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EXPLORING THE EFFECTS OF CONFLICT TOWARDS THE SOCIAL DYNAMICS OF THE SELF-MANAGED PROJECT TEAM (SMPT) IN SMALL AND MEDIUM SIZED KNOWLEDGE INTENSIVE FIRMS (KIFs)

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Abstract

This study focuses on exploring the effect of conflict towards the social dynamics of the self-managed project team (SMPT) in small and medium sized knowledge-intensive firms (KIFs). Literature suggests that the implementation of SMPTs not only increases productivity in organisations but also contributes towards increasing employeesø involvement as the team is being managed by the team members rather than a formal leader who exists within the team. The team process involves people in different areas of expertise working together resulting in different opinions and views that are likely to cause conflicts. Thus, it is crucial for organisations to create understanding on the role of conflict and how it is managed within the SMPT in order to ensure the successfulness of this particular type of team. This study contributes to the understanding of how the SMPT is being influenced by different types of conflict and their management strategies as well as the extent of external leader involvement in conflict situations. This longitudinal study comprises of evidence collected through semi-structured interviews involving face-to-face interviews and weekly telephone interviews for twelve weeks with the managements and team members from six SMPTs in three small and medium sized KIFs in Malaysia. The in-depth exploration of conflict occurrences in SMPTs reveals the interrelatedness between different types of conflict as well as different approaches of conflict management strategies being adapted by SMPTs. The evidence suggests that over time, the positioning of external leaders in SMPTs change as a result of how conflict is managed. These empirical findings are developed into proposed models of the transformation of SMPTs.

CHAPTER 1

INTRODUCTION

This chapter describes the overall preview of the research which covers the background of the research, research objectives, research questions as well as the overview of the research design. It also provides a description on the outline of this whole thesis.

1.0 Research Background

Self-Managed Project Teams (SMPTs) originally developed from the socio-technical perspective, the main objective of which was to utilise technology and social and psychological needs of people by providing a structure that is productive and satisfying to the people involved (Emery, 1993; Stewart & Manz, 1995). The approach attempts to create the work system in a way that it could respond to changing demands in the work environment either internally or externally in an immediate and flexible manner. SMPTs are work groups which are given the responsibility and certain discretion on decision making processes relating to work methods, planning and others (Cummings, 1978; Orsburn, Moran, Musselwhite, & Zenger, 1990). In other words, the SMPT is a team which is being managed by the

team members who are responsible in some aspects of the team processes which, in turn, gives flexibility for the team members in decision making processes.

SMPTs have been increasingly implemented in many countries (Lawler, 1986; Manz & Sims, 1993). The reason given for implementation of this type of team is the benefit which gives freedom to teams on the decision making process which allows them to creatively express and implement their ideas. The team members are given responsibility as well as the flexibility to plan, organise and manage their tasks which then leads to increased productivity (Cohen & Ledford, 1994; Wellins et al., 1990). Theoretical and empirical studies (eg. Hill, 1995; Pfeffer, 1994) suggest that one of the ways for organisations to achieve competitive advantage is through the implementation of SMPTs which not only increase productivity but also contribute towards increasing employees involvement, motivation and satisfaction. This occurs as the self-managing team members develop strong commitment (Barker, 1993) as well as the sense of ownership and pride in their work project (Barker, 1993; Cohen & Bailey, 1997).

Working as a team, particularly in SMPTs, the process of interaction is important as it occurs regularly as the team members are responsible for planning and managing their tasks and having interrelated tasks which require them to interact with each other. Furthermore, during their work process, which requires them to deal with people within and outside the team as well as external party outside from the organisation, the team members need to maintain the effectiveness of their interaction with each other. However, as the interaction process involves different

parties, conflict is inevitable as people might have different sets of ideas and opinions. As team members are from diverse backgrounds working towards the same objective, conflict management strategies are vital in order for the team to perform successfully. Furthermore, the dynamic nature of any project team, with regard to conflict, is important to be explored especially in this particular type of team where the team is being managed by the team members itself rather than a formal leader being assigned to be responsible for conflict handling.

On the whole, in studying the social dynamics or social processes of SMPTs, it is important to further understand the evolvement of conflict and different types of conflict as well as the way conflict is handled in SMPTs as social interaction is one of the most important factors to ensure the success of this particular type of team. The majority of research on the SMPT centres on its design, structure, benefits and effectiveness (eg. Cohen, Ledford, & Spreitzer, 1996; Kirkman & Shapiro, 1997; Manz & Sims, 1993; Wageman, 1997; Wageman, 2001) with only a few studies focusing on conflict within the SMPT. Therefore, there is a lack of empirical evidence on how conflict management strategies affect the social dynamics of SMPTs.

Therefore, this study contributes to the body of knowledge on group development and conflict management with specific focus on the SMPT by empirically exploring the effect of conflict towards the social dynamics of this particular type of team. This qualitative study, conducted using a longitudinal approach, adopted a diary study approach via weekly telephone interview and face-to-face interview with the

respondents. This enables an in-depth exploration of the SMPT social dynamics, which demonstrates the adaptation or changes of the SMPT with regards to conflict situations. By exploring the team processes during conflict, this also contributes to the understanding of how the SMPT is being influenced by different types of conflict and their handling strategies as well as the extent of leader involvement during conflict in the SMPT. Findings from this study will provide an in-depth understanding of the effects of conflicts towards the social dynamics of SMPTs in organisations. With this knowledge, implications for current practice will be identified and recommendations made for future research.

1.1 Research Question

Conflict management within the SMPT is an important factor which influences the behaviour of the team members. It is important as the team is characterised by whether the team members are voluntarily and willingly involved in handling and managing conflicts. As self-managing team, given the autonomy and freedom on certain work process such as decision making and problem solving, it is interesting to explore the approach taken by the team members in the event of conflicts. The strategies chosen by the team in handling conflict will provide an insight on any differences between this team and other types of team as the responsibility to solve the conflict is given to the team members rather than the leader.

This research focuses on a longitudinal approach in exploring the effect of conflicts towards the social dynamics of SMPTs in organisations, particularly in small and medium sized knowledge-intensive firms (KIFs). Small and medium sized KIFs are

the focus of this study as the survival of these types of firms is highly dependent on projects (Womack, Jones, & Roos, 1991) which means that it is important for the teams to ensure the successfulness of each of their projects. In order for the project teams to be successful, conflict has to be handled in a way that will benefit the parties involved and at the same time increase team performance. Thus, the social dynamics of SMPTs, specifically in small and medium KIFs when dealing with conflict, is worth investigating. Therefore, the research question can be framed as: ***How does conflict affect the social dynamics of SMPTs within small and medium knowledge-intensive firms (KIFs)?***

1.2 Research Objectives

The objectives of the present study are:

- To further explore the evolvement of conflict in project teams, particularly SMPTs, by identifying different types of conflicts in teams. Under this objective**, the occurrences of different types of conflicts within and outside SMPTs are being researched. The relationship between the different types of conflict is also being explored.**

- To determine the effect and influences of conflict in SMPTs. Under this objective**, the effects of different types of conflict and how it influences the team throughout a project will be identified and investigated.**

- To further investigate the social dynamics of SMPTs in different conflict situations and how each situation is being handled throughout a project. Under this objective, **the team activities will be investigated over a period of time in order to identify conflict occurrence and its handling strategies.**

- To explore the influence of conflict towards leadership specifically in SMPTs. As leadership within SMPTs requires a different approach than traditional leadership styles, **the involvement of the leader and their approaches towards conflict situations in SMPTs will be investigated.**

1.3 Overview of Research Design

In this study, a qualitative approach is being used in order to explore the issue of conflict and conflict management strategies in SMPTs. A qualitative approach is chosen as it allows the exploration of a complex phenomenon, in this case, the social dynamics of SMPTs with regards to conflict, which was obtained by having contact with those involved. In this study, face-to-face interviews as well as telephone interviews were conducted in order to gather data to be investigated. A diary study method was implemented via weekly telephone interview in order to provide processual data and face-to-face interview was conducted in order to provide the contextual data for the study.

Comparative case study is being chosen as the research strategy as it enables the researcher to obtain detailed understanding of the phenomena being investigated due to the richness of data collected and the differences between the cases can be highlighted. Data for the study was collected from the team members and the managements of three small and medium sized KIFs in Malaysia, known as ITCo, BiotechCo and HerbalCo. Malaysian R&D small and medium KIFs were chosen because of the project-based nature of the industry; and the presence, or absence, of teamwork in project implementation activities was explored. A total of six projects

were examined; two projects from each company. All six projects investigated were concerned with the development of new product and all of the organisations implemented SMPTs in conducting their projects.

As for the data analysis, it involves a two-steps process starting with an in-depth study of each site, called õwithin-case analysisö; the second step of the analysis consists of cross-case analysis in the search for patterns and discourse analysis are used to further analyse the data.

1.4 Structure of the Thesis

This thesis is divided into seven chapters. Following this introduction, Chapter Two provides the reader with a review of the existing literature on the Project Team, Conflict Management Strategies and Leadership. This starts by providing a review on teamwork in organisations which highlights the different types of team which exist in organisations. It also includes, in particular, how the SMPT has been widely defined in the current literature. The discussion continues with the review of conflict in teamwork and the conflict management strategies being implemented in teamwork. The chapter also includes the discussion on leadership types and positioning as well as the relationship between conflict management and leadership with project teams. **Table 3** summarises the differences of conflict management strategies and leadership styles between project teams generally and the SMPT. The chapter ends with the summary of the criticisms of the literature and the research gap and objectives are presented followed by the research questions.

Chapter 3 discusses the methodology being used in the research. It describes the qualitative approach being adopted and the justification of the chosen method. It also considers the design of the study, issues relating to access, the data collection procedures adopted during different stages of research, and the research techniques. This is followed by a discussion of the methods used for data analysis - case studies. The chapter ends with a discussion on gaining trust, reliability and validity issues, and the ethical considerations associated with the study.

Chapter 4 presents the findings of the study which consists of the within case analysis of all the six cases. It begins with the background of each case and the events of conflict which occur in the duration of the project at different points of time.

Chapter 5 provides the cross case analysis of the six cases. Similarities and differences across the cases are highlighted. Linkages between different types of conflicts and the relationship between conflict and conflict management strategies are also demonstrated. Leadership issues that rise within the cases are also presented.

Chapter 6 presents a discussion of the findings reported in Chapters 4 and 5. It begins by presenting a thorough discussion of the findings and compares these with the literature to determine whether there is consistency or new insights have emerged. The chapter ends with the discussion on three proposed models of SMPT transformation with regards to leadership and conflicts.

Chapter 7 presents an overall summary of the research objectives and their respective research findings. This chapter ends with the highlights on the study's limitations, lessons for practice and suggestions for future research are made.

1.5 Chapter Summary

This chapter has presented the background for the present study, described its research objectives, research design, and outlined the structure of the thesis. Briefly, the objectives of the study are to explore the dynamics of the SMPT with regard to conflict management and leadership and how the SMPT changes throughout the project duration.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the literature of self-managing project teams (SMPTs) with regards to conflict and conflict management strategies as well as the issue of leadership in SMPTs. The general problems in the current literature have been identified, indicating gaps in knowledge; this research will contribute to filling those identified gaps. The first part of the chapter will review different forms of teamwork in organisations. The second part focuses on conflict and conflict management strategies in relation to project teams and the third part focuses on the literature of leadership in project teams. The chapter ends with a summary of the criticisms of the literature and the research gap and objectives which follows by a refined research question.

2.0 Background

The project team is widely adopted and considered essential by knowledge-intensive firms (KIFs) in their product development and operational processes (Robertson & Swan, 2003; Swart & Kinnie, 2003). The significance of the project team has been addressed by many academic researchers (eg. Barker, 1999; 1997; West, 1994) which underline the efficiency and effectiveness of people working together rather

than individually. People's creativity, skills and ideas are claimed to be better while working in teams (West, 1994). For instance, project teams can increase learning and knowledge sharing within firms (Ancona & Caldwell, 1992; Dougherty, 1992) as well as enhance the efficiency of utilising various resources (e.g. human resources, facilities and technologies). Resources such as human resources are being utilised in teamwork as they combine the efforts of individuals in contributing their knowledge and skills. Each of the team members have expectations toward others (Lovaglia & Houser, 1996) thus it creates pressure for them to perform better which then leads toward increased organisational performance. Therefore, it is helpful to explore, further, the social dynamics of the team in an organisation as nowadays the team is being widely implemented and considered as one of the most important strategies in an organisation.

A KIF is defined as an organisation which consists of well-educated and qualified employees as a major part of the work force who engage in mainly õintellectual workö (Alvesson, 2000). Knowledge is considered as the õraw materialö for processing in knowledge-intensive firms (Nurmi, 1998) and a strong knowledge base is a key feature of the KIF (Alvesson, 2004).

In KIFs, the nature of their operations is mostly project-based and work is carried out in teams (Snow, Snell, Davidson, & Hambrick, 1996). Small and medium sized KIFs tend to depend highly on the success of project teams for product development (Womack et al., 1991), company survival (Gareis, 1991), and towards improving organisational performance (Glassop, 2002) compared to large KIFs. The decision on

conflict management strategies is also being undertaken collectively as a project team rather than individually. A collective approach to conflict resolution allows different types of conflict to be managed in a way that is beneficial to the project team (Tjosvold, 1991) which leads toward increased team outcomes (Behfar, Peterson, Mannix, & Trochim, 2008). These small and medium sized KIFs would also totally collapse as a result of one or two project failures because they are only providing services to a few clients and usually on short term contracts. This creates highly unstable and unpredictable environments for these firms (Swart & Kinnie, 2003).

On the other hand, for large KIFs, even though faced with failure in one or two projects, they would still be able to survive in the industry as they often rely upon a few spectacular project successes to ensure profitability (Gann & Salter, 2000). Furthermore, large KIFs have the ability to offer a range of complementary products or services rather than being only dependent on existing projects (Rothwell & Zegveld, 1982).

The focus of this study is on self-managed project teams (SMPTs) which are widely adopted in organisations (Lawler, 2001; Manz & Sims, 1993) specifically in small and medium sized KIFs. Small and medium sized firms were chosen as a focus due to their recognised importance and contributions towards social and economic development activity, wealth creation and employment, as well as entrepreneurship in many countries especially in South East Asia (Katsikeas, Bell, & Morgan, 1998; Tambunan, 2009).

SMPTs are claimed to contribute to organisations by increasing productivity (Cohen & Ledford, 1994; Glassop, 2002) thus helping to improve organisational performance (Cohen & Ledford, 1994). Therefore, understanding the dynamics of this particular type of team can be seen as one of the important factors to ensure the success of small and medium KIFs. Previous studies have largely discussed project teams and other similar team working situations within large KIFs (eg. DeFillippi & Arthur, 1998; Druskat & Wheeler, 2003; Gann & Salter, 2000; Haas, 2006; Wageman, 2001) and there are only a few studies looking into SMPTs within small and medium-sized organisations (eg. Barker, 1993; Kirkman & Rosen, 1999). The definition of SMEs, specifically in the context of the service sector in Malaysia is that the numbers of full time employees in a Small Enterprise is between five to 19 employees and the sales turnover is between RM200,000 (£40 000) and less than RM1 million (£200 000). As for the Medium Enterprise, the numbers of full-time employees is between 20 to 50 and the sales turnover is between RM1 million (£200 000) and RM5 million (£1 million) (SMECorporation, 2009).

In the case of the SMPT, interaction within and across the team is seen as one of the critical components to ensure team success (Barker, 1993). In order for the project team to be successful, the process of interaction and learning from each other, especially within the project team, will assist in gaining new insights into a problem and new ideas for product development (Tenkasi & Boland, 1996). This results in different opinions and views which are likely to cause conflicts within teams (Simons & Peterson, 2000). Therefore, conflict is inevitable and potentially

generative as it involves people in different areas of expertise working on the same project. Thus, it is crucial for organisations to understand the role of conflict in SMPTs. The next section explores the existing literature on teamwork and its importance in organisations.

2.1 Teamwork in Organisations

Organisations utilise teams to encourage members with various knowledge resources to produce novel ideas that result in creative output. Therefore, teams are considered important in organisations especially when conducting organisational projects in knowledge-intensive companies. This is due to the needs of having experts from different areas working together to achieve the best outcome for the organisation.

Teams exist in many different forms according to their functions in organisations as well as the composition of the team members (Mueller, Proctor, & Buchanan, 2000). A team generally consists of three to 20 members and it can be permanent or temporary with a fixed start and end date (Glassop, 2002). Different types of teams have been identified such as, management team, parallel team, work team, project team (Cohen & Bailey, 1997) and a recent type of team, virtual team (Townsend, DeMarie, & Hendrickson, 1993).

The management team is a team which is responsible to coordinate and provide direction to their sub-units (Mohrman, 1995). This team is also responsible for the overall performance of a business unit. Due to the complexity of the business environment, this type of team is expanding as it is beneficial to firms in achieving

competitive advantage by applying collective expertise, integrating efforts, and sharing responsibility for the success of the firm (Mankin, Cohen, & Bikson, 1996).

On the other hand, the parallel team is a team consisting of people from different work units õto perform certain functions that the regular organisation is not equipped to perform wellö (Ledford, Lawler, & Mohrman, 1988). It exists at the same time, in parallel with the formal organisational structure. It generally has limited authority and can only make recommendations to the management. Parallel teams are mostly used for problem-solving and improvement-oriented activities (Cohen & Bailey, 1997).

Another type of team is the work team which is a continuing work unit in an organisation, responsible for producing goods or providing services (Cohen, 1991). Traditionally, a work team is directed by supervisors who make most of the decisions about what is done, how it is done, and who does it. However, there are also various forms of work team such as self-managing, autonomous and semi-autonomous (Cohen & Bailey, 1997). Self-managing work teams involve employees in making decisions that were previously the role of the managers. It is also claimed that most of the members of self-managing work teams are trained in various skills which are relevant to the tasks they perform (Cohen & Bailey, 1997).

As for virtual team, it involves people from different locations working together interdependently. It is also known as a Geographically Dispersed Team (GDT) which refers to a team whose members work across time, space, and organisational

boundaries with links strengthened by webs of communication technology (Tabari & Kaboli, 2004). Members of virtual teams communicate electronically, so they may never meet face to face (Townsend et al., 1993). Virtual teams allow companies to procure the best talent without geographical restrictions as the team members are required to work across boundaries through systems, processes, technology, and people (Hambley, O'Neill, & Kline, 2007).

In terms of the project team, it is formed according to the specific project by the organisation and only for a specific period of time until the completion of each project. The team members consist of experts from different departments with different sets of skills so that their specialized expertise can be applied to any particular project. The team will work together toward the same objective, which is usually to produce a one-time output such as a new product or service to be marketed by the organisation (Mankin et al., 1996).

However, the project in which this type of team is involved may also include improvement over existing products or services. For example, new product development teams may gather their team members from marketing, engineering, and manufacturing departments. When a project is completed, the members either return to each of their departments or continue to the next project. Their ability to undertake multiple activities simultaneously benefits the organisation as it saves time. Therefore, most companies apply project teams as a response to time-based competition (Stalk & Hout, 1990).

Particularly for this research, the project team has been chosen as the main focus since the project-based nature of the team, with specific deadlines diverse team members, is seen as generating the occurrence of conflict especially when different people work together towards the same objective. Similar to the work team, there are two main types of project team: self-managing and leader-led (Tata, 2000). The major difference between these two teams is that a leader-led project team requires the existence of a leader within the team; meanwhile, within the self-managing project team, there is no existence of a formal, internal leader as the team manages and organises its tasks by itself.

2.1.1 The Self-Managed Project Team (SMPT)

The SMPT consists of interdependent individuals who have accepted responsibility for a group task and share this responsibility by monitoring and controlling the contributions of its members (Cohen & Ledford, 1994). This type of team is also known as a õ*bossless team*ö which describes the structure of a team that has no leader (Barry, 1991). Organisations, nowadays, regard these õ*bossless teams*ö as the key to solving complex problems, increasing productivity, and heightening creativity in organisations (Barry, 1991).

The concept of self-managing teams was originally developed from the Socio-Technical Systems (STS) perspective which aims to optimize the social and psychological aspects with the task and technical aspects of a work system (Stewart & Manz, 1995). This approach attempts to create a flexible

work structure in order to face the changing demand of work (Emery, 1993) which results in the shift from individual to group focused work where teams are formed in organisations according to individual expertise and any particular project. The teams are then given the responsibilities and autonomy over their tasks and responsibilities are delegated to the team members rather than any leader, which differs from the traditional approach of performing work (Stewart & Manz, 1995).

The self-managing team members have a variety of abilities which are a result of utilising a combination of experts from different areas. They are given certain discretion regarding decision making which involves the decisions on the method of conducting and planning their tasks as well as the division of tasks (Cummings, 1978; Orsburn et al., 1990). These characteristics empower the group where the team membersø involvement is important and they are given the autonomy to control any variations from the objectives, which then contributes towards increasing their productivity and working satisfaction. This team will work towards producing an output which is either a product or services which will be presented to their clients. There are many definitions in the literature to describe SMPT and **Table 1** below summarises the definition from different authors.

Table 1: Definitions of SMPTs

Author	Definition
Langfred, 2007 pg.885	õ...its **freedom and discretion** as well as the **ability to organise** its internal work and structure to best accomplish goals.ö
Druskat & Wheeler, 2003 pg.435	õa team that manages itself that requires a **unique approach to leadership.**ö
Glassop, 2002 pg.227	õ...consists of three to 20 membersö õ...**interdependent individuals** that have accepted responsibility for a group task and **share this responsibility by monitoring and controlling** the contributions of its members.ö
Wageman, 2001 pg.559	õA team that has the authority and accountability for **executing and managing** their work but within a structure and toward purposes set by others.ö
Yeats & Hyten, 1998 pg. 16	õTypically consists of five to 15 employees who are responsible for **managing and performing** technical tasks that result in a product or service being delivered to an internal or external customer.ö
Wageman, 1997 pg.49	õThe team itself, rather than managers, takes **responsibility for its work**, **monitors its own performance**, and **alters its performance strategies** as needed to solve problems and adapt to changing conditions.ö
Cohen & Ledford, 1994 pg.13	õA group of **interdependent individuals that can self-regulate** their behaviour on relatively whole tasks.ö
Orsburn et al, 1990 pg. 8	õ...**cross functional skills** within the team itself, much better **decision making authority** and better access to the information they need for making sound decisions.ö
Wellins et al. ,1990 pg.3	õí team members work together to **improve their operations**, **handle day-to-day problems**, and **plan** and **control** their work.ö
Manz & Sims, 1987 pg.124	õThere is a legitimate role of **external leaders** of self-managing teams and it **differs considerably from the traditional leadership role**.ö

Source: Compiled by author

Definitions from the various authors highlight the main characteristics of the SMPT as below:

1) Consist of interdependent individuals whose tasks are related to each other in order to achieve the objective of the project.

2) Members are given the responsibility and discretion and freedom over the decision making processes as well as organising, executing, performing and managing their work.

3) Requires a different approach of leadership than other forms of team.

A review of these definitions shows that the definition of the SMPT is limited to the processual aspect which involves the authority, freedom and discretion of the team members in their work processes such as to manage, perform, execute and monitor their tasks (eg. Langfred, 2007; Wageman, 1997; Wageman, 2001). This highlights some important attributes to the definition which includes interrelated tasks, self-regulation, discretion, ability and responsibility. On the other hand, the definition by Druskat and Wheeler (2003) and Manz and Sims (1987) focus on the structural aspects of the SMPT which highlights the needs for a unique leadership approach which suggests the existence of an external leader for the team.

Specifically, the definition that is most suited for the present study involves both the behaviours and activities of the team members as well as the team structures. Therefore, in this study, the SMPT is defined as a non-hierarchical team of three to 20 interrelated individuals which is dominated by peer-to-peer relations, where each member has the ability (knowledge and skills) to conduct their tasks. This team is given the discretion and authority to manage their working operations and decision making processes as there is no

identifiable leader within the group which will then result in an output for the organisation.

