the design team during the post contract stage of building construction projects in Sri Lanka.

Table 5: Impact of conflict handling styles of Design team leaders on the team spirit of the design team during the post contract stage of building projects in Sri Lanka.

Conflict Handling style	$\bar{x}$	Likert scale Value
Integrating style	3.30	Moderate
Obliging style	2.96	Moderate
Dominating style	2.76	Moderate
Avoiding style	2.76	Moderate
Compromising style	3.74	High

From the collected data, the compromising style has a high impact on the team spirit of the design team during the post contract stage. However, except for compromising style, all the other four conflict handling styles, integrating style, obliging style, dominating style and avoiding style show a moderate impact on the team spirit of the design team during the post contract stage of building construction projects in Sri Lanka.

### 4.4 The relationship between conflict handling styles and the team spirit of design teams during post contract stage of building construction projects in Sri Lanka

To establish a relationship between the conflict handling style and the team spirit of the design team during the post contract stage of building construction projects in Sri Lanka, few hypotheses were formulated. By rendering to the following correlation coefficient interpretations, the relationship of the above hypothesis can be analyzed. Correlation coefficient interpretations are shown in the following tables: Table 2 and Table 6 (Hauke & Kossowski, 2011).

Table 6: Correlation coefficient of conflict handling styles

Conflict handling style	Correlation coefficient	Rank
Integrating style	0.55876	2
Obliging style	0.57674	1
Dominating style	0.49633	4
Avoiding style	0.42298	5
Compromising style	0.50058	3

According to Table 6, all the conflict-handling styles in the dual concern theory create a strong relationship between the team spirit of the team members in the design teams during the post-contract stage of building construction projects in Sri Lanka. Further, according to the above table, among these 5 conflicts handling styles, obliging conflict handling style creates the strongest relationship whilst avoiding style creates the weakest relationship with the team spirit of the design team members during the post contract stage of building construction projects in Sri Lanka. Hence, for all the conflict handling styles, Spearman's correlation coefficient shows a stronger relationship which proves that due to the strong relationship between the conflict handling style and the team spirit, these conflict handling styles increase the team spirit of the design teams' members. Therefore, hypotheses H1, H2, H3, H4 and H5 created a positive result.

## 5 CONCLUSION AND RECOMMENDATIONS

Conflict is a common phenomenon to human beings. In terms of the construction industry, conflicts are a frequent experience for all the stakeholders. These conflicts can be classified into different classifications in terms of the parties responsible, sources, organizational levels etc. To handle such

conflicts, many researchers have established different theories; few of them are Mary Parker Follett Model (1940), Hall's Win-Lose Approach (1969), Thomas Kilmann Conflict Mode Instrument (1977) and the Devito Model (1995). In terms of the construction industry, among these conflict handling theories, Rahim's dual concern theory is widely used to define handling construction conflicts.

Conflicts have become an inherent element of the daily routine of the design teams during the post contract stage of building projects in Sri Lanka (Abeynayake & Weddikkara, 2012). This fact was proved by the findings of this research as the majority of the design team members experienced conflicts within the design team during the post-contract of building construction projects in Sri Lanka. In order to manage those issues, different conflict handling styles have been used by the design team leaders in the construction industry.

Findings in the research revealed that all the five conflict handling styles in the dual concern theory were used by the design team leaders to manage the conflicts during the post-contact stage of building construction projects in Sri Lanka with different frequencies. Design team professionals often use the compromising style and rarely use the integrating style, obliging style, dominating style, and avoiding style to handle conflicts among the design team professionals during the post contract stage.

In view of the impact on team spirit, compromising style shows a high impact whilst, all the other four conflict handling styles, integrating style, obliging style, dominating style and avoiding style were found to have moderate impact on the team spirit of the design team during the post contract stage of building projects in Sri Lanka.

Moreover, when analyzing the findings of this research, conflict handling styles, and their impacts on the design teams during the post-contract stage of building construction projects in Sri Lanka were identified. To develop a relationship between the conflict handling style and the team spirit, a correlation analysis was used between these two variables. The test has proven a strong relationship between the conflict handling style and team spirit as the correlation coefficient for all the conflict handling styles was between 0.40 and 0.63. Therefore, it can be stated that all the conflict handling styles in the Dual Concern Theory exhibit a strong relationship between the team spirit and enhanced the team spirit and prove all the hypotheses were positive.

Based on the research findings, the following recommendation can be made: According to the design team members' perspective, the analysis of conflict handling styles and the team spirit of the design team during the post-contract stage may be used to evaluate the team leaders in the design team and their ability to handle conflicts among the design team members in order to foster team spirit and enhance performance of the construction projects. Furthermore, as further research directions dictate, the same research could be undertaken for other construction industry professionals, team leaders, and at other stages of the building process.

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