These characteristics give the group the autonomy and competence necessary to control any distractions from achieving the project objectives, which will then contribute towards increasing productivity and working satisfaction. The team must include skilful members who are experts in their areas in order to allow them to pursue the team objectives without having to depend on any external support. The team members should also be able to adjust their behaviour and choose the most appropriate way of conducting their task and overcome any problems when unexpected problems arise.

SMPTs have been widely implemented in organisations due to the benefits in terms of improving organisationsø productivity (Cohen & Ledford, 1994), quality (Glassop, 2002), effectiveness (Dunphy & Bryant, 1996), performance (Cohen & Bailey, 1997; Muthusamy, Wheeler, & Simmons, 2005) as well as employeesø satisfaction (Kirkman & Rosen, 1999). Furthermore, it also increases team membersø involvement, motivation and satisfaction as they will develop a sense of ownership and pride in their work (Cohen & Bailey, 1997). However, there are also studies indicating that the team members are also subjected to greater work stress (Mahmoud Ezzamel & Willmott., 1998; Sewell, 1998).

Most research on SMPTs has focused on the benefits, performance and effectiveness (eg. Cohen et al., 1996; Kirkman & Shapiro, 1997; Muthusamy et al., 2005). For example, Muthusamy, Wheeler and Simmons (2005) discuss how the adaptation of the SMPT benefits an organisation by increasing innovativeness through its team members cooperation and communication process which requires a unique style in order to achieve better performance. Meanwhile, Kirkman and Rosen (1997) argue that one of the factors which determine the successfulness of SMPTs is based on how culture-based resistance is being effectively managed within the team.

Interestingly, the literature on SMPT neglects one important issue which is on understanding the social dynamics of this particular type of team. Social dynamics, in this context, refers to the changes which occur in a team and its social progresses to react to influences within and outside of the team (Cartwright & Zander, 1960). Understanding the social dynamics of this type of team is important as it involves people from different areas of expertise working together and being given the authority to manage themselves which are difficult and challenging for the team members. As argued by Duarte and Snyder (2001), a person's behaviour results from their functional background. Therefore, a functionally diversified team with members from various departments may potentially promote misunderstanding, and cause the team to have social dynamics that keep it in the stages of problem solving and conflict resolution. This will then affect the team's performance (Shaw, 1981).

The diversity and dissimilarity amongst team members created faultlines as defined by Lau and Murnighan (1998), a divide amongst the group's members on the basis of one or more attributes such as demographic characteristics. Demographic faultlines exist when a group contains distinct subgroups that differ on multiple demographic features. The existence of these demographic faultlines in teams is evident to increase conflicts and behavioural disintegration which in turn lead to poor team performance (Li & Hambrick, 2005b). Demographic attributes such as age, gender and race are likely to be the most salient attributes especially at the initial stage of a team's formation.

Therefore, these attributes will form a strong basis for faultlines in newly formed teams. However, over time such surface-level attributes are likely to lose their salience and, instead, faultlines may be formed based on deep-level attributes such as personality traits, beliefs and values (Harrison, Price, & Bell, 1998) or informational diversity such as functional and educational background (Homan, van Knippenberg, Van Kleef, & De Dreu, 2007). In addition, it is argued by Pelled and Adler (1994) that informational diversity can stir relationship conflict, as group members personalise the differences in their professional paradigms and priorities.

Similarly, a study by Li and Hambrick (2005b) finds that groups with activated faultlines -where faultlines are actually perceived by subgroups

based on the demographic characteristics - were more likely to have high levels of group conflict, and lower levels of satisfaction and group performance, than dormant faultline groups, where potential faultlines are based on demographic characteristics.

The existence of faultlines and the changes and adaptability of team members towards handling uncertainty and changing working environments - in this case, handling conflict - throughout each of their projects are still unexplored. Thus, investigating how this type of team changes in different situations will provide us with an understanding of the effects of different types of conflict - either it is harmful or beneficial (Tjosvold, Poon, & Yu, 2005) - which occur throughout a project and how it influences the team. This will also enable organisations to pay attention to this aspect in order to ensure that they benefit from the implementation of the SMPT as expected.

2.2 Conflict in the Project Team

Conflict is inevitable in any team working situation where team members with different views exchange ideas and opinions regarding their tasks. Conflict is defined as incompatible activities, where one person's actions are interfering, obstructing and making the behaviour of others destructive (Deutsch, 1973). Basically, conflict is categorized into two types: task conflict and relationship conflict (Jehn, 1997). Task conflict refers to disagreement and controversy among group members about any decisions, ideas and opinions on the best way to achieve the tasks' objective (Devine,

1999; Simons & Peterson, 2000) meanwhile relationship conflict refers to interpersonal incompatibility which involves emotional aspects such as annoyance and tension amongst team members (Simons & Peterson, 2000).

Conflict is regarded as something that would benefit the organisation as it helps to understand how members within the team relate to each other (Levine & Thompson, 1996) and help to improve the relationships among individuals following confrontation of their differences (Rubin & Levinger, 1995). The disagreement amongst team members would allow them to rethink their views and think of alternative solutions for their problem (Levine & Moreland, 2006) which leads to promoting individual and team creativity, enhances the quality of decisions being made and increases individual involvement in the organisation (Tjosvold, 1997).

Although the benefits of sharing different opinions and ideas are clear, especially in decision making processes within teams in organisations, it is also argued in the literature that conflict, either task or relationship, brings negative effects on team performance (De Dreu & Weingart, 2003) such as in achieving a teamøs goal as it has the potential to harm group processes, for instance, cooperation and collaboration during the process of disagreement over each otherøs viewpoints and opinions which raises the tension and annoyance amongst the team members.

In contrast, it has also been argued that the effect of conflict, either being beneficial or harmful to teamwork, depends on the different types of conflict (Tjosvold et al., 2005). This has been widely highlighted in the literature which suggests that task

conflict is beneficial to teamwork as it tends to promote team effectiveness, whereas, relationship conflict is harmful as it interferes with group outcomes and results in low group effectiveness (eg. Amason, 1996; Jehn, 1995). Task conflict has been perceived to be improving decision making outcomes and group productivity through constructive criticism (Amason, 1996).

An example is a longitudinal study of intragroup conflict by Jehn and Mannix (2001) which focuses on groups of postgraduate students in conducting their tasks and the effect for the overall team performance associated with different types of conflict which shows different patterns at different stages of the project duration. It is evident that higher group performance is characterised by low levels of relationship conflicts and moderate levels of task conflicts at the midpoint of the group process. However, it is also evident in the study that if conflicts occur at the end of the team process, it will result in low group performance (Jehn & Mannix, 2001).

With regard to this, it is also evident that relationship conflict decreases mutual understanding amongst team members which hinders the completion of organisational tasks as time is often spent on interpersonal aspects rather than on technical and decision making tasks. It causes the team members to be negative and suspicious towards others (Jehn, 1997). As for task conflict, it is evident that team members show good progress when faced with such conflict rather than during relationship conflict as they stimulate discussion of ideas which helps the team perform better (Jehn, 1995).

Research continues to attempt to identify the triggers and effects as well as the benefits and harms of conflict (Yang & Mossholder, 2004) which has been the outcome of a particular conflict situation. It is apparent to the author that there is still lack of research which explores the interrelation of the different types of conflict at different stages of project team development and how it affects them. Conflict might occur at different stages or at all stages of a project and this will require the team members to take a different approach depending on the situation. This will bring different consequences to the whole project team. Therefore, it is essential to investigate the occurrence of different types of conflict in a longitudinal manner in order to identify its interrelatedness and whether it is being beneficial or harmful in different situations throughout any particular project.

2.3 Conflict Management Strategies in Project Teams

Conflict management strategies have been discussed in the literature which underlines different ways of conflict handling in teams and organisations. The various conflict management strategies and lack of consensus in the wider literature have resulted in the recognition of different styles of conflict management strategies as highlighted by researchers (eg. Chen, Liu, & Tjosvold, 2005; De Dreu & Van Vianen, 2001; Lovelace, Shapiro, & Weingart, 2001). Traditionally, conflict handling strategy has been viewed as a way which should encourage and creatively channel conflict into effective problem solving (Deutsch, 1973). However, recent researchers have adopted a different perspective as conflict handling is seen not only for effective problem solving, but also aims for effective management as well as a way of meeting the time frame of any particular project (Chen et al., 2005; De Dreu

& Van Vianen, 2001). An example of conflict handling strategies with the aim of effective management is by Blake and Mouton (1964) who propose two basic dimensions: whether the management is having high or low concern of the productions or on the people. The first dimension is the degree to which a person attempts to satisfy their own concern and the second dimension is the degree to which a person attempts to satisfy othersø concerns. The combination of the two dimensions result in five conflict management styles: integrating, obliging, dominating, avoiding and compromising as shown in **Figure 1**.

Figure 1: The Dual Model of Conflict Handling Styles

	Concern for others	
	High	**Low**
High	Integrating	Obliging
	Compromising	
Low	Dominating	Avoiding

Concern for Self

Source: (Rahim, 1985) p. 84

Other major approaches of managing conflict are identified from Deutsch's (1973) theory of cooperation and competition. The conflict management strategies of Deutsch (1973) are adopted by many researchers as a number of literatures discuss the cooperative-competitive conflict approach in managing conflict (eg. Alper, Tjosvold, & Law, 2000; Putnam & Poole, 1987). Deutsch (1973) argues that conflict

which is handled cooperatively or competitively affects the dynamics and outcomes of conflict.

Conflict is managed in a cooperative way when people believe that their goals are linked; that they would help the other to achieve their goals; that one move toward goal attainment and the other in the team also moves toward goal achievement. By emphasizing the team's goal, a cooperative approach will be achievable. Recognizing that the success of one promotes the success of the other, conflict is being viewed as a mutual problem that needs common consideration and solution. The emphasis on cooperative goals leads to mutual exchange and an open-minded discussion which incorporates several positions to form a resolution (Deutsch, 1973) which is good and beneficial for everyone. This approach is also characterised by accurate communication, understanding, responsiveness of each other and the development of mutually satisfactory solutions (Tjosvold, 1985).

With this mutual affirmation and success, team members are confident that they can handle their conflicts and continue to deal with conflicts successfully. Repeated effective conflict resolution leads to high quality, implemented solutions that result in productive conflict (Chen et al., 2005) and it is also evident that project managers adopting a cooperative approach towards conflict are more open in their conflict management and become more successful leaders (Wong, Tjosvold, Wong, & Liu, 1999).

In contrast, in the competitive style of managing conflict, as one party succeeds, the other moves away from achieving the objective. Those who chose this strategy tend to view conflict as a win-lose struggle, as a competition; if the other wins, they lose (Wong et al., 1999). The emphasis on competitive interests either increases the tendency to avoid a direct discussion or leads to a closed-minded discussion which hinders the process of decision-making (Tjosvold, 1997) and it effects the communication process and results in low commitment of team members (Wong et al., 1999). It is also highlighted that cooperative conflict solving and avoiding competitive conflict helps to improve team productivity and commitment. The competitive approach is viewed as bringing negative impact because one party displays a negative attitude towards alternative resolution and uses power as control over the other (Wong et al., 1999). However, Walther (1997) argues that the competitive approach may encourage participants to be involved in tasks as when team members hold contrasting opinions, conflict that arises will challenge team effectiveness and performance.

As for conflict avoidance, it attempts to smooth over conflicts and minimize discussion regarding the conflicting matters (Chen et al., 2005). It is a strategy being chosen when those who are involved in any conflict try to maintain harmony by avoiding direct expression of frustration or annoyance (Tjosvold & Deemer, 1980). Avoidance reflects the intention that issues should not be openly discussed and dealt with. Studies overall indicate that avoiding conflict reinforces competitive conflict whereas a more open way complements cooperative conflict (Barker, Tjosvold, &

Andrews, 1988). This shows that this type of conflict handling will be the common choice for people who aim to maintain good relationships.

Conflict avoidance also appears to be more familiar in the Asian culture. Researchers have documented that Asians tend to use an avoiding approach to deal with conflicts where Westerners tend to confront conflict directly (Cho & Park, 1998; Graham & Kim, 1988; Kirkbride & Tang, 1992). This is due to the collectivist culture of the Asians where identity is embedded in their relationships and people have a strong sense of their connections with others and they highly value harmony. Consequently, they are highly sensitive to the possibility of losing social face and respect in front of other people; they avoid conflict so that they do not feel that their competence is being questioned (Cocroft & Ting-Toomey, 1994; Leung, 1997).

Teams that avoid conflict also tend to deal with conflicts competitively, but not cooperatively and the reliance on conflict avoidance is associated with low levels of productive conflict and team effectiveness. For example, project managers who are found to be competitive by avoiding conflict are found to be decreasing employee commitment (Barker et al., 1988) and it can result in disastrous decisions (Mann & Janis, 1989).

Tjosvold and Sun (2001) suggest that avoidance is motivated by the intention to protect the relationship and involves confidence that the other will be helpful as well as having the fear of revenge which views avoidance as a more proactive approach. However, it has also been argued (Cho & Park, 1998; Rahim, 2001) that besides

aiming to maintain relationships, conflict avoidance is also adopted by those who are concerned only with themselves, or being selfish, as it is motivated by a low level of concern for relationship as well as the concern to solve the conflict. People who avoid conflict can be considered to further their self-interest in a way that they do not want to show their weaknesses to others and they want to earn respect from others.

The appropriateness of conflict avoidance is argued to be dependent on cultural context (Ohbuchi, Fukushima, & Tedeschi, 1999). However, current research has found that avoidance is not only particularly appropriate for a collectivist society where relationships are valued highly for the people, for example, in Asia (Hofstede, 1980). It is also evident that avoidance is also common in the Western society or organisation (Dean, Brandes, & Dharwadkar, 1998). Therefore, it is important to understand that the conflict handling style is considered appropriate for a conflict situation if its use leads to effective solution to a problem. Although it was suggested that an integrating or problem solving style is most appropriate for managing conflict (Blake & Mouton, 1964; Likert & Likert, 1976) in order for conflict to be managed effectively, one style may be more appropriate than another depending upon the situation (Rahim, 2001).

2.4 Conflict Management Strategies in SMPTs

Conflict management strategies being applied is claimed to be influencing other decision-making activities within a team (Kuhn & Poole, 2000). It has been suggested in the literature that a number of conditions would help in managing conflicts, these include focusing on the conflict itself rather than involving any

emotional or personal problem, consideration of a wide range of alternative solutions or creating a cooperative climate (Putnam & Poole, 1987). This will ensure that the strategies being implemented are beneficial to the team and reduce the time dealing with the conflict in order to ensure that the project team meet the project deadline, especially in the SMPT, where the team members are responsible for the problem solving processes.

A number of scholars (eg. Kolb, 1992; Tjosvold & Sun, 2002) have argued that conflict handling also involves hidden ways of addressing the conflict situation rather than direct actions. Various ways that can be used to avoid direct confrontation have been discussed, such as purposely changing the topic of conversation, expressing disagreement by forms of body language, reacting via a third person in order to have the individual enact the actual confrontation or by pointing out common values and aims instead of directly pursuing the matter of conflict (Kolb, 1992; Morrill, 1992).

In terms of SMPTs, previous study demonstrates that conflict transforms teams in terms of reallocation of highly interdependent task responsibilities of team members to individuals. It also involves individuals taking drastic change to perform entire team tasks by themselves as individuals thus enabling reduced interdependencies in the project teams. For example, DeLeon (2001) observes that members of self-managing teams are reluctant to deal with conflict and often ignore or avoid it.

In addition to this, Li and Hambrick (2005a) find that relationship conflict leads to avoidance, reduced interaction and alienation of members, resulting in ‑behavioural

disintegrationø which refers to the degree which mutual and collective interaction exists in group (Hambrick, 1994). A lack of resolution on issues related to decisions, ideas and opinions, which can distract task completion, will likely lead people to be less dependent on the people with whom they disagree. This is in line with Amason (1996) and Jehn (1995) who report that task conflict leads not only to tension, but also influences team members to isolate their activities from one another.

An ethnographic study by Barker (1993) observes how turnover and the introduction of new team members disrupts otherwise stable teams, leading to increased conflict and a redesign of control systems within the teams. That is an example of self-managing teams reducing individual autonomy and interdependence as a response to conflict. Such transformation of self-managed team members, when faced with conflicts, shows how conflict and its management play an important role in the social dynamics of this particular type of team. Therefore, a conflict management strategy is considered as an important factor which influences the dynamics of the SMPT. It does play an important role in teams as it provides further understanding of how members within teams relate with each other (Levine & Thompson, 1996).

A number of studies focus on the importance, benefits, weaknesses and management of conflicts in organisations (eg. Barker et al., 1988; Chen et al., 2005; Tjosvold & Sun, 2002); in addition, much is known about the causes and effects of conflict in teams (Jehn & Bendersky, 2003). However, what unknown is whether the existing studies can explain the effect of conflict management strategies towards the social dynamics of project teams, particularly self-managing ones.

There are very few empirical studies which examine and analyze factors that affect the dynamics of SMPT in organisations. One example is a longitudinal, quantitative study conducted by Langfred (2007) which suggests that increased team conflict is associated with lower intrateam trust, which may influence team structure by reducing individual autonomy and loosening task interdependencies in teams. The effects of the way conflict is managed towards the social dynamic of self-managed project teams has remained largely unexplored, which represents a significant shortcoming in the understanding of SMPTs. Moreover, despite an abundance of study on teams and their processes and on the importance of team and task structure (eg. Wellins et al., 1990; Yeats & Hyten, 1998), little is known about how self managing teams change in order to adapt themselves to overcome different types of conflict and understanding whether conflict is being beneficial or harmful to the team.

2.5 Leadership in Project Teams

Generally, project teams operate with the existence of a formal leader within the team. The leader carries out the responsibility of being in charge of the needs of the team members in order to achieve the project objective (Cleland, 1995). The team member is highly dependent on the leader in important processes within and outside the team such as decision making and problem solving regarding any aspect of the project. The main tasks of a leader within this type of team as highlighted by West (1994) are: setting clear shared objectives; changing the roles of team members;

developing individual tasks; evaluating individual contribution; providing feedback on team performance as well as reviewing the team strategies and objectives.

Adding to that, the leader is also responsible for managing personnel resources as well as material resources (Fleishman & Zaccaro, 1992) which includes obtaining, allocating, developing, motivating and utilising personnel resources as well as managing, obtaining and allocating material resources and then maintaining, utilising and monitoring the material resources (Fleishman & Zaccaro, 1992; Zaccaro, Rittman, & Mark, 2001).

In the event of conflict within teams, the team leader is responsible for providing solutions to the extent that they may need to become highly involved in the conflict in order to solve it which will then assist the team in achieving their project objective and increase the project team performance. However, the dilemma which is usually faced by the leader is the balance between the team and the organisational objective as well as managing individuals within the team as it involves different people with different styles of working and thinking. Nevertheless, the existence of a leader within the team is beneficial as this helps the team members to focus on their task and the managing and organising role is being carried out by the leader.

Leadership is defined as a process of providing guidance to a team which includes the process of influencing the decision on the teamøs objectives, motivating the teamøs behaviours towards the objectives (Yukl, 1989) and influencing on group maintenance and culture (Stewart & Manz, 1995). Leadership is crucial in ensuring

the effectiveness of teams (Cohen & Bailey, 1997) as well as being considered a critical factor which has to be given attention as an appropriate leadership approach will ensure the successfulness of a team towards achieving its objective (Kirkman & Rosen, 1997). Even though the nature of leadership changes at different levels in the organisation and different working environments, the basic responsibility of a leader requires them to define the team's goals and strategies as well as planning to accomplish them (Zaccaro, 2001).

Besides, effective team processes will also relate to the effectiveness of leadership tasks (Zaccaro et al., 2001). For example, in a team which consists of experts and experienced members, they can take over several leadership roles which enable their leader to have extra time and resources to focus on other tasks. Thus, successful organisational team performance depends jointly on effective team and leadership processes.

Teams are always working in a dynamic and complex environment. This increases the needs of team members to coordinate their actions specifically in improving their work performance towards achieving the team's objective. Adding to that, the team members also need to be proactive in predicting any changes in terms of the work environment and their assigned tasks; they also need to respond to these changes. Even in a self-managing team, there exists an external leader (Cohen, Chang, & Ledford, 1997) who holds the responsibility of supporting the team to ensure the team's success. Hence, it is worth being able to understand how leadership and team processes are coordinated.

There are an abundance of literatures discussing both leadership (eg. Bass, 1990; Yukl, 1994) and team-group dynamics (eg. Forsyth, 1990; Levine & Moreland, 1990; McGrath, 1984). However, little is known on how leaders create and direct the team processes in achieving its objective. The literatures are limited only to providing prescriptions such as on the role of leaders and leaders' personalities for effective leadership in organisations (eg. Amabile, Schatzela, Monetaa, & Kramerb, 2004; Cleland, 1995). As according to Hackman and Walton (1986) "we have not found among existing leadership theories that deals to our satisfaction with the leadership of task-performing groups in organisations".

In addition, literatures on teams in organisations tend to either ignore leadership processes (Hirokawa, 1980) or specify it merely as one of several drivers of team performance (Salas, Dickinson, Converse, & Tannenbaum, 1992). It is arguable that leadership processes is one of the most crucial determinants of team effectiveness, particularly in organisations in which leaders play the main role in planning and strategizing for the team. Therefore, exploring into the processes of leadership, specifically in teams, will enable us to gain deeper understanding on how leadership and teams integrate together and to what extent the involvement of a leader is needed and beneficial to teams.

2.5.1 Leadership styles in project teams

Different styles of leadership have been identified in the literature such as engaging, involving, goal-oriented, visionary, democratic and commanding (Druskat & Wheeler, 2003; Gronn, 2002; Manz & Sims, 1987). These

differences are based on the approaches taken by the leaders in order to achieve the objective of a team or organisation.

In a model of leadership in teams, proposed by Stewart and Manz (1995), two dimensions of team leadership are highlighted: power of the leader and leader involvement. Power of a leader ranges from being fully democratic to total autocratic whereas leader involvement is based on the activeness or passiveness of a leader (Stewart & Manz, 1995). A democratic approach is often associated with the approach being used in self-managing teams which allows the team members to make decisions, manage and organise by themselves and only refers to the leader on certain occasions. Meanwhile, an autocratic approach is often associated with other types of team which shows how the team is instructed and being given rules or procedures to conduct their work (Stewart & Manz, 1995).

The leader involvement dimension concerns active involvement in teams related to the role being played by a leader who is always involved in any of the teamsø activities and always available to cater to team needs. On the other hand, a passive leader is not usually involved in the daily activities of the team and his presence is not directly felt by the team members.

Leadership styles are also categorised into being person focused or task focused (Salas et al., 1992). A task-focused leadership style focuses on an understanding of task requirements, operating procedures, and acquiring task information. Meanwhile, a person-focused leadership style facilitates the

behavioural interactions as well as attitudes that must be developed before members can work effectively as a team (Burke et al., 2006).

A task-focused leadership style is also known as transactional leadership which is built on dyadic exchanges between the leader and subordinate so that each derives something valuable, personally (Burns, 1978). While the subordinate performs their task and fulfills their personal goal, the leader provides rewards and acknowledgement to the subordinate who complies with their expectations. This type of leadership reflects behaviours in which there is a focus on reward contingencies and exchange relationships and the main focus of this type of leadership is on ensuring task accomplishment (Bass, 1990; Kuhnert & Lewis, 1987).

On the other hand, person-focused leadership is also known as transformational leadership (Burns, 1978). It is characterised by a meaningful and creative exchange between leaders and subordinates in order to bring about vision driven change in people and context (Bass, 1990; Burns, 1978). This type of leadership adopts a balanced approach, whereby leaders facilitate subordinatesø efforts to solve complex problems while, at the same time, assisting the subordinates to be more prepared to address future problems. This concerns the development of subordinatesø skills in self-management or self-leadership skills. Theoretically, all of the behaviours mentioned above have been argued to facilitate effective team processes and team performance outcomes through the promotion of team learning and adaptation (Hackman, 2002; Hackman & Wageman, 2005).

2.5.2 Positioning of the leader in project teams

With regard to the different approaches of leadership, these result in the various positioning of leaders in organisations. Two main categories of leader are identified: external leader; and internal leader. Even though both are responsible for the performance of the team, the leadership approach is different between the two. The leader is positioned either within or outside a team depending on the types of team and the nature of their work processes (Stewart & Manz, 1995) which influences the approach of leadership practice.

2.5.2.1 The internal leader

The internal leader is placed within a team and becomes part of the team and holds the responsibility of the execution and management of the team membersø tasks. The internal leader approach is bidirectional as they combine top-down and bottom-up approaches, meaning that they are the ones giving instructions as well as providing guidance for the team (Yukl, 1994); they will also be the person sending reports to the management which shows that they are expected to monitor, manage and organise the team members and their tasks (Druskat & Wheeler, 2003). All of the other team members depend on the internal team leader for the organisation, management and execution of their tasks. The responsibility also includes

problem solving and conflict handling which occurs in the team and also outside of the team.

It is argued that having an internal leader benefits a project team as the team members are able to focus on their assigned tasks; meanwhile the leader will be responsible for the process of managing and organising the whole team in order to meet the team's objective. This benefits the team as the team members will be more committed to their tasks rather than getting involved with the managerial aspects of the team. The team members will work based on the guidance of the formal internal leader and this will ensure that they are on track and able to meet the team's deadline according to the instructions of the team leader.

2.5.2.1.1 Distributed or shared leadership

Distributed leadership or shared leadership is also identified within the team where it involves either all or some of the team members to become involved with the process of leading based on their own expertise (Carson, Tesluk, & Marrone, 2007) rather than only one designated person as a leader. The practice of having distributed leaders in a team results in the team members leading and following each other based on certain aspects of their functions as well as responding to members in different areas. This creates better coordination and dependencies amongst the team members.

It is argued that the practice of shared or distributed leadership is beneficial to teams as it increases the commitments of team members as they feel responsible to the team (Carson et al., 2007) as well as influencing and supporting the others within the team. This is supported by Day, Gronn and Salas (2004) who suggest that the performance of the team is better when shared leadership is implemented.

2.5.2.2 The external leader

As opposed to an internal leader, the external leader is positioned outside the team which is at the boundary between the team and the organisation so that it can play the role of connecting the team with the organisation, creating a link between the two. The team members are the ones who are in charge of managing, organising and performing their tasks. The external leader is also known as coordinator, facilitator, supervisor (Stewart & Manz, 1995) or manager (Wageman, 1997). However, in this research, the term ‒leaderø is used to represent the manager that assumed the leadership role of external leader in the SMPT. The main role of this external leader in the SMPT is to lead people by inspiring and motivating them to lead themselves rather than managing work, which is the main role of a manager. This is in line with the argument by Yukl (2006) that ‒managerø is an occupational title which suggests that a person can have the title ‒managerø without actually leading and a person can be a leader without being a manager, thus acquiring the role of an informal leader.

Rather than giving commands and instructions to the team members, the external leader approach is often unidirectional, applying the bottom-up approach (Courtright, Fairhurst, & Rogers, 1989) as they are the ones who deliver the voices of the team members up to the top management. Their main role is giving consultation to the team by questioning, advising and giving information as their ability to persuade the team members is more important than showing their power by giving commands or instructions (Courtright et al., 1989). Participation of the leader is minimized to encouraging the team to manage themselves, to motivate and support the team members and to ensure that the team succeeds in managing themselves.

Little research is available on understanding the importance and the roles of these external leaders of SMPTs as the external leader's role is always ambiguous (Manz & Sims, 1987) because having an external leader is rather contradictory. It is also important to explore how the existence of an external leader affects team members and to what extent the participation of the leader is needed and beneficial to the team given the increasing leadership capacity which often resides in the SMPT (Day et al., 2004) which makes it unclear why a self-managing team requires any leadership at all.

2.6 Leadership and SMPTs

Leading a team which manages itself is a challenge as increased autonomy and control is given to the team which eliminates the existence of a leader. Team members of SMPTs make decisions by themselves, thus reducing one of the important roles of a leader. Previous research has discussed how these teams are independent, and do not need the existence and assistance of an internal team leader to make any important decisions regarding their assigned project (eg. Cohen et al., 1996; Orsburn et al., 1990). The team members are mainly responsible for any decisions regarding the project that they are involved in. Although it seems that raising the issue of leadership in a self-managing team is contradictory, these teams usually have some form of external supervision known as ±external leaderø which has been highlighted in the literature (eg. Druskat & Wheeler, 2003; Stewart & Manz, 1995).

According to Manz (1986), the influence of an external leader on facilitating self-regulating behaviours in SMPTs is important towards team success. An effective external leader refers to those who are able to build close relationships between the team members and the top management by acting as a bridge connecting these two parties, also known as the ±boundary spannerø (Cohen & Bailey, 1997). Similarly, Druskat and Wheeler (2003) state that the boundary spanning activity is important in ensuring the success of the external leader as is they who should be dealing with the team members as well as the management.

This supports the claim that one role of an external leader is to be a connector between the team and the management (Druskat & Wheeler, 2003) as well as providing assistance in certain aspects of the project which are out of the control of the team members such as the resources and financial issues. Even though an external leader might be responsible for the team's performance, most of the time, they do not get involved closely with the team in the daily operational activities and decision making processes (Wageman, 2001).

It is also highlighted that an external leader would usually be the ones asking questions rather than giving instructions (Courtright et al., 1989). By questioning, the external leader is aiming for the improvement of the team performance by getting the information needed and then encouraging the team members toward achieving their goals (Courtright et al., 1989). The approach of leadership undertaken by external leaders in SMPT is usually a combination of democratic and passive involvement (Stewart & Manz, 1995).

On the other hand, it is also beneficial to highlight that when people from different background and expertise, as well as different levels of experiences, work together it may not be easy for them to be able to cooperate well with each other. This will result into difficulties communicating amongst them which will then require someone to assist them to overcome the difficulties. Adding to that, there are also occasions when the team members of SMPTs need the leader to manage and organise the team rather than doing it themselves. It has been found in the literature that it is difficult to find a balance between guidance and directions and employee

participation and discretion, which then results in role conflict (Letize & Donovan, 1990). Thus, a participative leadership style, as suggested by Manz and Sims (1987), might be helpful in this situation.

Additionally, according to Cohen et al. (1996) the best way to lead SMPTs is to have no leader at all, as because there is no relationship between leadership behaviour and the effectiveness of the SMPT. It is argued that what is most important in team performance is the team members' involvement rather than external leadership. This suggests that focus should be given to team member behaviours which may provide insight into effectively facilitating self-managed team processes.

Moreover, interference by the external leader is said to interrupt the process of the team which is able to manage themselves. This is supported by Beekun (1989) who highlights that an SMPT without a leader performs better than with a leader, either internal or external. Therefore, no matter which approach is taken by the leader, it does not contribute to the success of the team. Similarly, several researchers have discussed how leaders have been identified as one of the main reason for the failure of self-managing team development (Cummings, 1978; Letize & Donovan, 1990).

Overall, the literature of leadership in SMPTs mostly focuses on the appropriate approaches of the external leader and whether or not it leads toward the team's success. Yet, there exists very little research on how the appropriate external leader approaches (ie. support, motivation, etc.) can be integrated to assist the team in different situations throughout their work processes. One of the important aspects

needing further exploration is the role definition of the external leader as well as the extent of involvement of the leader in the team's work processes which will then provide better understanding on which approach should be taken in order for the leader to lead towards the team effectiveness and ensure the team success (Manz & Sims, 1987). Thus, it is worth exploring whether the external leader approaches highlighted in the literature are applicable in all situations and how these approaches change during SMPT work processes.

2.7 Criticism of the Literature

The literature perceives the SMPT as a type of team requiring a different approach towards its structure, processes and leadership. Based on the review presented in the above section, the main criticisms are:

1. Despite the abundance of research on team working in organisations, research focusing on SMPTs is still lacking. Most of the literature focuses on other types of teams and those specifically on SMPTs are being researched in a large organisational setting (eg. Clifford & Sohol, 1999; Cohen et al., 1996; DeFillippi & Arthur, 1998; Gann & Salter, 2000; Haas, 2006; Wageman, 2001) and there are only a few studies looking into SMPTs within small and medium sized organisations (eg. Barker, 1993; Kirkman & Rosen, 1999). When discussing small and medium sized KIFs, it is important to understand that they are highly dependent on projects to survive, whereas large KIFs have the ability to offer other complementary projects whenever faced with failure in their projects. Therefore, the chosen research setting, focusing on

SMPT within small and medium KIFs, is important as the SMPT is vital in ensuring the success of the particular size of firms especially in developing countries such as Malaysia.

2. SMPTs have been implemented in organisations due to various advantages and the majority of research on SMPTs discusses its benefits towards an organisation's performance and effectiveness (eg. Cohen et al., 1996; Kirkman & Shapiro, 1997; Muthusamy et al., 2005). However, the literature has ignored an important aspect of SMPTs, which is on understanding the social dynamics of the teams with regards to conflict occurrences throughout a project. The changes and the adaptability of the team members in handling conflict are still largely unexplored. Attention should be given to investigating how this type of team changes in different situations and how it influences the team as they are self-managing rather than being managed by a formal leader, which creates a significant difference on how the team operates compared with other types of team.

3. Conflict might be beneficial or harmful to teams in organisations depending on the types of conflict and the conflict situation. It has been argued that task conflict is beneficial as it leads to good team progress by stimulating the creation of new ideas, whereas relationship conflict is harmful as it will involve negative emotions which will hinder the team working process (Jehn, 1995). Given the benefits or harms of various types of conflict in the literature, little is known concerning the interrelation of the different types of conflict at different stages of project duration and how it affects the project

team, specifically the SMPT. Conflict might occur at different stages or at all stages in a project and this will require the team members to take different approaches depending on the situation. This will then bring different consequences to the whole project team. Therefore, it is essential to investigate the occurrence of different types of conflict in a longitudinal manner in order to identify its interrelatedness and whether it is being beneficial or harmful in different situations throughout a project.

4. Various types of conflict management strategies have been discussed in the literature (eg. Barker et al., 1988; Chen et al., 2005; Tjosvold & Sun, 2002) of which each has its own impact towards the organisation. The decision on which conflict management strategies are implemented is important in ensuring smooth work operations as it will provide effective solutions to conflict. Although it was suggested that there are certain strategies which are appropriate in order to effectively manage conflict, the literature also suggests that more than one strategy may be applied in handling conflict, depending on the situations (Rahim, 2001). In the duration of a project which consists of different phases from the beginning to the end, the project team will encounter different situations and different types of conflict which requires them to effectively handle conflict. In the case of the SMPT, where team members are responsible to manage conflict, the approach taken by the team during the process of managing conflict and how the team adapts or changes during the occurrences of conflict is still largely unexplored.

5. Previous research has discussed the unique approach of leadership in SMPT which highlights the non-existence of a formal leader within the team. The team members are given the autonomy and freedom on certain aspects of their work which includes the decision making process which reduces the need of an internal leader (Cohen et al., 1996; Orsburn et al., 1990). The unique approach of leadership towards SMPT requires the existence of an external leader which carries a more complex role than traditional team leadership (Druskat & Wheeler, 2003). Therefore, it is interesting to understand the extent of how this external leader is involved within the SMPT. As the roles and importance of the external leader within the SMPT are still ambiguous, further research is highly needed in order to explore this issue (Cohen et al., 1997; Manz & Sims, 1987) which will be beneficial in understanding the process of leadership in SMPTs and to what extent an external leader is involved in the team work process.

Based on the criticism of the literature, the research gaps are identified which lead to the formulation of a refined research question. A summary of the research gaps and the research objectives are presented in **Table 2.**

Table 2: Research Gaps and Objectives

Research gaps	Research Objectives
Need to explore the evolvement of different types of conflict in SMPTs and how it is beneficial or harmful at different stages throughout a project.	To further explore conflict evolvement by identifying the different types of conflict in SMPTs.

To determine the effects of conflicts which occur throughout a project and how it influences the team. |
| Need to understand the effects of conflict management strategies towards the social dynamics of the SMPT. As argued by Langfred (2007) team structure may change with the effect of increased conflict in teams. Little is known on how SMPTs adapt or change themselves during conflict. | To further investigate the social dynamics of SMPTs through the team membersø activities in different conflict situations and how each conflict situation is being handled. |
| Researchers have argued that leadership is an important factor in determining a teamøs success or failure (Cohen et al., 1997; Kirkman & Rosen, 1999) but none have shown either theoretically or empirically clear understanding of the approaches of an external leader in SMPT during different conflict situations. | To explore the involvement of the leader and their approaches in conflict situations in SMPTs. |

The research gaps and objectives motivate the formulation of these refined research questions:

How does conflict management strategy affect the social dynamics of the SMPT within small and medium knowledge-intensive firms (KIFs)?

> i. *What type of conflicts and conflict management strategies exists in SMPTs?*

> ii. *How do different conflicts and conflict management strategies influence SMPTs?*

iii.   *How do conflicts and its strategies influence leadership within SMPTs?*

2.8 Chapter Summary

In summary, this chapter explored the team working literatures in organisations and reviewed the differences of conflicts, conflict management strategies as well as the various leadership approaches in teams, particularly in SMPTs. The literature suggests that it is important to understand the different forms of conflict management strategies on different situations and how it affects project teams. As for literature on leadership, the importance of distinguishing between different types of leadership approach with relation to different forms of teamwork is highlighted. **Table 3** below summarises the differences of conflict management strategies and leadership issues in Self-Managed Project Teams (SMPTs) and Project Teams (PTs).

Table 3: Comparison of conflict management strategies and leadership issues in SMPTs and project teams.

	SMPTs	PTs
Conflict Management Strategies	Team members are responsible for solving conflicts. Strategies being widely used are conflict avoidance and ignorance.	The leader will be responsible for managing and solving conflicts. Conflict management strategies being used include confrontation, avoidance, cooperation and compromising.
Leadership	The external leader positioned outside the project team. Unidirectional approach: bottom-up **Leader's role:** Democratic and passive involvement in the project team. Supporting and motivating the team members. Assisting the team to connect with the top management.	The formal leader positioned within the project team. Bidirectional approach: bottom-up and top-down **Leader's role:** Monitoring as well as controlling the project team. Giving instructions and directions to the team members. Sending reports to the management of any issues regarding the project team.

CHAPTER 3

METHODOLOGY

This chapter describes the overall approaches to the research process with regard to the exploration of conflict management in SMPTs. The first section discusses the research paradigm being adopted in this research. This includes the justification on the methodological choice for the study. The second section focuses on the research strategy which includes case study design and the sample selection method. The third section discusses the research activities including the type of data being used in this research as well as the data collection method and approach for data analysis. Finally, the discussion on the quality of the research is presented.

3.0 Research Paradigm

Each researcher needs to decide what assumptions are appropriate for the topic of interest and then use strategies and methods consistent with the selected paradigm (Crabtree & Miller, 1999). On deciding the research paradigm, the objective of the researcher and the nature of the research need to be clearly identified. Specifically, the present research intends to explore the effect of conflict towards the social dynamics of SMPTs. The research focuses on exploring on how conflicts evolve and

being dealt with in SMPTs, identifying the types of conflict management styles in SMPTs and how these influence SMPTs in the Malaysia context. The effort is made because, although there are studies regarding conflict management strategies in project teams that have been conducted in the West, they cannot fully explain the phenomena in different cultural settings, and Asia, specifically Malaysia certainly has certain practices, values, beliefs, and politics that differ from Western environments (Fontaine & Richardson, 2003).

Adding to that, most of the study on conflict management on project teams focuses on other forms of project team (Chen et al., 2005; Jehn & Mannix, 2001) rather than self-managing ones which are considered important by the researcher. This is due to the current wide implementation of SMPTs in organisations (Barry, 1991; Cohen & Bailey, 1997; Druskat & Wheeler, 2003; Lawler, 2001). With regard to one important feature, which does not involve any formal leaders within the team (Mohrman, 1995; Orsburn et al., 1990) it is interesting to explore how conflict is being managed without the existence of a formal leader in the SMPT.

In addressing the concern that the researcher's selected paradigm should be appropriate for the nature of the research problem, the assumptions regarding methodology as well as the nature of the study require the researcher to explain and understand what is unique and particular about conflict management strategies and the development of the SMPT. Hence, the research will be based on the presumption that conflict is something that cannot be avoided in teamwork and will be personally experienced by each of the team members. As conflict is intangible, it is necessary

for the researcher to be directly in contact with the person involved in the research context in order to understand them. This enables the researcher to appreciate the respondentøs feelings, attitudes, meanings, values, and beliefs (Cavana, Delahaye, & Sekeran, 2001) and leads to understanding of the team membersø behaviour and their activities (Denzin & Lincoln, 2005).

With regard to this, this research adopted the paradigm of interpretivism (Bryman, 2004) as the findings of the research will be drawn from the respondentsø experience and interpretation. Under this paradigm, social reality is viewed as subjective and regarded as the product of processes by which social actors negotiate the meanings for actions and situations and this is produced through social interaction (Bryman, 2004; Carson, Gilmore, Perry, & Gronhaug, 2001). Interpretivism is known as appropriate to effectively investigate the complex nature of reality as understanding of the world can only be achieved through knowledge as perceived by individuals (Bryman, 2004; Carson et al., 2001). This suggests that any interpretivist research should attempt to understand and explore problems within a specific context (Carson et al., 2001) and in the case of this research, the context of the self-managed project team.

This approach argues that in order to describe a phenomenon, it is not sufficient to rely exclusively on objective measures and by quantifiable observation such as theory testing using deductive logic to reason (Cavana et al., 2001; Easterby-Smith, 2002; Ticehurst & Veal, 2000). Instead õthe subjective meanings and social context of an individualøs words or deeds must be examined more deeplyö (Rubin & Babbie,

2001). This is to ensure that an in-depth understanding of the phenomenon is captured, thus any interviews conducted from the settings can be used to inform other settings (Cooper & Schindler, 2001).

As the subject of the research, the exploration of conflict within SMPTs, is of a dynamic nature which consists of people activities, constant interpretation is necessary throughout the research process. In order to capture the event of conflict within the project team, it is identified that the usage of language is essential as it is also regarded as one of the important aspects when studying social life (Hardy, 1994).

3.1 Research Methodology - Qualitative Approach

The determination of an appropriate methodology can be described as:

> *"The strategy, plan of action, process or design lying behind the choice of particular methods and linking the choice and use of methods to the desired outcomes"* (Crotty, 1998; pg. 3)

Methodology selection is influenced by the ontology and epistemology that inform the study (Zalan & Lewis, 2004) as well as the objective(s) of the study and the nature of the research problems. Qualitative methodology is described as the non-numerical examination and interpretation of observations, for the purpose of discovering underlying meanings and patterns of relationship (Babbie, 1988). The methods derive from multiple disciplines and from diverse traditions. Those traditions are ethnography, case study, and grounded theory, and they utilise particular methods such as interviews, focus groups and observations (Crabtree &

Miller, 1999). As this study intends to induce ideas for theory building, qualitative methodology is most suited (Orlikowski & Baroudi, 1991).

Qualitative research involves methods which allows a researcher to õfocus on the interpretationö as well as õto examine the way people think and actö (Ezzy, 2001). It is also suggested that an interpretation of the interview is subjective because it may be affected by the place, time, people, and circumstances of the interview (Ezzy, 2001). For example, when the interview is conducted by someone else in a different setting, the response might be different. However, what is more important and makes research more rigorous is not what is said, but rather how the interpretation is generated, and how the research findings reflect the particular social context (Ezzy, 2001).

In the areas of conflict management and SMPT development, researchers have used various approaches in conducting their research. For example, in the study of intragroup conflict, a quantitative approach is being used by several authors, for example, Barker, Tjosvold, & Andrews (1988); Jehn & Mannix (2001); and Langfred (2007). However, when the study deals with human beings and processes such as team development and conflict management, Hammersley (1992) argues that qualitative research is the most appropriate. However, a thorough analysis of this particular process will require the researchers to use personal interpretation that results from the presence or participation in the process being examined. This is in line with the view that the study of conflict must be conducted as a dynamic process, rather than static as suggested by early conflict theorists (eg. Deutsch, 1969).

Qualitative methodology was developed in response to the limitations faced by quantitative research and thereby often challenge the assumptions of the positivist paradigm (King, 1994). As opposed to quantitative, the qualitative research approach interprets phenomena from the perspective of the subjects being studied, because social phenomena are recognised to result from a blend of social, economic, political and environmental factors that cannot be studied in isolation (Bryman, 2004). Therefore, the process is a less structured and more inductive procedure from empirical research to theory generation, which starts with fairly general research questions (Bryman, 2004) leading to hypothesis-generating research (Auerbach & Silverstein, 2003). This is necessary because keeping the structure simple not only raises the opportunity of genuinely capturing the perspectives of the participants but also ensures the necessary flexibility which is needed for the iteration between data collection and data interpretation.

An important objective of the qualitative approach is to describe and explain the different elements of the explored social system and their interconnection in very much detail, that is, to provide a holistic view of the context (Miles & Huberman, 1994). Hence, it aims at the contextual understanding of social behaviour rather than extensive measurement (Symon & Cassell, 1998). This should lead to substantive theories that are generated from the data, that is, that they are ‒groundedø in the data (Glaser & Strauss, 1967). Miles and Huberman (1994) elaborate that qualitative data is a source of well-grounded, rich descriptions and explanations of processes in identifiable local contexts.

Lye, Perera and Rahman (1997) suggest that, in order to provide rich explanations, the research method must not attempt to ignore or simplify the complexities of the context that control the phenomena under investigation, but should instead, clarify them. Thus, qualitative data collected in a processual manner to a specific context are more suitable because they can be a source of well-grounded explanations of processes occurring in their local context (Miles & Huberman, 1994).

In contrast to quantitative, the qualitative approach allows the researcher to get first-hand experience, that is, development of analytical, conceptual, and categorical components of explanation, from the data itself, rather than from the preconceived and structured definitions constructed by the researcher (Filstead, 1971). In addition, qualitative researchers believe that their own experience can be a source of knowledge about the phenomenon under investigation, which is subsumed under the term reflexivity (Auerbach & Silverstein, 2003). Common techniques that are used for the purpose of data collection and analysis are, for example, interviews, focus groups, observation, textual analysis and others (Bryman, 2004).

Because at the beginning of the investigation not enough was known on conflict and conflict management issues in self-managed project teams to formulate specific hypotheses, the researcher followed the basic guidelines of inductive qualitative research (see **Figure 2**). Hence, the researcher was looking for open and unclear issues that emerged from a basic literature review leading to more general research concerns expressed by the research objective (Auerbach & Silverstein, 2003) which,

in this case, is to explore the effect of conflict and its management strategies towards the social dynamics of the SMPT. The objective guided the data collection and analysis process and was explicitly refined during analysis. Ultimately, this led to the development of emergent hypotheses. These emergent hypotheses were then compared with the existing literature (Eisenhardt, 1989). This process involves looking into what is similar and what is contradicting with the existing literature on the specific subject as well and understanding the reasons of the similarities and differences (Eisenhardt, 1989).

The iteration process between theory and data stops when theoretical saturation (Glaser & Strauss, 1967) is reached which means that the incremental learning is minimal because the researcher is observing the phenomena that have been seen before (Eisenhardt, 1989). Therefore, the process has reached its closure and it is time to write up the findings and conclusion of the research.

Figure 2: Outline of Qualitative Research
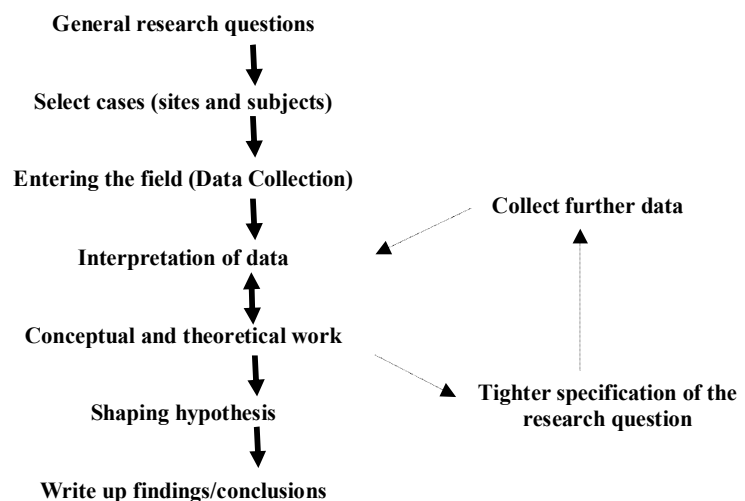
Source: (Bryman, 2004)

3.2 Research Strategy - Case Study

As mentioned earlier, the main aim of this study is to explore how conflict affects the social dynamics of the SMPT. Hence, a research strategy that allows the aim to be achieved is required, which is the case study approach. Case study is known as most suitable in answering *how* and *why* research questions (Hartley, 2004; Yin, 1994, 2003) rather than *what* or *how much* (Hartley, 2004).

This approach is also beneficial for theory generation when theories with regard to the phenomena are lacking (Marshall & Rossman, 1995). The case study approach is useful in exploring process-oriented inquiries (Burgelman, 1983) as it enables researchers to trace significant events and capture the complexity of organisational phenomena (Shenkar & Yan, 2002).

Case study is an exploration of a case (or multiple cases) over time through detailed, in-depth data collection involving multiple sources of information rich in context (Creswell, 1998). Case study is known to be appropriate in research which requires detailed understanding of social or organisational processes due to the richness of data collected in context (Hartley, 2004). It can be used for various purposes such as providing descriptions, testing theory or generating theory (Eisenhardt, 1989). It is also useful in exploring new and emerging processes or behaviours as well as enabling researcher to understand everyday practices and their meanings to those involved. The techniques being used allow trust to develop between the researcher and the organisation members over a period of time that will allow some information

being provided which would not be given to the researcher if it was a one-off interview (Hartley, 2004).

In this research, the aim is to provide ‑qualitative evidenceø (Yin, 1989) which explains how conflict and its management strategies effect the social dynamics of the SMPT. The use of multiple case studies in this research followed the principles of data collection established by Eisenhardt (1989) and Yin (1994). Multiple sources of evidence are used, which includes in-depth semi-structured interviews (Silverman, 2007), consisting of face-to-face interviews and telephone interviews which are applied in the data collection, with an addition of the organisationsø documents.

3.3 Research Activities

3.3.1 Cases selection method

Selection of cases is one of the important decisions that have to be made by a researcher prior to data collection. Several different types of sampling have been discussed, such as theoretical sampling and purposeful sampling (Eisenhardt, 1989; Yin, 1989). With regard to this research where an inductive approach is being adopted, cases are selected based on theoretical sampling instead of random sampling as suggested by Eisenhardt (1989).

Theoretical sampling underlines the importance for cases to be selected for theoretical exploration rather than statistical hypothesis-testing purposes (Glaser & Strauss, 1967). Theoretical sampling provides flexibility during the research process (Glaser & Strauss, 1967; Strauss & Corbin, 1998) and it involves sampling to test, elaborate and refine a category, their relationship and their

interrelationships. This could involve changing the interview questions as the study progresses.

Regarding the selection of the right sample size, Eisenhardt (1991) and Stake (1995) point out that how much is known and how much new information can be gained from any further participants are much more important. The sample size cannot be established in advance as each research participant has the potential opportunity to develop and refine theory (Auerbach & Silverstein, 2003).

In this study, the data collection process was conducted in two phases. The first phase consists of data collected in two organisations in Malaysia, ITCo and BioTechCo. Two projects were selected from each organisation as case studies. Semi-structured face-to-face interviews were conducted for three months with the respondents, consisting of the management and the people involved in at least one of the projects conducted by the organisations. The data gathered from the face-to-face interviews provide the contextual background for the study. This then continues with the agreement from the respondents of a weekly telephone interview, to be held for another three months, in order for the researcher to gather processual data for the study.

The sample selections are based on the context of the study which is on SMPTs in KIFs. As KIFs consist of knowledge workers whose ideas and new discoveries are the most valuable assets for organisations, all projects selected in the study involved creating and developing solutions or products for internal and

external purposes and the group of people chosen to be the team members must possess necessary knowledge and skills in completing each of the projects.

In the present study, the respondents are knowledge workers involved in current projects and who are members of the organisation. They are individuals who have an employment relationship with the organisation in the sense of being full-time, permanent staff as well as individuals who have an employment relationship with the firm, either as temporary or contingent. There is no involvement of individuals from outside the organisation.

As the research proceeded, it was found that further investigation was required to challenge the initial findings from the four cases. Therefore, the second phase of the data collection was initiated. Two cases from one organisation in Malaysia were selected. Face-to-face interviews were conducted for one month and weekly telephone interviews were conducted for three months, similar to the previous data collection duration, in order to maintain similarity with the longitudinal data collection in the first phase.

In Eisenhardt (1991) and Stake's (1995) opinion, the researcher has to keep recruiting and interviewing respondents until no new data is produced that adds new insights to theory construction or no new information is learned about the research topic. This procedure is called 'theoretical sampling' (Glaser & Strauss, 1967) and ultimately determines the sample size of the study (Auerbach & Silverstein, 2003). This approach was followed throughout the interview phase of this study which involved iterative steps in data collection and analysis in

order to determine a certain level of saturation (Eisenhardt, 1991), that is, following interviews became informed by analytic questions and hypotheses about data relationships drawn from previous interviews (Strauss, 1987).

3.3.2 Research domain

The project teams participating in this research consist of three small and medium sized knowledge intensive firms in Malaysia. The organisations entirely depend on projects as their main activities. One firm is ITCo, which is from the Information Technology industry specifically focusing on multimedia development; another, BioTechCo, is involved in the Biotechnology industry which focuses on life sciences research using bioinformatics solutions; and the third firm is HerbalCo, which focuses on research and development of herbal and organic product ranges. To protect the participating project teams and organisationsø anonymity, pseudonyms are provided.

Several characteristics will be highlighted to differentiate the self-managed project team chosen for this study as compared to other types of project team. The project teams selected in this research are real project teams working on a specific project in organisations. The team members have interrelated tasks within the team (Cohen & Bailey, 1997) which require them to work closely and become dependent towards one another, they also have a variety of abilities (Cohen & Ledford, 1994) - their own set of skills and expertise in their own field - which is important for performing each of their tasks.

The team members are also given responsibilities and freedom (Cohen & Ledford, 1994) in decision making and managing their tasks. This involves any decision making processes regarding their project and in dealing with people inside and outside the team. Each of the project team has no identifiable formal leader within the team but there are managers of the organisations who exist outside the team. There is no hierarchical form for each of the project team structure, as the team is dominated by horizontal forms of peer-to-peer relations within the team.

3.4 Data Collection

The study comprises of evidence collected in two phases comprising of face-to-face semi-structured interviews and weekly telephone interviews in each phase. The first phase of the data collection was conducted for six months from November 2006 until April 2007 which began with three months of face-to-face interviews and another three months of weekly telephone interviews with team members and the managements from four projects in two small and medium sized KIFs in Malaysia, known as ITCo and BiotechCo.

As the research progressed, the second phase of data collection was set out to challenge the initial findings from the first phase. The second phase was conducted for four months from July 2009 until October 2009 which began with one month of face-to-face interviews and three months of weekly telephone interviews with the respondents. The respondents for the second phase consisted of the management and

team members of two projects from one small and medium KIF in Malaysia, known as HerbalCo.

For both phases of the data collection, the data gathered from the weekly telephone interviews is the main data being used in this research which provides longitudinal, processual data of conflict and its management strategy in each of the project teams and the face-to-face interviews provide contextual data for further understanding of the processual data. (See **Figure 3)**

There are three reasons for adopting the semi-structured interview, the first being compared to the structured interview method, it allows for more knowledge generation. Thus, the use of a semi-structured approach allows for unexpected development that may arise. Secondly, the dynamic nature of project teams is different from one project to another and from one organisation to another. Thus, the use of semi-structured interviews allows further questions to be asked based on the unique situation surrounding a particular project team. Finally, compared to the unstructured interview style, the semi-structured approach is more likely to facilitate cross case comparison.

Figure 3: Data Collection Process

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┌──────────────────────────────────────────────┐
│                                                │
│        ╭─────────────────────────────╮         │
│       ╱    PROCESSUAL DATA             ╲        │
│      │  Weekly telephone semi-structured │      │
│      │          interviews               │      │
│      │         (Diary Study)             │      │
│       ╲   First Phase: 12 weeks        ╱        │
│        ╲  Second Phase: 12 weeks      ╱         │
│         ╰─────────────────────────────╯         │
│                      ▲                          │
│             ┌─────────────────┐                 │
│             │     Further      │                │
│             │ understanding of │                │
│             │    the data      │                │
│             └─────────────────┘                 │
│                      ▲                          │
│        ╭─────────────────────────────╮         │
│       ╱     CONTEXTUAL DATA            ╲        │
│      │   Face-to-face semi-structured   │      │
│      │          interviews              │       │
│       ╲   First Phase: 12 weeks        ╱        │
│        ╲  Second Phase: 4 weeks       ╱         │
│         ╰─────────────────────────────╯         │
│                                                │
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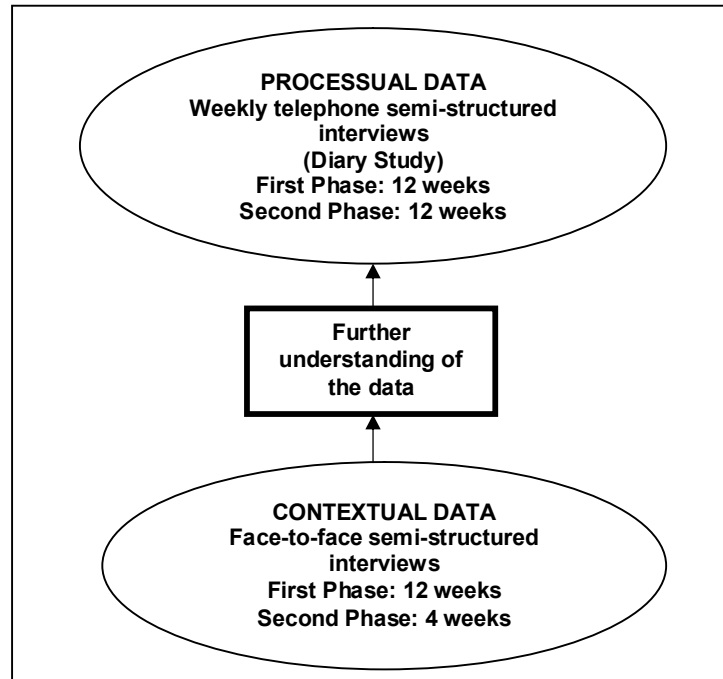
During the data collection process, additional documents were also provided by the organisations involved. Documents are written data sources which include published and unpublished documents, company reports, and newspaper articles, and they can be used both in quantitative and qualitative approaches to research (Schindler & Cooper, 2001). In this research, documents such as memos and notes on the activities involved in the projects were provided by the interviewees, thereby helping the researcher to further understand the nature of the projects and the organisations.

3.4.1 Face-to-face semi-structured interviews

Semi-structured interviews are a flexible and adaptive research technique that can be modified to suit the needs of different groups of participants (King,

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1994). It is an intermediate step in a continuous spectrum of possible interviewing characteristics ranging from structured interviews in a more quantitative domain to completely unstructured in-depth interviews in a more qualitative approach (Bryman, 2004). In this sense, semi-structured interviews leverage the strengths of both structured and unstructured interview methods. It offers sufficient flexibility to approach different respondents differently while still covering the same areas of data collection. However, the weaknesses of the semi-structured interviews are that they are time consuming, in addition the researcher will need to prevent the urge to show agreement or disagreement to the respondent to avoid bias (Klenke, 2008).

Particularly for this research, face-to-face semi-structured interviews were conducted at the beginning of the two phases of the data collection process to provide the contextual data in exploring the event of conflict and its management strategies in all the six cases. Initially, emails were sent to several organisations in order to gain access for the data collection purposes. Some organisations replied and several rejected the requests by providing their own reasons; as a consequence, and with the assistance of a network of personal contacts from the researcher's previous work experience, more organisations were approached. As highlighted by Johl (2010), academic research may not be considered valuable by organisations and they are usually sceptical about the role of outsiders researching their organisation due to confidentiality.

However, three of the knowledge intensive firms in Malaysia agreed to grant access to the researcher to their organisations and the agreement was recorded via emails sent by the CEOs of each organisation (see **Appendix A** for examples of consent emails) Following their approvals, the researcher liaised with the ‑gatekeeperø introduced by the CEO in order to brief on the nature of the study and the type of projects in which she was interested. Permission was granted to the researcher on conducting interviews with the employees in the organisations. The information sheet, together with the consent form, was distributed to the potential participants. The issue of data confidentiality was explained in the information sheet. Those who agreed to participate in the research returned the signed consent form to the researcher. (Please refer **Appendix B** for Participant Information Sheet and **Appendix C** for Consent Form).

In the first phase, the researcher went to Malaysia and a set of 45 face-to-face semi-structured interviews were conducted with two organisations: ITCo and BioTechCo (see **Table 4** for Face-to-Face Semi-Structured Interview Details). Some of the respondents were interviewed more than once due to time constraint and as they were working on two different projects. The respondents from both organisations were interviewed respectively at an agreed time after they had provided consent to participate in the study. The face-to-face interviews required few visits to each company and each of the interviews lasted between one to two hours.

In BioTechCo, a set of 20 face-to-face interviews was conducted with 16 respondents who included the CEO, directors, managers as well as the project team members who consisted of bioinformaticians and scientists. Nine of the interviewees were involved in both Project A and Project B. The researcher was introduced to the people in the organisations by the CEOs, therefore making it easy for the researcher to personally contact them and arrange interviews at a mutually convenient time and place. Besides conducting the interviews during office hours, some people wanted to be interviewed during their lunch break while some outside office hours. The interviews were arranged on specific days with agreement from the respondents so that the researcher was able to best utilise each of the visits to the organisation.

In ITCo, 25 face-to-face interviews were conducted with 12 respondents including the CEO, managers and the project team members. The project team members consisted of the animators, multimedia executives and the modellers. Five of the respondents were working on both Project C and Project D. A list of names of the people involved in the projects was provided to the researcher by the manager. During each of the visits to ITCo, a meeting room was provided to be used by the researcher to conduct the interviews. A clerk assisted the researcher in arranging the interviews with all of the respondents.

On reflection, the educational background of the researcher which is in the field of information technology provides familiarity with some of the projects being

conducted in the organisations. This provides easiness for the researcher to understand the selected projects. Meanwhile, in the second phase, a set of 15 face-to-face interviews were conducted with one organisation, HerbalCo. 13 respondents were involved in the interview consisting of the factory manager and the project teams' members who are the scientists, quality controller and the research and development (R&D) executives. During the first visit, the factory manager agreed to arrange a suitable time for the interview sessions with all the respondents thus enabling the researcher to conduct several interviews in each visit.

Overall, in the first and second phase, 61 face-to-face semi-structured interviews were conducted with 41 respondents who were the management and team members from six projects in three KIFs in Malaysia and all were digitally recorded (see **Table 5** to **7** for Interviewee Details and **Table 8** to **10** for Interviewee Work Profiles for each organisation).

Table 4: Face-to-Face Semi-Structured Interview Details

Organisations	Projects (Cases)	Number of interviewees	Individuals interviewed	Number of interviews	Duration of each interview (approx.)
BioTechCo	Project A	16 (nine interviewees were involved in both Project A and Project B)	CEO Directors Managers Bioinformaticians Scientists	20	1.5-2 hours
	Project B				
ITCo	Project C	12 (five interviewees were involved in both Project C and Project D)	CEO External Manager Multimedia executives Animator Modeller Storyboard Artist Graphic Designer	25	1-1.5 hours
	Project D				
HerbalCo	Project E	13 (eight interviewees were involved in both Project E and Project F)	Factory Manager Scientists Quality Controller R&D Executives	15	1-1.5 hours
	Project F				
Total		41		60	

Table 5: Interviewee Details for Project A and B (BioTechCo)

No	Interviewee	Gender	Age	Functional Background	Tenure
1	MrMt	Male	43	Management and Finance	10 years
2	DrP	Male	46	Research and Development (BioTech)	10 years
3	MrL	Male	40	Research and Development (Information Technology)	10 years
4	MrB	Male	40	Accounting and Finance	10 years
5	DrPr	Male	45	Management and BioTech	5 years
6	MrH	Male	38	BioTech Research	10 years
7	MrD	Male	27	BioTech Research	4 years
8	MrRg	Male	25	Information Technology	2 years
9	MissA	Female	25	Information Technology	2 years
10	MrT	Male	26	Process Engineering	3 years
11	MrR	Male	24	Biology Research	1 year
12	MissAn	Female	28	Biology Research	4 years
13	MrZ	Male	35	Life Science Expert	10 years
14	MrE	Male	30	Health science Research	5 years
15	MrK	Male	30	Health science Research	5 years
16	MrQ	Male	26	Life science Researcher	2 years

Table 6: Interviewee Details for Project C and D (ITCo)

No	Interviewee	Gender	Age	Functional Background	Tenure
1	MrMm	Male	46	Management and Administration	11 years
2	DrN	Male	40	Marketing and Software Engineer	8 years
3	MrG	Male	38	Finance and Accounting	6 years
4	MrS	Male	31	Multimedia	3 years
5	MrD	Male	25	Computer Animation	2 years
6	MrF*	Male	25	Computer Animation	3 years
7	MrE	Male	24	Information Technology	1 year
8	MrL	Male	26	Computer Science	3 years
9	MrT	Male	27	Graphic and animation	2 years
10	MrK	Male	30	Art and design	4 years
11	MrP	Male	34	Graphic designer	4 years
12	MrN	Male	31	Art and design	2 years

- ***The participant withdraws at Week 3 of the interview.**

Table 7: Interviewee Details for Project E and F (HerbalCo)

No	Interviewee	Gender	Age	Functional Background	Tenure
1	DrW	Male	43	Production and operation	8 years
2	MrSh	Male	40	Management	8 years
3	MissM	Female	28	Quality and operation management	5 years
4	MrK	Male	26	Chemical expert	3 years
5	MrS	Male	26	Chemical expert	3 years
6	MrM	Male	27	Biology researcher	4 years
7	MrH	Male	32	Plant Research	5 years
8	MrD	Male	33	Plant Research	4 years
9	MrQ	Male	40	Biology and Plantation Research	7 years
10	MrO	Male	28	Product Development and Marketing	3 years
11	MrH	Male	24	Product development	1 year
12	MrB	Male	24	Product Research	1 year
13	MrHn	Male	27	Product Development	3 years

Table 8: Interviewee Work Profiles for Project A and B (BioTechCo)

No	Interviewee	Designation	Project A	Project B	Face-to-face Interview	Telephone interview
1	MrMt	Chief Executive Officer	YES	YES	YES	
2	DrP	Director	YES	YES	YES	YES
3	MrL	Assistant Director	YES		YES	
4	MrB	General Manager	YES		YES	
5	DrPr	(External) Manager	YES	YES	YES	YES
6	MrH	Bioinformatician	YES		YES	YES
7	MrD	Bioinformatician	YES	YES	YES	YES
8	MrRg	Bioinformatician	YES	YES	YES	YES
9	MissA	Bioinformatician	YES	YES	YES	YES
10	MrT	Bioinformatician	YES		YES	YES
11	MrR	Scientist	YES	YES	YES	YES
12	MissAn	Scientist		YES	YES	YES
13	MrZ	Scientist		YES	YES	YES
14	MrE	Scientist	YES		YES	
15	MrK	Scientist	YES	YES	YES	
16	MrQ	Scientist	YES	YES	YES	

Table 9: Interviewee Work Profiles for Project C and D (ITCo)

No	Interviewee	Designation	Project C	Project D	Face-to-face Interview	Telephone interview
1	MrMm	Chief Executive Officer	YES	YES	YES	
2	DrN	(External) Manager	YES	YES	YES	YES
3	MrG	Assistant Manager			YES	
4	MrS	Multimedia executive	YES	YES	YES	YES
5	MrD	Animator	YES	YES	YES	YES
6	MrF	Animator		YES*	YES	YES
7	MrE	Modeler		YES	YES	YES
8	MrL	Modeler	YES		YES	
9	MrT	Modeler	YES	YES	YES	
10	MrK	Storyboard Artist	YES		YES	YES
11	MrP	Graphic designer	YES		YES	YES
12	MrN	Graphic designer		YES	YES	YES

*The participant withdraws at Week 3 of the interview.

Table 10: Interviewee Work Profiles for Project E and F (HerbalCo)

No	Interviewee	Designation	Project E	Project F	Face-to-face Interview	Telephone Interview
1	DrW	Factory manager	YES	YES	YES	
2	MrSh	(External) Manager	YES	YES	YES	YES
3	MissM	Quality Controller	YES	YES	YES	YES
4	MrK	Scientist	YES	YES	YES	YES
5	MrS	Scientist	YES	YES	YES	YES
6	MrM	Scientist	YES	YES	YES	YES
7	MrH	Scientist	YES		YES	YES
8	MrD	Scientist		YES	YES	
9	MrQ	Scientist		YES	YES	
10	MrO	R&D Executive	YES	YES	YES	YES
11	MrH	R&D Executive	YES		YES	YES
12	MrB	R&D Executive		YES	YES	
13	MrHn	R&D Executive	YES	YES	YES	

The face-to-face semi-structured interviews cover a broad range of information and discuss the participantsø meanings and perceptions on conflict and conflict management strategies that they currently implement during their project as well as their relationship inside and outside their project team.

It was clarified and ensured before the interviewing process that the individuals to be interviewed were those who involved in at least one project in the company. The multiple perspectives from the participants contribute to the insightful approach on understanding the project that each company is involved in.

Prior to the interview session, the researcher studied the companyøs background using each of the organisationøs website and company profile. In addition, an interview guide was developed consisting of a list of questions to be covered

which were structured around the research themes in the study (see p. 78-80 for list of interview questions). This was done to ensure that the interview format was consistent across the cases. The interview guide was necessary in guiding the interviews to be more focused rather than too general (Bryman, 2004). Before the interview guide was finalized, it was tested for clarity on several fellow doctoral students. This procedure assured that the interview questions would be clear to the interviewees selected as the respondents for the research. At the beginning of the face-to-face interview sessions, the researcher reviewed the purpose of the study with the individuals involved, then moved into the interview questions. The interview sessions were all digitally recorded and then transcribed and translated where necessary.

The interview questions were sequenced as follows:

1. Questions were asked relating to the project that they are involved in and their role in the project.

2. For the researcher's understanding, respondents were asked about the general issue that they usually face while working in the project team.

3. For the exploration of the conflict management strategies within the project team, the following questions were asked[1]:

    a. Before the project begins, how do you feel about working in team?

    b. How do find working with your team members?

___

[1] During the interview, the wording of the questions was not necessarily the same. Elaborations on the questions were sometimes required depending on the respondent's request and understanding.

c. When do you usually need to get involved with the other team members?

d. How often do you interact with the team members / management?

e. Do you have any experience of facing any problems in your team?

f. What kind of problems did you face / are you facing within your team?

g. Why and how did that happen?

h. Who was involved? Does that affect the relationship within the team?

i. What is it that you do to solve the problems? Your role?

j. How long did the problem last?

k. If you do not have these problems, will you be able to work more efficiently?

l. Why is it difficult? Is it only you who feel the difficulties?

4. To further explore the conflict management strategies within the project team, respondents were asked to describe, step by step, how any of their conflict was solved, and at each step who was involved, and who had what opinions about the solution.

5. Then, further questions were asked on problem solving whether it is usually done in groups or individually and whether it involves the management or just amongst the team members.

6. Finally, opinions and comments from the respondents were sought on how their current working process and environment could be changed to improve the conflict handling processes in their team.

3.4.2 Weekly telephone semi-structured interview - diary study

In order to capture processual data for the research, weekly telephone interviews were conducted. This enables a direct and frequent recording of the respondentsø experiences and events every week which is adopted from the diary study approach (Unsworth & Clegg, 2004). Diary study design enables the researcher to capture the current and spontaneous events and daily life experiences of the respondents (Bolger, Davis, & Rafaeli, 2003). Diary study design is the most appropriate method of capturing changes over time or any processual phenomena of either individual or group setting (Unsworth & Clegg, 2004).

Particularly in this research, the researcher takes the record as a diary rather than the participant. As the diary is recorded by the researcher, this increases the willingness of the respondent to participate in the longitudinal study. Compared to the respondentøs self-recorded diary, this will not require high commitment and dedication from the respondents in order to record their weekly work activities by themselves which will be time consuming and there is also tendency for the participant to skip recording on certain weeks due to being forgetful or just unwilling to update their own diary at any point in time (Bolger et al., 2003). This might be due to the participantøs work and personal life commitment. Therefore, by having the researcher recording the weekly diary via

telephone interview, the researcher will be able to remind the participant about the weekly phone calls and not be too intrusive. Additionally, during the interview, further clarification can be gathered from the respondent regarding any issue which is unclear from the previous week.

The data collection process continued with weekly telephone interviews with some of the previous respondents during the face-to-face interviews which consisted of managements personnel as well as those who were involved in project teams. There was no difficulty faced by the researcher to gain and maintain access to the three organisations for weekly telephone interviews as permissions was given by each organisation for the researcher to further conduct the interviews. Additionally, the relationship between the researcher and the respondents had already developed as a result of the face-to-face interviews that were conducted at the early stage of the data collection. This facilitated the process of getting back in touch with the respondents for them to agree to be further interviewed via telephone.

In order not to interfere with the tight work commitment of the respondents, both the researcher and the respondents reached agreement that the telephone interviews should be conducted on a weekly basis for a duration of twelve weeks. This enabled the researcher to capture the processual nature of the project team social dynamics with regard to conflict and conflict management strategies. The twelve weeks duration was decided upon considering the permission of access given by the organisations, as well as considering the planned time length for the whole research process.

The respondents in the study decided to choose a fixed time slot for the weekly interviews to be conducted which was on the same day and time every week throughout the data collection period. The time was decided by the respondents and agreed by the researcher. However, these times sometimes would change depending on any circumstances and were adjusted due to the time differences between two countries because the respondents were in Malaysia and the researcher was based in the UK.

During the weekly telephone interviews process, trust begins to develop between the respondents and the researcher. Respondents become more open with the researcher and they are willing to share more information such as in depth stories of their experiences and feelings in their project team which offers some useful information for the research. The process of interpreting the interviews is conducted in a way of considering different sides of stories from each of the respondents from the same projects which provides various versions of reality for the researcher to consider. The approach that used allows respondents to tell their stories without any evaluation and interference from the researcher. The semi-structured interview questions being asked, allow the respondents to express the truth about the reality of their experiences in each of their projects and this requires the researcher to maintain systematic inquiry as well as demonstrating integrity while conducting the interviews.

In order to maintain both the quality of the research and the integrity of the respondents, the researcher was aware of the certain limitations of interviews, even though it enabled to provide answers to the questions of how and why for the research. The respondents can be affected by what is termed by Leary (2001) as ÷social desirabilityø which means that the respondents might be giving the answers they believe the researcher is seeking for rather than giving accurate and honest answers to the interview questions. However, considering the sometimes very open and direct answers of most respondents as well as their willingness to provide sensitive information on the questions being asked, response bias seems very unlikely to occur. Adding to that, the research aim was not clearly known by the respondents, which makes it difficult for them to meet even if they predict it correctly.

In the first phase of the weekly telephone interview, 10 respondents from BioTechCo agreed to participate and eight of them were involved in both Project A and Project B. As for ITCo, eight respondents agreed to participate and three of them were involved in both Project C and Project D. However, one of the respondents involved in project D withdrew from the study on Week 3 due to personal reasons.

Meanwhile, in the second phase, a total of eight respondents from HerbalCo agreed to participate in the weekly telephone interviews and six were involved in both Project E and Project F. Each of the weekly telephone interviews lasted

about 15 to 30 minutes and all were digitally recorded (see **Table 11** for the

Weekly Telephone Interview Details)

Table 11: Weekly Telephone Interview Details

Organisations	Projects (Cases)	Number of interviewees	Individuals interviewed	Number of interviews	Duration of each interview (approx.)
BioTechCo	Project A	10 (eight were involved in both projects)	Managers Bioinformaticians Scientists	120 (10x12)	15-30 minutes
	Project B				
ITCo	Project C	8 (three were involved in both projects) (one withdraws at Week 3)	Managers Animators Multimedia Executives Modelers Storyboard Artist Graphic Designers	87 (8x3wks) + (7x9wks)	15-30 minutes
	Project D				
HerbalCo	Project E	8 (six were involved in both projects)	Factory manager Scientists Quality Controller R&D Executives	96 (8x12)	15-30 minutes
	Project F				

Note: The participants who were involved in two projects from the same organisation talks about both projects during each telephone interview session.

The telephone interviews were conducted using the hands free function on the
telephone which allows the telephone conversation to be heard using the speaker
on the telephone and then recorded using a digital voice recorder upon the
respondentsø agreement. The interviews were held in a secluded room which
was equipped with the hands free telephone and digital recorder to protect
confidentiality of information as the loudspeaker function is being used.

Since the weekly interview was to explore the process of conflict and conflict
management strategies in project team in a processual manner, questions were
asked to describe how the week had been and on any interesting events that

happened throughout the week. The same interview questions were asked throughout the 12 weeks duration of the weekly telephone interviews.

The questions asked in the first phase were[2]:

1. What are the interesting events that happened for the past one week?
2. What task were you involved in for the past one week?
3. Was there any problem that you faced for the past one week? Why do you think it happened?
4. How was the problem solved? Who was involved? What is it that you do to solve the problems?

Meanwhile, in the second phase of the weekly telephone interviews, as the intention was to challenge the initial findings from the earlier data collection, additional questions were added to the interview guide. The same questions were asked throughout the 12 weeks duration of the interview.

The additional questions in the second phase were[3]:

1. What do you think of the involvement of the external leader/management for the past one week?
2. How did the external leader/management help the project team for the past one week?

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[2] Sometimes, during the interview, a question was repeated or rephrased to encourage the respondent to elaborate in more detail.

[3] A question was either repeated or rephrased for further understanding of the respondents and to encourage the respondent to elaborate in more detail.

The digitally recorded data were carefully listened to repeatedly, transcriptions were typed and notes (researcher reflections with regard to issues being researched) were also used. Although the language during the interview was a mix of both Malay and English language, it was predominantly Malay. Therefore, the transcriptions were then translated by the researcher into English language. The researcher took careful steps to ensure the quality and originality of the meaning was maintained[4].

3.4.3 Link between the project duration and the telephone interview starting time

For Project A, the project duration was planned for 24 months and the project commenced from October 2006. At the beginning of the telephone interviews, the project had just started for a month where the team members were still in the process of getting to know each other and where some of them had not worked together before. The interviews were conducted from the second month until the fourth month of the project.

For Project B, the project duration was 18 months. It started in July 2006 and when the telephone interview began, the project had started five months previously, and where the project team was in the middle of the sample collection for the project. The interviews were conducted from the fifth month until the seventh month of the project duration. In terms of the relationship

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[4] The translation was shown to four colleagues (each with different scripts) to get the consistent agreement on the meaning.

within the team members, they were working well with each other and relationship has been developed amongst them as they had been working together for the past five months.

For Project C, the project duration was 18 months. This project commenced in September 2006 and when the interviews began, the team has just finished producing the first episode of the 3D animation series that they were working on and about to start working on the second episode of the series. The interviews were conducted from the third until the fifth month of the project duration. The team members were experiencing good relationships with the management and were still in the process of getting to know each other within the team.

For Project D, the project had been going on for four months before the telephone interview started which was in August 2006 where the team had just completed their training on the software needed for the project. The interviews were conducted from the fourth month until the sixth month of the 18 months duration for the project.

For Project E, the project team was formed in May 2009 and the project started four months before the telephone interviews started. The team members were in the middle of conducting the experiment for the project and the interviews were conducted from the fourth month until the sixth month of the 12 months

duration of the project. Most of the team members had been working together previously and they were experiencing good relationships with each other.

As for Project F, the project duration was 12 months. The project started in June 2009 and had been going on for three months before the telephone interviews began. When the interviews started in August 2009, the team was in the middle of the research and development process for the project. The interviews were conducted from the third month until the fifth month of the 12 months duration of the project.

The interviews began at different stages of the project. For Projects A, C, D and F, the interviews were conducted at the early stage of each project while for Projects B and E, the interviews were conducted at the middle stage of the projects. This showed some differences in terms of the relationship between the team members whereby, at the beginning stage of the project, the team members were in the phase of getting to know each other. They were still developing their relationships amongst the team members. However, when the project progressed, the team members started to get more involved with each other and this is when they were likely to get involved into conflicts. As this was at the beginning of the project, each was showing good behaviour in order to portray a good image to each other.

Table 12: Linkages between the project duration and when the telephone interview started

Projects	Project begins	Interview begins	Interview duration	Project duration
Project A (DA)	Project team was formed and project has started for one month. (October, 2006)	A month after the project begins. (November, 2006)	Month 2 until month 4 of 24 months	24 months
Project B (IH)	Project team was formed and project has started for five months. (July, 2006)	Middle of the blood sample collection for the project. (November 2006)	Month 5 until month 7 of 18 months	18 months
Project C (3D animation)	Project team formed and project has started for three months (September, 2006)	First episode has finished and starting on the second one. (November 2006)	Month 3 until month 5 of 18 months	18 month
Project D (Online game)	Project team formed and project has started for four months. (August 2006)	The team has just finished training on the software needed for the project. (November 2006)	Month 4 until month 6 of 18 months	18 months
Project E (HealthDrink)	Project team formed and project has started for four months (May, 2009)	Middle of conducting the experiment for the project. (August 2009)	Month 4 until Month 6 of 12 months	12 months
Project F (HerbsOils)	Project team formed and project has started for three months. (June 2009)	Middle of the experiment. (August 2009)	Month 3 until Month 5 of 12 months	12 months

3.5 Data Analysis

In this study, the data were analyzed in two stages: within-case analysis and cross-cases analysis. This took place after the transcription and translation of both the face-to-face and telephone interviews being undertaken after the interviews. Within-case analysis is an in-depth study of each individual site. According to Strauss (1987), the process involves the following: Each case has to be analyzed separately. The central idea is to become familiar with every single case on its own to identify unique patterns which, for this study includes the teamøs social dynamics, before generalizing patterns across cases. To avoid being overwhelmed by the data sets, the within-case analyses were focused around the already identified research objectives dealing with conflict and its handling strategies. General conclusions regarding all cases could then be drawn. With cross-case techniques it is more likely to discover some novel findings that are incorporated in the data by looking at it in many different ways (Eisenhardt, 1989).

The within-case analysis entailed sifting through all the data gathered from the weekly telephone interviews, documents and face-to-face interviews. As the weekly interviews provided processual data, sentence by sentence of the interviews were reviewed in order to identify the occurrence of different types of conflict within the project team and the way each conflict is managed. Meanwhile, the face-to-face interviews and additional company documentations were also scanned for the purpose of further understanding on the context and technicality of each of the project. The data were then sorted.

The idea was to allow the most significant information to emerge from all the data gathered during the interview sessions, while reducing its volume. Generally, from the transcription, direct quotations and a particular experience or incident describing the interviewee's experience, especially related to conflict evolvement and management in the project team were coded under several tracks as below:

1. Track A: key material pertinent to the research theme.

2. Track B: background in which the interview discourse departed from the primary research theme, but still offered useful context.

3. Track C: material such as general chit chat or interview interruption.

The key material relevant to the research was coded into various categories according to the research themes (Yin, 1994). The quotations and particular experience or incidents provided by the respondents assisted the researcher's interpretation and assessment of each case. Firstly, a case of each project was written up in a weekly manner. Then, the conflict events were highlighted. In this study, conflict is differentiated into two different types: task conflict; and relationship conflict. Task conflict is recognised by the existence of disagreement and different points of view on achieving the project's objective amongst the team members in the duration of the project either with people within or outside the team. Meanwhile relationship conflict is recognised by incompatibility amongst each other within or outside the team, involving emotions which occur in the project duration.

Thirdly, aspects of conflict not expressed by the respondents during the interview sessions, but detected from the respondents' descriptions of the conflict were noted. Fourthly, all the elements were thoroughly evaluated and assessment was made with

regards to the research questions. Finally the case was written up by combining the aspects mentioned above. In general, the way cases are written is by retelling the narrative but from the researcher's point of view and interpretation.

To facilitate the cross case analyses that were to follow, the cases were written in the same format.

1. A brief introduction describing the project.

2. A brief description about the starting point of the interview.

3. A description of the events of conflict that occur during the project.

4. A description of the conflict management strategies implemented by the project team.

5. A description on the role of leader during each event of conflict.

The second step of the analysis consisted of cross-case analysis in the search for patterns of events. To begin with, a table consisting of the project duration, the types of conflict and the dynamics of the team member with regard to conflict management strategy was created. The cases in the table were then compared to each other and linkages between different types of conflict and conflict management strategies were highlighted. The similarities and differences among them were noted for further analysis. Cases that indicated different patterns from the other cases were subjected to further comparison with each other.

The techniques of pattern-matching and explanation-building developed by Yin (1989) were used. This approach was aided by a variety of analytical tools applied within and across the cases, as suggested by Miles and Huberman (1994). For

example, Time-Ordered Matrices, and Event Listings were used to identify and chronicle the event of conflicts and conflict management strategies that was implemented as well as the project team dynamics.

In most instances, direct quotes from case informants were used, as they were believed to best reflect the phenomena under investigation. Given the processual perspective of the research, all analysis was conducted chronologically as the basic sequence of cause/effect should not be in a reversed form. Further, a major area of the literature, based on the self-managing team, focuses on sequential stages, thus chronological analysis was relevant. This approach is also supported by Gersick (1988) as appropriate to the study of the social dynamics on project teams.

3.6 Quality of the Research

In the interpretivist perspective, quality of a research is address through methods that will ensure the trustworthiness of the reported findings. Four criteria of qualitative research trustworthiness were underlined by Auerbach and Silverstein (2003) and Lincoln and Guba (1985) which consist of four criteria: credibility, transferability, dependability and confirmability.

Credibility is determined by the extent to which the findings appear to be acceptable representations of the data, focusing on the match between the respondentøs constructions of the phenomenon and the researcherøs representation of it. The second dimension, transferability, is concerned with the extent to which findings from one case study in one context will apply to case studies in other contexts. The

third dimension, dependability refers to the stability of the research process which is the extent to which a case study's findings are unique to time and place and the consistency of the explanations. The fourth dimension, confirmability, is determined by the extent to which interpretations are the result of the respondents and the phenomenon as opposed to researcher bias. It requires the demonstration of how findings can be based on the data itself rather than the researcher's bias, i.e. conclusions, interpretations and recommendations must be able to be traced back to their sources in the data (Lincoln & Guba, 1985).

In the context of this study the concern of credibility, transferability, dependability and conformability will be addressed in several ways:

- The issue of credibility is handled by multiple iterations and follow-ups with the respondents during the time of the interview as well as during the phase of data analysis. Probes for clarification and further understanding of certain issues were made during the interviews by utilising semi-structured interview questions as they provided more flexibility for the interviewees to share their experience. Time was also allocated after each interview for the researcher to clarify what had emerged before moving on to the next interviewee. Furthermore, the researcher developed good relationships with the interviewees and found this to be valuable since it allowed the researcher to continue gaining any further information regarding their projects after the period of the data collection. As for the selection of the participants for the telephone interview, some were recommended by the management and some

were voluntarily willing to become involved with the interview. Continuous correspondence via email was undertaken after the interview for any further clarification before the process of transcription and translation.

- The issue of transferability is dealt with during the design stage of the research when deciding on data collection techniques. In this research, the transferability is increased by studying multiple ÷sitesø and involving various participants which enable the analysis of comparative results and the verification of patterns through a ÷within-caseø analysis (search for patterns and meaning) and a ÷cross-caseø analysis (replication). Multiple data sources were being utilised such as using face-to-face semi-structured interviews, telephone interviews as well as the organisationøs documents, for instance, memos and notes on the projectsø activities.

- The aspect of dependability is addressed by having multiple access to the respondents as the same respondents were interviewed several times and interviews were conducted according to the place and/or time of their choice. A database was also created in order to keep record of all phases of the empirical research in an accessible way and review was also being made to establish whether proper procedures had been followed throughout the research study by obtaining assistance from academic experts. Feedback and evaluation were also being made by two fellow researchers on the interview protocols and findings.

- The aspect of confirmability is addressed by utilising initial interviews with five key people from the companies involved to provide initial data from which to form the basis for subsequent interview protocols. This process is believed to make data gathered later in the fieldwork ÷strongerø (Miles & Huberman, 1994). Then, recent projects were selected and besides the management, only the team members in the selected project were selected for further interview. Confirmability is also enhanced by allowing the interviewee to speak on their own terms. Broad questions were asked which allow plenty of scope rather than more directive questions. In doing so, genuine intervieweeøs account emerged from the interview. At the same time, the researcher focuses primarily on listening and understanding the interviewee, thus minimizing the interviewerøs active role in the interview. As such, trust is built with the respondents who are more likely to open up towards a non-judgmental and directive interviewer and this allows the interviewee to speak about things they believe are important.

3.7 Chapter Summary

This chapter discussed the methodology chosen for the study. Interviews and documents from three organisations were used to develop six case studies relating to the issue under investigation. Aspects of data collection, through the use of face-to-face interviews and telephone interviews in two phases were discussed. The case study design, sample selection method, data collection processes, and the approach for analyzing the data have all been discussed. The chapter ended with the highlights

of the issue regarding the quality of the research. In the next chapter (Chapter 4), the within case analysis will be presented which will include the data from the interviews as well as the organisationsø documents to support the cases.

CHAPTER 4

SIX CASE STUDIES

This chapter explores each of the projects being investigated in this study. Six cases from three organisations will be presented. These projects were at different stages of their progress and different phases occur within each project. The chapter begins with a background of all the cases and the second part explores each of the cases in details.

4.0 Background of Cases

The findings of this research consisted of data from six cases. The terms ÷caseø and ÷projectø will be used interchangeably in this research as ÷caseø represents the boundary for the context of the phenomena being researched (Miles & Huberman, 1994). Referring to this definition, this research adopts the terms of case and project to refer, respectively, to the research sites and the phenomena for investigation as each of the projects is the main focus and being used as the unit of analysis for the research.

Three small and medium sized knowledge intensive firms in Malaysia were involved in this research: BioTechCo, ITCo and HerbalCo. BioTechCo is on a mission to develop their expertise within the multi-disciplinary Bio-IT and Bioinformatics. During the period of the data collection, BioTechCo was working on two major projects: DA (Project A); and IH (Project B). These two projects were focusing on the development of innovative bioinformatics solutions by combining the knowledge in the area of computer science and molecular biology.

On the other hand, ITCo is a company in the information technology industry which specifically focuses on multimedia and 3D animation development for entertainment such as 3D animated television (TV) series and multimedia games application. The knowledge, skills and creativity of multimedia experts combined with graphic designers were fully utilised by this company in producing their end product. The company was working on three projects at the time of the interview and two projects were selected for this research: 3D animated cartoon TV series (Project C) and online gaming project (Project D).

The third organisation, HerbalCo is a company involved in the research and development of herbal products. The knowledge of herbal sciences and medicine is utilised in HerbalCo in order to develop natural, herbal and organic product ranges. The projects investigated in this study were: HealthDrink (Project E); and HerbsOil (Project F).

4.1 Case 1 - Project A

DA Project

The DA project is a project that provides medical informatics solutions for developing virtual autopsy application software. It will enable the process of autopsy, the procedure performed on a dead body, usually to help determine the cause of death of a person, to be performed virtually, without involving physical examination and mutilation of the dead body. It uses high performance intensity computing, specifically programmed to enable capture, use, and storage of huge amounts of data, combined with 3D surface scanning.

A project team was specifically formed to work on the DA project where the team was divided into two sub-teams and located at two different locations; one team being located in Malaysia and the other in India. These two sub-teams work closely with each other as they often need to communicate to integrate their tasks. The self-managing project team were in the process of getting to know each other where they were at the beginning of the project.

Week 1 to 6 of 12

The interview begins on the first month of the DA project which is at the beginning phase of the 24 months project. The project team is a self-managed project team and this can be evidenced as the team members are given freedom and flexibility on managing and organising the project. It is evident from the weekly interviews that the team members are independent and the decision making process, as well as organising and managing their allocated tasks, are decided and agreed between

themselves. There is no formal leader within the team and the supervisor is positioned outside of the team and not playing any major role within the team.

The approach taken by the team at this phase towards conflict is that cooperative strategy is being applied whenever faced with conflict, being highly committed with each of the project team activities and in the process of developing the relationship with each other as they are still at the early stage of the project and have just started working together, therefore, the team members are still in the process of getting to know each other where everyone in the project team is at their best behaviour in order to portray good image to others. On conducting their tasks, the team members, consisting of the bioinformaticians and the scientists, show their ability to make decisions on their own and act independently without involving the management:

> *"...we have to think...what are the other possibilities that we can think of on that particular task. We always discuss this kind of thing before doing any task. Before selecting that this protocol is the final one, we always discuss with each other for any other alternatives."*
> *(MrD, Bioinformatician, Wk4, ProjectA)*

> *"So, it's time for us to decide whether the data is enough or not. It depends on us to decide whether the data that we have is the final one. So now, we have all agreed that whatever we have is the final one."*
> *(MrRg, Bioinformatician,Wk5,ProjectA)*

> *"We are in charge of our problem, after we've got the clear idea on how to go and solve this problem, then we will proceed. We're still thinking of the ways that we can go forward. Because if I keep on continuing keying in the data, because we know the problems and if let say I enter another 10, then we will have the same problem."*   *(MissA, Bioinformatician, Wk3, ProjectA)*

> *"We are a group of people who are professional, so, it's well-balanced, each of them will share their experience and we will talk to each other what we will do and we will try to finish our work. It's a team work, not an individual work. So, everything we do, it is as a team."*
> *(MrT, Bioinformatician,Wk3, ProjectA)*

"Okay, since the project does not depend on only one, two or three person, so the project will go on even though people are leaving. It does not depend on only one or two individuals. So it will still go on. So there's no problem about that. Even if new people come, we just trained them and show them what the previous people has done. And that's not a problem. Better still, everything is solved within the team."   *(MrR, Scientist, Wk2, ProjectA)*

Conflict starts to occur when the team is in the process of planning the schedule of the project. The team needs to decide on the task organisation as well as the methods and protocols of the experiments that they are about to conduct for the project. The team members are giving different opinions and ideas which result in conflict amongst them as some of them insist that their ideas and opinions should be implemented. With the focus of keeping the project going, immediate action is taken by the team members to solve the conflict. A cooperative approach is being used by having face-to-face discussion with those involved:

"We know that it can be avoided but still, it happened. So, what we did was we discuss...we discuss until we've found the right solution and that everyone is happy or at least, able to agree with each other."
(MrT, Bioinformatician,Wk5,ProjectA)

"Yes, there's an issue few weeks ago between me and him, but when that happened, I can just go straight to him and discuss with him."
(MissA, Bioinformatician,Wk4, ProjectA)

The project team is divided into two different locations as the lab and the main office is situated at different places. This causes miscommunication as whenever they communicate, which is commonly via telephone, it is not recorded which, in the end, results in some differences in understanding some ways of conducting their tasks. Again, the team members take the cooperative approach in addressing the conflict by having face-to-face discussions and reaching agreement over the issues that occur cooperatively.

"So, I will go and see them because at the end of the day, they are the people who are keying-in the data. So I think, it's better just for me to go and see them face-to-face. So, I will probably go and see them next week and I will sit down and discuss and find out what are the problems, why they didn't do this and that and you know, just to give them information, explanation. So, I will sit down with them."   *(MrR, Scientist, Wk5, ProjectA)*

"I had a meeting with Dr AT and Prof R. We managed to clear some confusion. Because sometimes, we do not know what they want and sometimes they don't know what we want, so we managed to clear that out. We sat down and have a heart-to-heart talk."   *(MrRg, Bioinformatician, Wk6, ProjectA)*

It is clear in this phase that the team members are the ones responsible for managing and organising their tasks as well as handling any conflict that occurs in the project without assistance from the management. This is also agreed by DrPr, who is one of the external leaders involved in the weekly interviews.

"So, this means that even though there's no one sitting beside them, asking them to do this and that and forcing them, nothing like that, they just willingly working on their task. Just give the task and the due date, then they will work on it through themselves and through the team."
(DrPr, External Leader,Wk2, ProjectA)

"All the team members understood the goals of the project, so they are taking the responsibility to cooperate by preparing themselves before any discussion so that they can give constructive ideas to ensure the success of the project."
(DrPr, External Leader,Wk3,ProjectA)

Week 6 and 7 of 12

As the team progresses over time, it undergoes major changes during Weeks 6 and 7 of the interviews. It is identified that their approach towards conflict handling has changed. This is identified to be caused by the act of blaming that starts to occur as well as the negative outcomes of the team member's previous experience from dealing with conflicts.

At this point of the interview, the project team are facing the same issue when dealing with the other team members in a different location as there are series of miscommunications and difficulties in getting feedback from the other team and this affects the progress of the project. Things become worsen when they start to blame each other when the outcome of their task is not as expected as well as some of the team members have started to not give full commitment to their own task.

> õ*I got fed up. I spent my time waiting and keep waiting. And I called and emailed. I need to get their feedback and input about my task, it can't be delayed. And when I got the feedback, they are not giving attention to what I requested for."*   (MissA, Bioinformatician,Wk6, ProjectA)

> *"I did tell him about the things that happened but he said because I didn't record down all the corrections and everything, so it should be my fault. But I don't think so but he still said that it's my mistake."*
> (MrH, Bioinformatician,Wk7, ProjectA)

> *"It is very hard to be close to those people. It needs time and patience to deal with them. We need to work together, so I'm not sure if it could work in this project."*   (MrRg,Bioinformatician,Wk7,ProjectA)

In addition, the project team members claim that they would be able to work more efficiently if they do not have to wait for decisions or co-operation from the other team members. Blaming starts to occur within the team. The team members become frustrated over what has happened and get distracted from their work as some of them feel bad to be blamed. After several unsuccessful attempts to solve the issue with each other, this is when they decide to seek assistance from the external leader to be involved in managing the conflicts.

> *"I have to wait for his co-operation, then only I can proceed. So many times it gets delayed and when things get delayed, there will be someone who starts to blame and this lead to some other issues. It's not a good thing to work in a team but failed to show the willingness to co-operate with others."*
> (MrD, Bioinformatician,Wk7, ProjectA)

Instead of having discussion on solving any conflict, the team members have changed their approach which is by avoiding the conflict. This results from the act of blaming that occurs which makes the team members feel more comfortable to share the problem with people that they are close with as they do not want to be responsible or being blamed later on for getting involved with the conflict. Blaming is giving a big impact towards the team members as they are not happy whenever people start to point fingers at them. The team members are not accepting the blame as they believe that they are doing the right thing on conducting their task.

> *"I don't think so. Maybe...maybe not putting it down on the Excel sheet is my fault but I think she should do all these. The corrections are requested by her, so she should do it and give it to me. I don't know why. But nevermind. What to do. I don't care."*   *(MissA, Bioinformatician,Wk6, ProjectA)*

> *"Some of the team members are not committed to their jobs. I know that some of them have other projects at the same time. But I think they need to commit for this project as well. We need to participate and give our inputs. I always look for someone who is committed to discuss anything."*
> *(MrT, Bioinformatician,Wk7, ProjectA)*

> *"I think if someone does not understand the requirement of this project, they will just take things for granted. It is not easy to get support from these people."*   *(MrD, Bioinformatician,Wk7, ProjectA)*

As the team members are avoiding those who are involved with the conflict, they become dependent on the external leader. The team members get annoyed when dealing with each other and the external leader will have to act as the mediator to assist the team in solving their conflict.

> *"Don't know why they acted like this. Next time onwards, I will never commit on anything. I would rather let DrPr handle this and just follow what they would suggest. I'm telling myself, this is how things will work here. Then I guess, it will make me feel better.*   *(MrT, Bioinformatician,Wk 6, ProjectA)*

> *"I don't want that to happen again. Now, what I'll do is just to follow his instruction. I'm sad of the accusation. They should understand that it was not*

my fault. I'm not going to take the responsibility of anything. Since then, I will ask his advice and wait for his decision on everything."

<div align="right">

(MissA, Bioinformatician,Wk7,ProjectA)

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The transformation of the team approach towards conflict handlings is also agreed by DrPr.

> *"I'm quite surprised to see them coming to me and request for me to help them to decide because previously, it is up to them to manage and to make their own decision on their work. And they are good at that. I don't think there's any problem before."*   *(DrPr, External Leader,Wk7, ProjectA)*

> *"...and now, I will sit down and discuss and find out what are the problems, why they didn't do this and that and you know, just to give them information, explanation. Like, this particular problem, how it should be, the information should be like this and such. So, nowadays, I will need to sit down with them."*   *(DrPr, External Leader,Wk7,ProjectA)*

Blaming is giving negative impact to the team members as they feel that it makes them incapable of doing their assigned task as they always regard themselves as expert in their own field. Conflicts are no longer discussed openly with the individual involved but it becomes informal and behind the scenes conversations among the team members. The responsibility of handling conflict is given to the external leader in this phase.

Week 8 to 12

It can be evident from the data that the team membersø approach towards conflict changes from the early phases. Conflict is being avoided rather that dealt with. The external leader, in this project DrPr, was given the responsibility to deal with the conflict. It is found that the team members are not willing to get involved in conflicts as they do not want to be blamed and are afraid that it will affect their work efficiency. This results in major transformation on the team processes as the external

leader and the management are now playing a major role is most of the team activities especially the ones involving the decision-making process. The leader is no longer positioned outside the self-managed project team as it is the leader who is in charge of making decisions, solving all the conflicts and dealing with uncertainties which occur.

> *"In my case, since I am the leader, they are more than willing to share information regarding the project with me. Nowadays, they would need me to tell them what to do."*   *(DrPr, External Leader, Wk9, ProjectA)*

The team members' attitude change which they start to just focus on their task and let DrPr take charge of handling any difficulties or problems.

> *"No, we will always refer to the team leader. It's easier that way. That's most important. That's how we do it nowadays. We do not want to cause problems by making our own decision and then if it's a wrong one, we will be in trouble. We no longer want to take the risk."*
> *(MissA, Bioinformatician, Wk10, ProjectA)*

> *"Don't know why they acted like this. Next time onwards, I will never commit on anything. I would rather let the management handle this and just follow what they would suggest. I'm telling myself, this is how things will work here. Then I guess, it will make me feel better."*
> *(MrT, Bioinformatician,Wk 11, ProjectA)*

> *"Because from my previous experience, if we just continue without really sitting down with the management, we will make mistake so that is what we don't want – to be blamed! We are putting that on hold until Matt and Dr Pr comes back. Then, they will decide, I'm not taking the risk anymore"*
> *(MrR, Scientist,Wk10, ProjectA)*

In this phase, the project team members are being highly dependent on the team leader and it is found that conflicts are dealt with by talking to a mediator or in this case, the management or the team leader. By doing this, the members are able to get away from being responsible to deal with the conflict. Even though during the first phase the team members were totally in control over all things regarding the project,

after the transition they are no longer interested to be responsible for dealing with any conflicts that occur.

This is the same in the case of relationship conflict whereby, when they are not comfortable with the attitude of any of the team members and unsatisfied towards each other, it is evidence that this is dealt with avoidance. They are unwilling to get involved with the conflict that occurs as they view that relationship conflict is not giving any benefit to them and that it is not important to pay a lot of attention to it. They would rather focus on their personal task and request the help of the team leader to be the one to solve their conflict.

> *"It is very difficult to work with him. I am so annoyed with his attitude towards this project. I don't feel like talking to him anymore. And actually, I didn't talk to him nowadays. I will let the management tell him this".*
> *(MrT, Bioinformatician,Wk8, ProjectA)*

The self-managing project team were in the process of getting to know each other where they were at the beginning of the project. It was evident that the project team was showing evidence, at the beginning, on how the team was being independent and responsible to overcome any problem regarding the project. However, when faced with conflicts, either task or relationship conflicts, over time, it can be seen that the project team is moving towards becoming dependent on the management in order to solve the conflicts. This is due to the pressure of being blamed by others, as well as based on their previous experience of handling conflict within the team that resulted in themselves being blamed whenever the conflict got worse or the solution was not successful. Conflict avoidance occurred in the middle phase of the project which led the team to become dependent on the management. By being leader-dependent, the

team members realised they were no longer being responsible for any decision making in the project that would affect others as well as keeping themselves away from being accused or blame if anything went wrong throughout the project.

4.2 Case 2 - Project B

IH Project

IH Project is a project to develop a molecular diagnostic kit. The kit is claimed to be the first in Malaysia to be targeted at the Asian population and as it is specifically going to be developed to detect the mutation for a disease known as familial hypercholesterolemia (FH), that makes it the first in the world being developed specifically for the disease.

Since the project outcome will be a fabrication of the diagnostic kit for the FH disease that will be validated both clinically and in the lab, the university agreed for BioTechCo to use their labs and their medical centre. The project team was formed specifically for IH Project consisting of members from different area of expertise. All of the team members are located in the headquarters in Kuala Lumpur, Malaysia. The first phase of the project, Phase 1 begins with the recruitment of samples from the patients in the university's Medical Centre. Blood samples are collected and at the same time, the clinical validations as well as the wet lab validation are conducted.

Week 1-5 of 12

The interviews begin when the team is in the process of collecting blood samples for the project which is in the fifth month of the 18 months project duration. At the same time, the project team members are also involved in the clinical and lab works of the

project. The data from the interview shows how the project team members are able to organise their tasks and act as decision makers for the project. At this phase, it is evident from the interviews that team members independently take charge of the decision making process, particularly important ones which involve dealing with other parties in the project.

Organising, as well as decision making processes, involves all of the project team members. It shows from the data that the team behaviour in this phase is: highly independent in organising and managing the project; highly committed to the project; and in the process of developing close relationships within the project team. The project team members are working closely with each other and they have frequent discussion amongst themselves whenever there is an important decision to be made. They decide upon any solutions together without the interference of the external leader.

> *"We are a group of professional people so it's well-balanced, each of us will share our experience and we will talk to each other what we will do and we will try to finish our work. It's a team work, not an individual work. So, everything we do, we do it as a team. We help each other."*
> *(MrR, Scientist,Wk1, ProjectB)*

> *"Usually if there's some issues with our task, we just discuss between ourselves and get back to the objective of the task. We review back the mistakes together and seek clarifications from each other. We just sort it among ourselves."*   *(MrRg, Bioinformatician, Wk2,ProjectB)*

> *"In this project, we need to work together. Our tasks are inter-related, so we are always willing to co-operate with one another."*
> *(MissA, Bioinformaticiann,Wk3,ProjectB)*

A leader is positioned outside of the team and does not get involved with the team activities. The role of the leader is minimized to only get involve when requested by

the team which is not evident in this phase. The team is independent in conducting their task and this is agreed by the management who view the project team as being highly independent and committed to their task.

> *"I believe that all the team members know their duties and responsibilities. One of the goals is to co-operate in whatever circumstances in achieving the best result for the project. For example, if we have problems, all of the team members work hard to solve the problems."*
> *(DrPr, External Leader, Wk2, ProjectB)*

> *"I will always give the opportunity for the team to express whatever concern they might have. If they are not happy with anything or do not agree with any decision, they can bring it up, so that all of us can discuss and we can solve it together. But up till this moment, they are solving everything themselves."*
> *(DrPr, External Leader, Wk4, ProjectB)*

It is also found in this phase that some of the team members are in the process of getting to know each other and trying to understand each other. The relationship between them is developing as they have never worked together in any previous projects.

> *"We purposely go out together for lunch or tea especially after a formal meeting and I find it helpful to get to know each of us better. From our conversation, I get to know what they like and what they don't like. Now we feel comfortable to deal with each other."* *(MissAn, Scientist,Wk3,ProjectB)*

> *"I am willing to help my colleagues if they have problems. I don't mind if they do not know exactly what to do. We can always discuss and find the solution together. The more we work together, the more we understand each other."* *(MrR, Scientist,Wk4,ProjectB)*

This is also similar to the team members who have known each other. The experience from working with the same people previously, helps them to understand each other well and this enables them to adapt with the working style of each other and this helps in the process of team decision making as well as in any discussion that they have.

"I have been working with some of the team members in other projects for many times. So, I know them quite well. In fact, some of them are in the same department, which is why…you see, we are like brothers and sisters. We have no problem in working together. I don't need to ask for help because they are always there to guide and try to motivate me."

(MrRg, Bioinformatician, Wk5, ProjectB)

"I knew him since our previous projects. He is okay. Very nice. Easy to work with. He will always make sure he will spend his time to discuss anything with the rest of the team members".   *(MrZ, Scientist, Wk4, ProjectB)*

In this phase, misunderstanding occurs between the team members and the clinicians from the public hospital that they were working with. The data from the blood sampling are not recorded properly by the doctors involved according to the guidelines and procedure underlined by the project team. This causes difficulties for the project team to continue with their analysis. Due to that, two of the team members, MrR, the scientist and MrRg, the bioinformatician, decide to confront the people who are responsible at the hospital. They organise a meeting and both sides file complaints and voice their dissatisfaction.

The confrontation approach enables them to immediately solve their problem as they finally reached an agreement over the matters. The other project team members feel relieved that MrR and MrRg took the responsibility to deal with the other party. The action taken helps the team to overcome the issue and the analysis process for the project could proceed as what they had planned earlier.

"Everyone in the team was concerned about this matter. So we decided to confront the people there so that it won't delay our work. We had planned for our tasks. We don't want that to get delayed just because of the people there."   *(MrZ, Scientist, Wk4, ProjectB)*

"I feel like we have to do something immediately. So, we had meeting with everyone in the team and list out the issues so that we can talk to the people there. We have to be in charge. It's our responsibility. In the end, I'm glad that we managed to solve it!" (MrRg, Bioinformatician, Wk5, ProjectB)

It can be seen in this phase that the team members are able to deal with any issues regarding the project among themselves. The team members manage to take responsibility for any issues that they face. The relationships between the team members are also developing well whereby everyone is trying to get involved in getting to know each other and they seem to be actively involved in the problem solving as well as decision making activity in the project team.

Week 6 to 7 of 12

The team are faced with bigger problems as the project progresses. The procurement process of the main equipment, a hi-density micro array setting that is needed for the project is delayed. This is due to the whole procedures which take a lot of time from the funding agency in order to purchase the equipment. The administrative hassle took more than three months since the beginning of the project and will also delay the plan that has been set for the project. However, the team manage to overcome the delay in their project by rescheduling and reorganising their work plan to ensure that they would be able to meet the deadline. These are done with the assistance from the external team leader as well as the management. They reschedule the tasks for the project and decide to bring forward some of their plan. This is to ensure that they are able to still work on the project while waiting for the main equipment. The team members try to understand that these are the problems which they would face in any project.

> *"Yes, yes. We have to make the best of what we have and you know, to make the best of what we have, we need to be creative. We are short in equipment, we are short of staff, we are short of time, so we must have creative idea in order to solve all the problems in the given time. DrPr has been a great help."*   *(MrRg, Bioinformatician, Wk6, ProjectB)*

The external leader for the project tries to seek help from the Treasury Department for the funding to reduce the procurement processing time as it will enable the team to be on track again towards their deadline. However, no update is received from the Treasury Department regarding the matter. As this has been going on for quite a while, it has affected the motivation of the project team members. The team members are upset with how the problem is being dealt with.

> *"Yes, they said that it (the equipment) is there now, they will be having meeting, I don't know how many times they are going to have a meeting. All they do is only meetings. I don't know what meetings they are having. Always on meetings. Maybe the meeting is only to eat! The equipment is still nowhere to be seen."*   *(MrR, Scientist, Wk6, ProjectB)*

> *"This is a government funded project so, if the work is done by a private company, the work will be done even faster. Since this is a government-linked project and we are working in a government hospital, work is not being done as fast as we are thinking. So that's the main problem. Work is not being done as what we think."*   *(DrPr, External Leader, Wk6, ProjectB)*

> *"...so these are some of the events which might have become a bottleneck and might push the project to more number of days. We were expecting to finish in September next year, but it will be pushed because all the other things are not happening in the same milestones. Because we were supposed to get the equipment in March but now it's almost end of April. So, one month delay. So, all my other activities are delayed."*   *(MrZ, Scientist, Wk6, ProjectB)*

On the other hand, the project team manages to get several other pieces of equipment needed for some of the experiments. The management contacts the suppliers and

some of them agree to loan some of their demo equipment for the project team to use while waiting for the procurement process.

Meanwhile, the project team is having another problem as one of the scientists working on the project resigns. The resignation affects the project team as the scientist is one of the experts for the project. A few weeks later, another resignation is tendered by a bio-informatician in the project. The reduced numbers of team members makes it really difficult for the other team members as they now need to take over the tasks of those who resigned. One of them describes that even the organisation believes that each of their staff is a multi-tasking expert; in reality it is actually a difficult thing to do. With limited time that they were given, they have to carry multiple roles and responsibilities. DrPR, the external leader for the project team realises this as he says:

> *"...there is a break in the continuity and that affects the team work as well as the team morale. Because they started feeling that somebody has left and the newcomer will join and they have to get subjected to the new scientist and his way of doing his work. They don't seem to like it."*
> *(DrPr, External Leader, Wk 7, ProjectB)*

> *"Sometimes, they instruct me to do this...to do that. It cannot solve the problems. They need to discuss with me first, I just don't like it when they delegate whatever they like without discussing with me first."*
> *(MissAn, Scientist, Wk7, ProjectB)*

The remaining team members have to work extra hours during the weekdays as well as during the weekends in order to meet their deadline. The project team have frequent meetings and plan the work schedule so that the tasks given to the resigned team members can be covered by the other team members. The management claim that the team willingly agreed to work at odd hours. However, this contradicts with

their confession that they feel stress that they now have to work extra hours and now that they have less time for themselves. However, during discussions the team members do not say anything regarding this issue and agree with all the decisions by the external leader as well as the management.

> *"Well, the working hour duration is usually not enough, so we have to manage time ourselves. We have to finish our task that was assigned to us in that limited amount of time. So the whole 8 hours will have to be utilised in a proper way so that we won't have to work extra hours. But usually we won't be able to do that due to the workload. We are now doing two three people's tasks at one time."*   *(MissAn, Scientist, Wk7, ProjectB)*

> *"We don't mind doing our work, it is our responsibility but when we are given work which are supposed to be done by someone else, this is pressuring. The deadline is the same, but the workload is different. So, this causes lots of tension in the team."*   *(MrZ, Scientist, Wk7, ProjectB)*

Needing to find a replacement urgently, the management decide to recruit a new scientist. However, at about time for him to start joining the team, some personal problem occurs and this delays his involvement in the project team. Everyone in the project team is frustrated as they are hoping that the addition of the new scientist would accelerate their work.

> *"We are happy when we know that he's coming, but now, it got delayed. This is very frustrating for us. There's so many things to do. We need more hands."*   *(MrR, Scientist, Wk7,ProjectB)*

> *"The additional member would help us a lot. We need extra people for all our workloads. It's too much now. We are not able to do it all. I hope that his problem is solved so that he can quickly join the team."*
>   *(MissAn, Scientist,Wk7,ProjectB)*

Due to this, some of the team members are assigned to work in a different location and others are required to rotate working in both locations as they are the expert but they are the experts with both lab work and documentation work for the project. The

members feel that it is difficult to be going from one place to another working at two different locations in a week and this causes lack of interaction amongst the team members as they are occupied with their task.

The team then decide to set a regular meeting time where everyone would be able to be at one place and discuss their progress. At this stage, the relationship amongst them is not as close as before and they interact less with each other.

> *"I need to update the work quickly. I had e-mail him but no response. Not once, not twice but more than that. It is very hard you know, to get in touch with him...I know that they are busy as well, but they do have to respond to urgent emails."*   *(MrRg, Bioinformatician, Wk7, ProjectB)*

This leads to some arguments within the team in the middle of the project as whenever a team member makes a mistake, the others are put in a very stressful situation as it will affect their tasks as well. With additional roles and responsibilities that each of them have to perform, the situation worsens. The leader has a discussion with the rest of the team members on how to control the situation as they are worried that it will get worse. This is done by reviewing their mistakes and seeking clarifications on matters on which they are not clear. However, this causes the team members to avoid their conflict rather than deal with it as they are not willing to get involved in any conflict that will affect their focus on conducting their increasing workload.

> *"Due to the stressful nature of doing our tasks and the short time period to finish each task, sometimes we did misunderstand each other but now, we just keep it to ourselves. I guess performing and finishing the task is much more important than how we feel."*   *(MissAn, Scientist, Wk7, ProjectB)*

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> *"I can feel the difference now. It's no longer the same as before. We are all doing our own task and when there's any issues, we won't talk to each other to solve it but we directly talk to the leader. I don't think this is good for us."*
> *(MrZ, Scientist, Wk7, ProjectB)*

Week 8 to 12

The team members have been avoiding conflict and decide to pay full attention in completing their task rather than getting involved in any conflict even though it is affecting their work process. The team members are being dependent on DrPr, the external leader, to be responsible for solving their conflict. At the same time, DrPr was required by the management to work in a new project. Therefore, DrP took over his responsibility. Having a different style of leading the team, miscommunication occurs between the team members and the new team leader. The new leader has less knowledge about the project and the instructions and assistance given are not helping the team members as they expected. The team members are unhappy with the situation but they agree to learn to adapt with the new style of the new project leader.

> *"It is not easy to work with him. He does not understand how our team operates. I don't think he even understands what we are working on. We did talk about this with him but until now, it is still the same. Nothing changes."*
> *(MissAn, Scientist, Wk9, ProjectB)*

> *"His approach is different. I don't think he is interested in the project. When we seek for his help, he can't do much.*
> *(MrRg,Bioinformatician, Wk10,ProjectB)*

Meanwhile, for the team members working in the lab, some of the equipment is taken back by the suppliers. Previously, some of the suppliers agreed to loan their demo equipment for the project usage but due to the long duration of the procurement process, the suppliers decide that they would take back all the equipment which is on loan. The suppliers decide that they are only be able to

continue supplying the equipment when the procurement process is done. This is causing difficulties for the team working in the lab as they need to conduct several experiments using the equipments being loaned by the suppliers.

> *"I'm not sure what to do. Now that they are taking back all the loaned equipments. It disturbed what we have planned earlier. And like now, we are in the middle of all the small experiments. So, having the equipments are very important. But now they are all gone."* (MrZ, Scientist, Wk9, ProjectB)

DrP, the new external leader, has several discussions with the suppliers to negotiate an additional time to use their equipment but it was unsuccessful. Again, this causes frustration within the project team. They have to reschedule their work plan and they also need assistance from DrP in order to motivate them to do their work. DrP is aware of the changes in the team as they are being very dependent on him.

> *"I'm quite surprised to see them coming to me and request for me to help them to decide because previously it is up to them to manage and to make their own decision on their work and they are good at that. I don't think there's any problem before."* (DrP, Extenal Leader, Wk12, ProjectB)

> *"We just follow what they say. Now it is so unstable due to the lack of resources and everything. We can't afford to make wrong decision. If we have problem, we will tell them, if we need help, we'll seek them. Everything will be on them. We don't want to be blamed later on."*
> (MrZ, Scientist,Wk11, ProjectB)

> *"I will consult the leader first if I have problem with the new software. I don't want to be the one deciding on that. What if it brings no good to the project?"*
> (MrZ, Scientist, Wk8,ProjectB)

Then, the management decide that the team members attend training on the software that they will be using in later stages and to do some research on the experiments that they are about to conduct so that they are able to publish some research papers while waiting for the problems with the equipment to be solved.

It can also be found in this phase that there is a gap between the senior and junior member of the project team; that the new member of the team feels comfortable dealing directly to the external team leader whenever there is some assistance needed regarding their task. The reason for this is that they feel that they would be blamed if they take their own action on any matters. They decide that it is best to seek help from the team leader so that they would not be blamed over what happen in the decision making process.

> *"I am new here, I am shy if I have to ask my colleagues often, I don't want to act as if I know how to do it but the truth is, I really don't. I feel that if I do it on my own, it won't work. It happened when I first joined the project. I feel that it is much easier to straight away seek help from the senior."*
> *(MrR, Scientist,Wk10, ProjectB)*

> *"I won't make my own decision now. We've had a discussion with DrPr about this and not wanting to make wrong decision, we would refer to DrPr for everything. He will have the final say."* *(MrZ, Scientist,Wk11, ProjectB)*

> *"It is very difficult you know...I would rather keep quiet than say something. These people are just there to point finger if anything goes wrong. Let's just leave it to the team leader then"* *(MissAn, Scientist,Wk10,ProjectB)*

This is similar to situation of the senior team members being affected by the delay of equipment as well as lack of team members, they are aware that any wrong decision being made will cause more trouble for the project team. Therefore, they decide to avoid any conflict and let the leader to be responsible.

> *"I feel that it is much easier to straight away seek help from the boss because he is the one responsible. He should take charge of everything."*
> *(MrRg, Bioinformatician,Wk9,ProjectB)*

> *"It is very difficult you know...I would rather keep quiet than say something. These people are just there to point finger if anything goes wrong".*
> *(MrZ, Scientist, Wk 11,ProjectB)*

The project team was at the middle stage of the project whereby they were in the process of collecting samples for the project as well as conducting some other experiments. The project team was collaborating with a medical centre in Malaysia. It can be seen at the beginning of the interview that the team members were facing conflicts with other parties outside the team but they managed to solve it by themselves. There is also evidence of gaps between the senior and junior members of the project team. However, as time went by, when faced with several other task and relationship conflicts, they started to avoid the conflicts and they showed evidence of being very dependent on the management.

The team experiences of being blamed for their actions were one of the reasons that the team members decided to change their approach towards their task conflict. Another reason that can be evident is that they were aware of their increased workload that they were not willing to spend their work time dealing with any conflicts that occurred. They chose to avoid conflict and let the external leader to deal with it.

4.3 Case 3 - Project C
3D animated cartoon TV series (AAS Project)

AAS Project is a project by ITCo which is developing a 3D animated cartoon TV series. The project team was formed to work on a project of developing a 3D animation cartoon series and consists of animators, modelers, graphic designers and storyboards artists.

Week 1-6 of 8

The interviews start during the third month of the project. It is an 18-months project and there are 24 episodes to be produced. When the interviews begin, the team has just completed the first episode and is in the middle of preparing for a demonstration to their client. However, the client is dissatisfied with the outcome that the team produce and they request that it needs major improvement. According to the team member, this is not surprising as the project was problematic from the beginning:

> *"AAS is actually a difficult project to handle because there are lots of technical problems during the initial animation process and the design itself is difficult. For example, normally people will just follow the design and drawings of 2D and then transform it into 3D but in our case, we need to look for perfection of the character so that we can see the depth, we can blend things, play with the lenses, with the camera, all around. With the equipments that we have here, it is really difficult."*
>
> *(MrS, Multimedia Executive, Wk1,Project C)*

Given the feedback from the clients, the management decide that the project team needs to go back to the pre-production process to reproduce the first episode of the series to fulfil the requirement of the clients. The team members suggest the usage of a new 3D software, ‗SoftImage‖ for the project as it will enable them to produce a high quality 3D animation which is expected to fulfil one of the client requirements.

Therefore, the project team members need to acquire new skills to use the new software.

At the beginning of the interviews, the project team is in the process of becoming familiar with the new software. The team members spend most of their working hours researching and exploring the new software as none of them has any experience of using the software. Books and online resources are referred to for new techniques and skills. Daily informal meetings are also conducted to enable the team members to exchange the new skills and techniques on using the new software.

> *"It is a big challenge for us. Nobody is experienced with the new software. It's like a 'nobody knows' working environment and everyone in the team is busy learning it. If we have any questions, there's no one that we can refer to except for the online tutorials. It would be better if someone expert in the software is in the company."*   *(MrK, Storyboard Artist,Wk1,ProjectC)*

> *"We need to explore the new software and yet the management has no plan to send us to attend any training. We need to learn on the software by ourself. This really takes time and we are not sure when we would be able to master the skill for the software. This will delay the development process."*
>   *(MrD,Animator, Wk1,ProjectC)*

> *"The management should send us for training so that we could quickly learn all the techniques and tips on SoftImage. They are more concern about the cost than the outcome. No one here knows about the software. This will take a long time to learn and it will delay the work schedule."*
>   *(MrS,Multimedia Executive, Wk1,ProjectC)*

As well as struggling to learn using the new 3D animation software, the project team is unhappy with the current condition of the equipments in the company. Most of the servers and personal computers are outdated and needed upgrading. The computer processors are so slow that it is difficult for them to explore the new animation software as well as performing other tasks.

"Look at the condition of the equipments here. The computers need upgrading. It is not easy to work like this. The management should do something about this."   *(MrP, Graphic Designer,Wk3,ProjectC)*

"The equipments, especially the hardware is not up to the new software requirements. It's not compatible. This is so annoying. How can we work efficiently when the equipment is outdated?"

(MrS, Multimedia Executive,Wk2,ProjectC)

The team members find it difficult to talk directly with the management about the condition of the equipment and any other problems due to their close personal relationships. Instead of discussing directly with the management, they decide to show a totally different attitude on their tasks which is by showing slow work progress as well as producing low quality output to the management even though they know that they could perform better. They purposely do this in order to convey the message to the management that there is something wrong with the equipment.

"We purposely do not show any good work progress. We did that as we are unhappy with the equipment. We need to use the new software for the project but they are not providing the high-end computers that we need. I don't know why they are not taking care of this matter."

(MrS, Multimedia Executive,Wk3,ProjectC)

"That's what we are doing now. We wanted them to know that there are things that the management needs to improve. It is not easy to directly talk with them as we are like a big family, but how could we do our work if things like this are distracting us."   *(MrK, Storyboard Artist,Wk3,ProjectC)*

"We know that we could do better but this is just a way to tell them that they need to be aware of the conditions of the hardware especially the servers and the computers. This is a very big project and they should be paying attention to the most important thing - the computers."

(MrD, Animator, ,Wk4,ProjectC)

However, the management do not show any serious concern on the low quality output that they produce. The team members then realise that what they have done is

giving any no benefit to the project and they decide to have a formal discussion with the management regarding the equipment problems. This is because they realise that there is nothing that the team is able to do without the assistance of the management on the equipment as that is the managerial responsibility to provide the equipment for the team.

> *"We did try to tell them in a different way. We are not paying full attention to our work. We just do not produce our best. But the thing is the management didn't realise this. So, it didn't benefit us at all. So, we discussed and we decided that it's about time to directly talk with them about the equipments."*
> *(MrK, Storyboard Artist,Wk5,ProjectC)*

> *"We did protest but by doing what we did, it was not beneficial for us as well as the project. So now we decided to talk to the management about this".*
> *(MrS, Multimedia Executive,Wk5,ProjectC)*

The discussion is successful as the management promise that they will take action over the issue, deciding to upgrade some of the computers.

> *"We talked with the management. We told them that the equipments seriously need upgrading. It is just too slow to be used especially in a big project like this. They said they will do something about it. I hope that's not just a way to make us stop complaining. We really hope that they will do something about this."*
> *(MrK, Storyboard Artist,Wk6,Project C)*

After several weeks, some of the computers and servers are upgraded. Although not all the equipment is upgraded, the team feel better that they are able to directly discuss the issue with the management and they are happy that the management considers their problems and manages to provide solutions for their problems.

In the same week, the project team face another big challenge when three of the team members quit their jobs. The reason for this is due to financial problems faced by the

company. This is due to the delay of payment received from their clients as well as problems that they have with some previous clients. This was expected by the management as confirmed by DrN, the salaries of the employees have not been paid for the past five months as revealed by the external leader of the team.

> *"We've secured several projects, big ones, but the company is having a major financial crisis. We are not able to pay their salaries but we still need them to work on the project. We've been promising them but we are still not able to fulfil our promises."* *(DrN, External Leader, Wk6, ProjectC)*

On the other hand, some of the project team members decide to continue working on the project regardless of not getting their getting their salaries for the past five months. It is evident that their commitment is due to their passion and interest in their work which is particularly in animations work for the animators, which gives them the motivation to keep on working. The new software usage and the process of producing the 3D animation series is also what the team members see as an opportunity for them to gain beneficial experience.

> *"It did affect me, of course! But I think it's okay to stay for a while. Learning the software would be useful for us in the future. We are not getting any money yet… but I think gaining the skill is very important, too, for my future."* *(MrS, Multimedia Executive,Wk6,ProjectC)*

> *"We haven't received our salary for the past several months. How could we support ourselves? I'm looking for a new job but I'm staying here for the time being to get the idea on the new software and working on a 3D project as I know it would be useful for the future."*
> *(MrP, Graphic Designer,Wk6,ProjectC)*

> *"I have so many bills to pay, this and that. I'm looking for other opportunities out there but now, I'm still here. This is my passion. I've been doing this for so many years. I enjoy doing this kind of work. However, I still hope that the management is going to fulfil their promise that we will be getting part of our salary by the end of next month."*
> *(MrK, Storyboard Artist,Wk6,ProjectC)*

The management is worried that the project is still at the beginning stage but they are facing lots of problems. With the resignation of the three team members, the others are buried with added responsibilities. The tasks for each of the team members has multiplied, not only do they have to perform additional tasks, they also have to take extra roles. For instance, the animators have to do the work of modellers or programmers and vice versa. The team members have to spend extra hours working on the project and some of them even spend their nights in the office.

> *"We are trying to work on that first. It is not easy because we are not having enough staff. Our skills are in different areas. Like for example, someone is an expert in the modelling process but now, they will need to get involved with doing animation and others. And as for myself, I will need to add the solution, the water effects and others. That is not my expertise. That was supposed to be the work of the programmer. And now I heard that they are trying to recruit a new senior animator, recruit new person. But what about the financial problem? I don't understand the management. Lots of projects but well, I don't know, it's the management."*
> *(MrS, Multimedia Executive,Wk6,ProjectC)*

It can be seen in this phase that the project team are independent in organising and managing their work. It is the project team members who decide to use the new software for the pre-production process of the 3D animation. Besides that, they also have close personal relationships with each other within the team as well as with the management but in terms of professional matters, they seldom let the management get involved and the team would rather solve all their problems themselves. Therefore, any problems and decision making processes involve only the project team members.

> *"We are closer this way. Amongst ourselves. Sometimes, they (the management) were asking about funny stuff about the project in our meeting, which I don't think they knew what they were talking about especially on the technical stuff."* *(MrK, Storyboard Artist,Wk4,ProjectC)*

> *"We feel comfortable to discuss in the team. Easier to exchange and share our ideas and opinions."* *(MrD, Animator ,Wk5,ProjectC)*

"We'll always try to do our best to solve our problems. I'll do it by myself and then I'll ask my colleagues for their opinions. Usually, that's how I do my work and solve any problems." (MrK, Storyboard Artist, Wk3,ProjectC)

It is seen that the team members are not comfortable to discuss with the management even though they are in need of management assistance. Whenever they are working on any of their projects, they discuss amongst themselves about whatever is happening and will resolve their own decision. It can be evident from the data that one of the reasons that the team members are avoiding discussions with the team leader is due to the fact that they feel the team leader is not knowledgeable enough in the project and would always refer back to them.

"He is sometimes...you know, because he comes from a typical management background, so he doesn't want to listen to us. So basically, like whenever I wanted to discuss with him, it's not easy to explain stuff to him."
(MrP, Graphic Designer,Wk6,ProjectC)

"It's not easy to talk with the management. I find it a bit difficult to talk and to discuss with them as what happened previously, they do not listen to our opinions. So, let them be. But in terms of our personal relationship, we are close, like brothers. We would go out for lunch together and things like that."
(MrD, Animator, ,Wk5,ProjectC)

Another reason discovered is that the team members prefer to discuss and deal with problems themselves as they notice that discussion with the management takes a long time to solve and leads to a more complicated situation than they had previously experienced.

"It is quite a problem when the discussion involved the management. It could drag for 3-4 hours. Just wasting our time. I think it is not that complicated."
(MrS, Multimedia Executive,Wk7,ProjectC)

> *"Whenever we are having discussion, he always makes it difficult and complicated. I wonder why? Personally, I would prefer not to talk to them about any problems that we are facing. Discussing within the team is easier."*
>
> *(MrS, Multimedia Executive,Wk4,ProjectC)*

Week 7 to 8

In this phase, the remaining team members spend endless hours working on the project and they manage to complete all the important parts of the project which are the characters and backgrounds for the project. They manage to achieve this as the team members feel that working in a smaller project team and being given more responsibilities are challenges for them to face. Their skills in using the new software have improved enabling them to complete their assigned tasks despite the lack of resources and financial crisis faced by the company.

> *"...should not a problem because by hook or by crook we must finish our work before the deadline. And it's not always that you have to bring your work home. I believe that if we manage to complete this on time, we will be getting the payment that they've promised."*
>
> *(MrS, Multimedia Executive, Wk7, ProjectC)*

> *"I will always try to complete my daily work by the end of the day and try to finish the whole thing at the end of the week. We won't keep the things pending for next week and things like that. The work load is terrible but just look at it as a challenge."*   *(MrP, Graphic Designer, Wk7, ProjectC)*

The project team then demonstrate the initial output to the clients. During the demonstration, the client is satisfied with their output and this motivates the project team as they realise that their work is being appreciated by the client as well as the management despite not getting paid and not having enough employees for the project.

However, in Week 8 of the interview, the management take drastic action when they decide to discontinue the project and to sell the 3D characters that they had developed to the clients. The decision is being made as they feel that the company is not able to complete the whole project, based on the huge financial problems that the company is facing as well as the problem of lack of employees to work on the project.

The project team members feel shocked they were not informed before this decision was made and they did not expect the management would make such decision. They are frustrated as at that time, they had been involved so much in the project. Adding to that, as for those involved in sketching the background for the 3D animation, they are frustrated that the client only agreed to buy the characters but not the background design that they had produced. The client intends to outsource the project to another company. Therefore, the completed backgrounds created for the 3D animation are wasted.

> *"Oh..we are really, really frustrated..especially me. Because as for me, I gave my very best for my task which is on the background for the series. And now that they decided to stop the project, it's just so frustrating. All of us spent most of our time working on the project. And like the background that's almost done, it can't be used for any other project as it is specifically for AAS. Everyone else is frustrated too with the management. Because time has been wasted on that."*   *(MrS, Multimedia Executive,Wk8,ProjectC)*

On the other hand, the management think that they have made a good decision; that by discontinuing the project, it would enable the company to focus on working on smaller projects with small budgets and shorter project duration. This is expected to enable the organisation to receive faster payments.

"We believe that it was a good decision for the company. AAS is a big project and for a long duration. We are in the midst of financial crisis as well as lack of resources. We are having so many problems. We would rather focus on small projects which would give quick money for the company. In this way, we would be able to pay the salaries and upgrade the equipments."

(DrN, External Leader,Wk8,ProjectC)

The company were the process of developing the second episode of the project when the interviews started. They were having some conflict with the clients but the team managed to solve it by improving their work based on the feedback that they received from the clients. The close relationship between the team members and the management put the team in a dilemma as it was difficult for them to express their dissatisfaction towards the management. Adding to that, the project was also having financial problems regarding the funding of the project. As the output of the project improved over time, the team was happy that their work was appreciated despite having the financial problem which affected their salaries. Finally, the management decided that the project team needed to be dissolved and they stopped the project during the second phase of the interview.

4.4 Case 4 - Project D
Online Gaming Project

The Online Gaming Project is a project for developing an online game based on old legends from several countries in South East Asia (SEA). It is a collaborative project between three multimedia companies in SEA. The three companies divide the project into three different sections whereby ITCo is given the responsibility for the development of the ─animated charactersø for the project.

Week 1 to 6 of 12

The interviews start during the fourth months of the 18 months project. The team members have just completed their training for the new software that they will be using for the project and they are already working on some initial parts of the project. At this phase, ITCo is facing problems with the lack of employees and they decided to send all of the team members, even those who are not related to animation works, to attend training on the new software. The background artist, the modeller as well as the storyboard editor are included. This is to enable them to gain knowledge on the new software and enable them to work together on the project. The team members are unhappy with the condition as they are given more responsibility for the project in addition to some of them doing tasks which are not their area of expertise.

The process of developing the animated characters requires the project team to perform brainstorming activities regularly at the early stage of the project. The team members share their knowledge on using the new software and discuss the development of the characters among themselves in their group discussions every alternate day. A team leader is assigned but he is positioned externally which means

that he will only get involved whenever the team members decide to seek his assistance.

> *"We need to discuss a lot at this stage as they are still some confusion on the development process and we wanted to make sure that we are able to produce the output as expected by the client. But all these discussions were just among us. It is better this way that we are able to discuss freely compared to the meetings with the management. This is a bit informal but very beneficial for the team."*
> *(MrF, Animator,Wk1,Project D)*

> *"We had our discussion every two days so that we can discuss anything especially on the development of the characters. It's something new to some of us so we need to discuss a lot on the matters. We are doing our best to produce the output as according to the client's requirement. It is a big project so we need to make sure that everything is perfect."*
> *(MrS, Multimedia Executive,Wk1,Project D)*

In their regular meetings each of the team members is given the chance to share any of their newly acquired skills in using the new software and then they can demonstrate it to the other team members. This enables them to improve their own skills towards meeting the output specification given by the client. The team members then start to delegate their tasks to ensure that the project will proceed to schedule. Each of the team members is given several weeks to work on their parts and then the team sets a date that they will have another meeting to compile all their work output.

During their work process, the team members start to realise that some of the team members are struggling with their tasks. This is based on some of the initial output which is not meeting the specifications given by the clients and not as they had discussed together at the beginning. Even though the team have been reminded many times that even though they are free to work according to their own style, they still need to ensure that their work quality meets the client's requirement.

This causes conflict for the project team as when they compile their work together, the different parts are not standardized and they need extra time to fix the mistakes and this will delay their work schedule. More work needs to be done to correct the completed output by some of the team members, in this particular quotes, MrM.

> *"MrM should refer to us whenever he's not sure with any single thing. Things would be better if they seek us first before completing the task. This will save plenty of time rather than showing us the output which is not as the project requirement."*   *(MrE, Modeler,Wk4,ProjectD)*

> *"Well, I'm quite annoyed with MrM's attitude. He could just ask us if he is having problems with his task. We are a team. During the frequent meetings that we had previously, he showed no sign of needing our guidance but now his output is giving us difficulties to compile. Now we need to spend more time on that."*   *(MrS, Multimedia Executive, Wk4, Project D)*

The team members start to feel unhappy with some of the team members and they feel that they need to solve the issue immediately. As a result, some of the team members decide to have a discussion in order to prevent the same thing from re-occurring. The meeting enables the team members to voice out and confront each other by showing the work output that was assigned to each of them. By doing this, they are able to compare the work between themselves. The work output which is completed according to the specification given by the clients is compared with those which are not up to the standard required by the client. In order to do this, the team members are given the chance to give comments and critiques on each others' work.

The team members begin to understand the difficulties faced by some of the team members in doing their assigned task and they are willing to provide assistance to

them. They are able to improve their work quality as now they aware of which aspect of their tasks that need improvement and they can seek help from others.

> "It is useful and helpful to have this kind of discussion. We can ask around and share whatever it is that we need to know. I guess most of us learn something from the meeting."   (MrN, Graphic Designer,Wk5,ProjectD)

> "What we did was to let others comments on our given task and then start to find out ways to improve. That, I found very much helpful to help us to maintain the quality of our work. And when we received comments from others, we will know what we are lack of. Sometimes we just don't realise that."   (MrS, Multimedia Executive,Wk5, Project D)

The team is now in the process of improving their work and they are working towards meeting the deadline that has been scheduled. In this phase, the management agrees with the suggestion given by the team members to start implementing flexible working hours where they are able to access the building at anytime, day or night, so that it will be easier for them to work extra hours on the project. The implementation of the flexible working hours allows the team to work extra hours which allows them to be back on track with the things that they had scheduled earlier. They are given access to the building at anytime and there is no restriction as long as they are able to get their work done.

> "Now it is easier to work without any 9 to 5 restriction. Before, we need to go home before they lock the whole building and then there's no access. So, if there's many more things to be done, we need to wait till the next day. But now, we can access any time. So, usually after dinner I'll continue working in the office."   (MrD, Animator, ,Wk6,ProjectD)

> "The flexible working hours is excellent! We are able to work at any time. As for me, I prefer to work at night. That's my productive time. I do come during the day and then at night, I will continue with my work and I realise that I can focus more at night."   (MrE, Modeler,Wk6,ProjectD)

The project team is able to work efficiently with this flexibility as they claim that some of them are able to work more efficiently at night and then in the day they will

be able to take a rest. Therefore, with the implementation of the flexible working hours, the team are improving their work performance and increasing their productivity. The decision made by the project team to suggest the flexible working hours is helping the team to be able to complete their tasks on schedule and they are able to spend more time on improving their skills for the project.

Week 7 to 8 of 12

As the project progresses, the team is faced with another difficulty which is during the compilation of the work output produced by all of the team members. They realise that the previous problem is repeating. Even though they have taken some actions previously, there are several team members who are still having problems in completing their tasks and no improvement being made by them despite the comments that they received and help given by some of the other team members.

> *"During the meeting, they will agree with the comments. It seems that they really understand what to do next. Which part needed to be fixed and things like that but, well...they keep doing the same mistake."*
> *(MrE, Animator,Wk7,ProjectD)*

> *"We talked about this several times. In each and every meeting. We help them by showing how to do it, how to produce excellent output, but somehow they still repeat the same mistake. I'm not sure how to help them anymore.ö*
> *(MrE, Modeler,Wk7,ProjectD)*
> *"It is not always easy when some of the members prefer to stick to their own ideas and not willing to accept comments from others. The meeting which was supposed to help them doesn't seem useful for them."*
> *(MrD, Animator, ,Wk7,ProjectD)*

At this point, the team realise that they are in need of assistance from the team leader whom they believe will be able to help solve the problem. This is to ensure that some of the problematic team members are able to complete their tasks according to the

specification that is required by the client. The team leader begins to get involved with the project in this phase and he tries to discuss with those who seem to have problems in completing their task and try to understand the problems that they are facing.

> *"We need the management to step in now. I don't think there's anything else that we could do. We did organised meetings and things like that but it is not changing anything now. I think the best person to deal with this is the management"*   *(MrS, Multimedia Executive,Wk8,ProjectD)*

> *"I know that by now, the team leader have to be in charge. Or else we are not able to make it for the project. "*   *(MrD, Animator,Wk8,ProjectD)*

It is discovered that some of the team members are having problems with their work output due to their inability to fully acquire the skills on using the new software as they are from different areas of expertise and they are not interested in doing their assigned tasks. They have to do it due to lack of staff for the project. The team leader explains to them that as part of the project team, they are required to do the task and they will need to produce the work as required.

> *"...they tend to...like no matter how much you tell them, they still want to do their stuff. You know, that kind of thing. I know that they have no experience doing this before, but as part of the team, it is their responsibility. They need to do it. Normally we will tell them on the spot and if they still don't listen, we will still tell them again and again that it's not our own project so you can't really do it with all your likings. You have to do what the clients want. The client will tell and we will do it."* *(DrN, External Leader,Wk8,ProjectD)*

The leader then decides that the team members will need to update him on their daily progress so that he can monitor their work and give direct feedback on their work output each day. Whenever their work is not satisfactory, the team leader will be able to provide assistance for them on giving suggestions or comments on what can be done to improve their work and the other team member will also be able to assist and

those with the appropriate skill will also be able to help them. With the new monitoring strategy implemented by the team leader, the problematic team members realise their responsibility towards the project which requires them to meet the client's requirement.

On the other hand, due to the implementation of the flexible working hours, the project team faces difficulties in finding the right time to conduct their meeting. This is as some of them are working during the night and they are not able to attend any meeting that is scheduled in the morning the day after. Even though email is widely used to communicate amongst them, they still need to conduct face-to-face discussion. The team members feel that communication via email is not possible to help them to clarify some matters regarding their work. The misunderstandings that occur causes annoyance amongst the team members as it will also delay their task schedule whenever they are not able to have further discussion with the others.

> *"It's not easy to have a meeting. This is a bit difficult for us to discuss about the project and when we try to set a meeting time, not everyone will be able to attend. So some parts get delayed."*   *(MrD, Animator, Wk8,ProjectD)*

> *"We did communicate via email but as for certain issue, we need further clarification and need to discuss together face to face so that there will be no misunderstanding. For example when we need to discuss on any particular animated characters, we will need to see the characters in front of us so we can fix what needed to be fixed." (MrS, Multimedia Executive,Wk8,ProjectD)*

> *"I think by having fixed meeting date will ensure the team members are able to attend. They will know the date and time in advance so that they can organise their work and time to make sure that they are able to attend the meeting. I have to set the time so that they are able to have their project meeting."*   *(MrE, Modeler,Wk8,ProjectD)*

Therefore, the team leader decides that adjustment has to be made for all the meetings arrangement. The team members realise that the implementation of flexible working hours is good for the team but sometimes difficulties occur especially when they need have any immediate discussion. The team leader decides to arrange a fixed date for the team meeting and this is agreed by everyone so that they will spare their time specifically for the meeting.

Week 9 to 12

As the project progresses, the project team is in need of extra team members to ensure that they are able to complete their tasks on time as they are no longer able to handle their workload. Besides that, they are also involved with other projects in the company which need their attention. They start to request for the team leader to get involve with most of their discussions for the project and they rely on the leader to make any decision regarding their task as well as in solving any of their problems. This is due to their previous experience of dealing with some of their conflicts that they are not able to resolve it just by themselves as the same mistake was repeated by the same people several times.

> *"As what happened before, it causes some problems because of some the misunderstanding. So now, I would prefer to just straight away go to the management and let them deal with it. That's a huge relief that I don't have to deal with that anymore."* (MrD, Animator, Wk9,ProjectD)

> *ðI would prefer to see the team leader everytime I'm stuck with my task or any other thing. I don't want to make my own decision. After all, he's the one with all the experience."* (MrE, Modeler,Wk10,ProjectD)

In order to add new members to the project with very minimal cost, the management decide to hire two part-time employees to assist in the project. With minimum pay, the new part timers accept the work as they want to gain experience and to polish

their skills in developing the online game application. However, instead of helping the project team to speed up their work, they distract the other team members as they progress slowly and need guidance all the time. The other team members complain that they do not have enough time as they need to focus on their own task.

> *"Unfortunately, they are not making it easy. We now need to spend our time to show them this and that. We are hoping that their existence in the team would at least speed up the whole process but no! This is so annoying."*
> *(MrE, Modeler, Wk10, ProjectD)*

> *õThis is not good. We need more work to be done, not more problems. We are able to show them for the first few weeks but it ended up that we need to show them each and every steps and this is a waste of our time that should be spent on our own task. "*   *(MrD, Animator, Wk9, ProjectD)*

The team members then discuss with the team leader and he decides to have a talk with the part timers. They are told to work independently as, at that time, they have already received a lot of assistance and guidance from the other team members. The new team members agree and they start to improve the way they conduct their task and this enables the team to work according to their deadline.

> *"The team leader did a great job. Now, everything is okay with the part timers. Well, at least they no longer bother us with simple questions which they can actually explore by themselves. This is how we expect it to be. They are here to provide assistance for us and not to distract our work.õ*
> *(MrD, Animator, Wk12,ProjectD)*

During the team regular meetings, they share and exchange knowledge with the new members so that they are able to understand the working culture in the company. Most of the team members claim that they always eagerly wait for the meeting because it enables them to discuss new ideas and techniques for the project. Even though there are disagreements in the project team, they are able to accept that as a way to improve their work performance.

"My colleagues and I are close and we are very committed to each other in terms of providing help with regards to our job, I don't see any difficulties in sharing or working together. We always hang out with each other in the weekend too."   *(MrE, Modeler,Wk11,ProjectD)*

The relationship amongst the team becomes closer as they go out together for lunch or dinner and they play bowling together. This makes it easy for the team to have discussions with the team leader and they take this opportunity to let the team leader deal with most of the problems that they face especially regarding to their task. The external leader plays an important role in problem solving as well as decision making processes in the project team.

"We will share our problems and we will talk to each other of what we will do and how we are going to do it. It feels good that he (team leader) helped to decide and try to solve our problems. So now we could focus on our work rather than getting involved with other things."
(MrS, Multimedia Executive,Wk11,ProjectD)

"He will worry about the problems and we can focus on our tasks. It is much better this way to have someone helping us in making decisions and such."
(MrE, Modeler,Wk12,ProjectD)

This is as agreed by the external leader, DrN.

"By now, I know most of the team members very well. We have lots of meetings and discussions and I know each of their personality. But most of them are still young. They do not have much experience. They would always consult me and I'm always here, always willing to help them with anything."
(DrN, External Leader,Wk11,ProjectD)

Another problem is discovered in this phase as the project team is unhappy with the management due to the financial problem that the company face. Earlier, the management told them that they would be able to pay their salary as they have received some portion of payment from the clients. However, the management invested the money to obtain new equipment and sending the employees to attend

trainings as well as using the money to settle their debts on other projects. Therefore, they do not have enough money to pay the project team members' salaries.

> *"It's always the same problem - money. The management promised that we will get paid this month, at least half of what they owed us, but still, there's no news on that yet. I'm so upset about this."*
> *(MrD, Animator, Wk12,ProjectD)*

> *"We are doing the work and hoping that we will get our salary. We haven't been paid for several months. They gave empty promises and we ourselves have other financial commitment. Like for me, I need money to pay for my car loan, housing loans, for my family…It is so frustrating. I'm looking for another job now."*   *(MrE, Modeler,Wk12,ProjectD)*

When the interviews started, the project team was about to begin working on the project right after finishing the training sessions for a new software which was to prove useful for the project. At the beginning stage, it can be seen how the team members cooperated and planned their work together. However, over time, the team had task and relationship conflicts due to the performance of some of the team members which was not according to the clients' specifications. They also faced the problem of lack of team members for the project. The team members were frustrated for not getting their salary paid after months of hard work and even though they were willing to work extra hours, they were still not being rewarded accordingly. The management tried to convince the employees that they would be able to pay them but some of the employees were already demotivated and they no longer wanted to work extra hours for the project as some of them intended to quit their job and they decided that once they received an offer from another job, they would quit their job in the company. The team then started to face some other conflicts which caused them to be highly dependent on the management in order to help them continue working on the project.

4.5 Case 5 - Project E
HealthDrink

This project is on developing a new formulation for an herbal drink product which is based on a type of herb, Noni (Morinda Citrifolia), which is claimed to be beneficial to humans. The project team consists of an R&D scientist, food technology scientist, junior scientists, R&D supervisor and others. The project team is located in a R&D lab which is situated at a different location from the administration team.

Week 1 to 5 of 12

This project is a 12 month project and the interviews start during the fourth month where the team is in the middle of conducting experiments for the project. At the early phase of the interviews it is evident the team members are well organised in taking the responsibilities to perform their tasks. Team members are working together independently without having direct contact with the management. This is due to the nature of the team which is given the freedom to work on its own as well as the different location of the management team. When needed, the team will communicate with the management team via email or telephone calls and the managing director visits the team when needed.

Every day, the team members allocate five to 10 minutes for morning briefing with all the team members and this then continues with the ‒Morning Marketø session. During the morning briefing, all the employees gather and they take turns giving a brief motivational talk to everyone to start the day. This is then followed by the ‒Morning Marketø session which involves only the project team members; it is a session where it is compulsory for all of the team members to attend and to update

each other on their previous day's progress and their plan for the day. Any issues that arise are also discussed in the session. There is an internal communication form which is filled every day so that the team members are aware of any problems as well as the solution and the person who is involved and in charge for each of the problem.

The project team members work closely with each other and they have frequent discussions amongst themselves whenever there is an important decision to be made. They decide upon solutions together without involving the team leader.

> *"We will voice out our comments during 'Morning Market'. We will prepare our report at the end of each day so by the next morning we are well-prepared to report and also we need to plan on what to do for the rest of the day. If there's further action to be taken, the people involved will further discuss about it after the Morning Market. I really think that this session is beneficial for the whole team."*   *(MrK, Scientist,Wk1,ProjectE)*

> *"The 'Morning Market' is around 45 minutes to two hours, depending on the issues that we are facing. In terms of time, it seems a bit of a waste especially when we are approaching deadline for some of our tasks but anyway, we will still have to get involved as we are doing things that are related to each other. We need to know how things are getting on with others and work together to solve any problems."*   *(MrS, Scientist, Wk1,ProjectE)*

> *"It is good to have this daily as we don't really keep any problem to ourself. Everything is shared and we do help each other. In a way it is good but sometimes it the meeting drags for almost two hours and still we are not able to come to a conclusion."*   *(MissM, Quality Controller, Wk2, ProjectE)*

The lab manager takes charge of all the reports and is responsible to bring any important matters to the management such as any financial issue which is out of the capabilities of the team members to resolve. It is also claimed that all the team

members are able to conduct each of their tasks responsibly and this is agreed by the lab manager, MrSh.

> "In my experience, the project team is very much capable of solving their problems and make their own decision. The daily morning meeting that we are having shows how they are working together as a team and try to achieve the best solution in order to achieve the team goals."
>
> (MrSh, External Leader,Wk2,ProjectE)

> "I am always open for any discussion on any issues with the project team. They know that I will always be around to assist them but I believe they prefer to work on anything amongst themselves and solve it together."
>
> (MrSh, External Leader,Wk4,ProjectE)

Since most of the team members have experience working in other projects, their relationship with each other is quite close. There is one new member to the team but he feels very much welcomed by the rest of the team members.

> "We are like a family. We will always go out for lunch or tea together. I feel that during that time was the best time for us to get to know each other better and also that is the time talk about other things than work. So this allows us to be closer to each other."   (MissM, Quality Controller,Wk3,ProjectE)

> "We will try to make our working environment comfortable for everyone. Especially for the newcomer, I don't mind if he makes mistake or doesn't know what to do. We, the rest of the team, are always willing to help."
>
> (MrK, Scientist,Wk2,ProjectE)

> "Surprisingly, everyone is helpful. As for me, this is my first job, my first big project. At first, I'm worried of making mistakes which is not good for the team but I managed to get along well with the team members and I'm not afraid of requesting for their help or further explanation of things that I'm not sure of."   (MrM, Scientist,Wk3,ProjectE)

As the project progresses, it is evident from the interviews that some of the team members are unhappy with the attitude of one of the team members, MissM. The issue occurs when they are in the process of conducting some testing for the projects and it seems that the particular team member is being bossy by monitoring and

complaining about the works of others and she does that in an annoying manner as claimed by the other team members.

> *"Well, I've done my best and I've been doing the task for quite a while. I would be grateful is she stops complaining about the way I do my work. I know she is the one monitoring our work quality but it feels like everything that I do is being monitored, each and everything, and nothing will meet her standard. I don't feel good, it is quite annoying when people complaints about your work every single day!"* (MrH, Scientist, Wk4,ProjectE)

> *"I am sure that everything I do is as according to the standard and I will check again all the procedure for example, for any particular experiment, and I will be very careful at each step to ensure that everything is up to the standard, but still, she is looking for my fault!"*
> (MrS, Scientist, ,Wk4,ProjectE)

> *"It seems that everything I do, there will be something wrong. Sometimes she will say sorry, telling me that she's only doing her job but usually the time is not quite right. We are tense with our task and having people complain is not a good thing. Maybe she could be more flexible or maybe she could approach us in a better way."* (MrM, Scientist,Wk4,ProjectE)

The team members decide to confront the person involved as they do not feel good working under pressure and feeling annoyed at others. Each of them voice out what they feel and how they think the conflict could be solved. It is a surprise to them that the particular person accepts their complaints in a good way as she claims that she never knows that all the while people are feeling annoyed at her and she apologizes. They discuss a better approach that she could take in order to perform her task. The approach taken by the team helped to improve the situation.

> *"It's a relief that we are able to talk directly with her on this matter. We wouldn't want to work under pressure every day and we wouldn't be happy receiving negative complaints about our work every day as if we are not able to conduct our task. The way she behaves before really annoyed most of us."*
> (MrH, Scientist, ,Wk5,ProjectE)

> *"I'm glad that we are able to have a discussion with her regarding the matter. She claimed that she's doing her job but at the same time it is good that we suggested that she could do it in a better way, as in a better approach of giving us feedback. She accepted this and apologizes to us."*

> *"I thought I was just doing my job. And I've been doing this for previous projects too. I never knew that this causes the other team members to be unhappy. I realised that I should change my approach or maybe my voice tone while giving feedback on the work of others, but whatever it is, I will still have to make sure that the quality of their work is up to the standard set by the company. This is a big project; we don't want to mess it up. So, it's a challenge for me to change and at the same time to do what I have to do. But it's good to know that they come to me and talk about this. I don't want to ruin our relationship within the team.*
>
> *(MissM, Quality Controller,Wk5,ProjectE)*

Week 6 to 8 of 12

In the second phase of the interview, another conflict occurs as the team is in the stage of analyzing the result of their experiment. Lack of manpower causes increasing workloads for the team members. Each of them is burdened with a lot of responsibilities as the project requirement changes. This pressures them but they are not able to take any action as it is the responsibility of the management. Due to that, the team members voice the problem to the lab manager and assurance is given that he will talk to the management regarding the needs to add new members for the project. However, no action is taken by the management.

> *"It's quite tiring. We had planned everything. In our plan, we already suggested to the management that we will need more staff. This is a big project. We will need more people working on this. Or else everything will get delayed as we are not able to do everything by ourselves within the given time."*   *(MrS, Scientist, Wk6, ProjectE)*

> *"I'm starting to feel the pressure now. I guess all of us are. We need to meet our deadline but at the same time we don't have enough people to do all the work! It is not easy to get things done with lack of team members."*
>
> *(MissM, Quality Controller, Wk6, ProjectE)*

The issue of having lack of manpower causes the team to evolve into task conflict as disagreement starts to occur whereas the team members are not happy with the decision made by others regarding their work allocation. They start to complaint that

they are working on more tasks than others. Adding to that, disagreement starts to

happen as they are not able to accept others' opinions regarding the project.

> *"Nothing that I can do. I'll still have to do everything. I can't avoid that. But the management should know what to do. We need more people coming in. I don't think we can reach all the deadlines with this increasing workload and more additional requirement given for the projects."*
>
> <div align="right">(MrH, Scientist, Wk7, ProjectE)</div>

> *"We did all the planning but somehow with the increase workload, it seems impossible. They (the management) should take action on this. We already told them but it seems that there's no update from them. And as they are in a different location, it is quite difficult to get in touch with them so that they can see and actually understand what it is that we are talking about."*
>
> <div align="right">(MrM,Scientist,Wk7,ProjectE)</div>

Some of them agree that they should change the way they allocate and conduct their

tasks within the team so that they will be able to have extra time to do some other

tasks but some of them disagree as they say it will delay the progress of the project.

At the same time, one piece of equipment which is being used for the project is

broken. This causes them to have another disagreement on planning for their next

tasks as the fixing of the equipment will take a few months. As the team is in the

middle of working with the equipment, the team needs to plan for an alternative way

to conduct the project. This is when the team decide that they will need the

management to get involved as they are not able to reach a conclusion on the matter.

> *"The management will need to help us on this. No one seems to agree on what to do next. We need to plan but everytime we had a meeting, there's no final decision being made."*   (MissM, Quality Controller, Wk7, ProjectE)

> *"I guess DrW will need to be here, be in charge. He will have to get involve with the team so that we can solve this issue. We need his help so that everyone will be able to at least agree on something. We need direction on what to do next."*   (MrM, Scientist,Wk7,ProjectE)

This is agreed by the lab manager, MrSh that, at that moment, most of the team members would come to see him and talk about needing assistance regarding their project.

> *"I always open my doors, and really, the door to my room is never close. This is to let them know that I'm always there to help them. But this has never happen before that every day the team members would come to me and complain and seeking for my advice. They wanted me to get the managing director and the management to be in charge and work out the solution for them."* *(MrSh, External Leader, Wk7, ProjectE)*

The conflicts that they face then lead to relationship conflict amongst them as they start to have negative feelings towards each other. This is as a result of feeling dissatisfied with the way tasks are being allocated and performed as well as having arguments on the ideas and opinions of others. The team members at this stage try to ignore each other as they feel that if they try to talk, it will cause more disagreement and this will make matters worse. There is very minimal interaction within the project team. The project team members communicate only for very important matters and even during the ─Morning Market─ session, they no longer discuss or give opinions to help others. The lab manager plays an important role to make sure that the objective of the session is achieved.

> *"I don't want to give any opinion. No one will agree and it looks like everyone is busy with their own task and we seldom communicate with each other unless it is very important. It is very quiet in the lab nowadays."* *(MrK, Scientist,Wk8,ProjectE)*

> *"For me, I would prefer to talk with MrSh if I need anything. He will be able to help. If I try to talk to others, we will be arguing as there are things that we are not happy with. Especially on the workload that we are burden with. I feel that we are not that cooperative anymore. Before this, everyone is willing to help each other and as our work is related to one another, there was no problem to seek for assistance and work together. But now, it's not the same."* *(MrS, Scientist,Wk8,ProjectE)*

"It's no longer the same working environment as before. We are so quiet and I can see people coming in and out of MrSh office. I guess we would rather communicate with him rather than among ourselves now. The unhappy feeling that we are experiencing changed the team. I hope the management can help us to improve the situation. It is getting worse. How can we work with minimal interaction as we are in a team."

(MrM, Scientist,Wk8,ProjectE)

Week 9 to 12

In this phase, the lab manager plays an important role to assist the team members to work together as they have started to ignore each other. This affects their performance on each of their tasks as they communicate less with each other, this causes some mistakes in their tasks especially when they are compiling their work.

"This is causing some problems as they are now not interacting with each other. They should be communicating frequently as their tasks should be conducted together, this is giving some problems to the project. When you are doing things which are related to each other, how could you not talk with other people, especially those who are related to your task? This is a problem."   *(MrSh, External Leader,Wk9,ProjectE)*

This important issue is brought to the management in order to help the team to carry on with the project and to solve the issues happening within the team. The lab manager speaks to the Managing Director as requested by the team members about the needs to add new team members for the project and how important it is as it will help the project team to be able to perform their tasks efficiently and could solve most of the conflicts that the team is facing. It is identified that it is the pressure faced by the project team which causes conflicts to happen within the team. This pressure is triggered by the burden of being given more responsibilities than what they feel they should be doing.

"The management should know better. This is not the company's first project. They should have thought about this at the very beginning. How could with this number of people, they are expecting us to work on this big project. Maybe during the planning stage, they didn't plan it properly. And now that the project requirements change again, more things are coming in for us."

(MissM, Quality Controller,Wk9,ProjectE)

"I feel that I need to add more hands to do everything. The management should understand our condition. We've been telling them again and again and nothing happen. How could they think we will be able to survive this?"

(MrS, Scientist,Wk9,ProjectE)

The management then have a discussion with the team members on their conflict which restricts their communication and causes problems in their task performance. The management also agree to add new people to the team and has begins the recruitment process. The news improves the conflicts that occur within the team as they know that the addition of new members will enable them to work according to their planned task allocation at the earlier phase of the project. This also improves their relationship with each other as everyone was satisfied with the assistance given by the management.

"MrSh has been seeing this problem among us that has been going on for several weeks so he decided to organise and urgent meeting with our project team. He helped us to voice out our concern and what is our main problem in the project. I guess he did help us with having this meeting.ö

(MrK, Scientist,Wk11,ProjectE)

"The team meeting that we had seems to be assisting us. Well, we can't act like this forever. Either we like it or not, we still have to be working with each other. But we need someone to be the middle man between us, to help us clear the situation. And after the meeting, I feel relieve that we are able to talk with each other and I'm sure things will be better after this as we have discuss our plan too."
(MrM, Scientist,Wk11,ProjectE)

"We'll see if they keep their promise. It seems that the project team really need more member and that will solve many things. Now that we just had our

meeting and that clear some of our issues, the addition of new members are most welcome. We do need more people and I'm sure the project will be going on smoothly with the new members. But, well, we are not sure when the new people will be joining us. Just wait and see."

<div align="right">

(MrH, Scientist,Wk11,ProjectE)

</div>

"Being able to talk with the others and to voice out what we feel really help us to think again and try to think of ways to make things better. Everyone realise their own mistakes and as we realised how important it is for us to work together as how we did it before. MrSh did a good thing to organise this meeting for us to discuss on this issue."

<div align="right">

(MissM, Quality Controller,Wk 11,ProjectE)

</div>

"It is much better now that the management is considering our suggestion. If they listen to us from the beginning, the issue that we are having won't be this bad. Now we are waiting for the equipment to be repaired then we can speed up the whole process."   *(MrS, Scientist,Wk11,ProjectE)*

They have another meeting after the conflict is resolved to plan their tasks now that they are waiting for the equipment to be repaired. The team members request the lab manager to attend the meeting to have someone to mediate the meeting and to help them in deciding and planning for their next tasks. It is evident in this phase that the team members feel that the existence of the lab manager is important in the team as his assistance enables them to focus more on their task and the lab manager to be responsible of the planning and the decision making processes.

"They requested me to attend each of their meetings and usually I will need to make the final decision. The approach of the team members toward their work planning and decision making has changed. I'm now involved directly with them and I'm not sure if this is good or not, Will need to talk with the management about this. But as for now, I'm sure I've been helping the team as can be seen from their progress this few weeks."

<div align="right">

(MrSh, External Leader, Wk12, ProjectE)

</div>

"It is a good thing I guess to have someone to rely on whenever we are having problems. We used to solve our own problem, everything is just within the team, but with this changes, I would say that I feel more comfortable having MrSh helping us with our project."   *(MrK, Scientist,Wk12,ProjectE)*

The interviews started when the project was in the middle of the experiment process. It can be seen in the first phase of the interviews that the project team members were well organised and responsible towards their tasks for the project. As the project progressed, they faced problems with one of the team members which caused relationship conflict within the team. However, the project team managed to solve the conflict. In the second phase, they started to face task and relationship conflict as they were experiencing lack of manpower for the project which led to other problems within the team. It can be seen that the team members were trying to avoid each other which caused them to start being dependent on the management in order to help them to solve their task and relationship conflicts.

4.6 Case 6 - Project F

Herbal Oil (*HerbsOil*)

The project teams are working on a project of producing an enhanced version of HerbsOil made from sea cucumber, also known as ‑Gamat‖ which is widely known in the South East Asia region to be useful for medicinal remedies. The project team members consist of the R&D executive, scientists, quality controller and others. Some of the team members have been working together in different projects previously and some of them are new to the team.

Week 1-5 of 12

This project is a 12-months project and the interviews start in the third month. It is found in this phase that the team members are able to organise their tasks and are given the freedom on the decision making processes regarding their project. When

organising their tasks, all team members are involved and they have frequent discussion within the team to ensure that their work progress is according to what they had planned.

> *"This project is quite an important project for the company. As Gamat has been used by some of our competitors in the industry, we need to ensure that the one that we are about to produce has the highest quality. With the formulation of new ingredients to be added to Gamat, we are sure to produce something better. This is the motivation for the team. All of us are working together to ensure that we will meet our aim."* (MrS, Scientist,Wk1,ProjectF)

> *"The project team has been working on this project for several months now. We received great support from the management. We hope that this is going to be a successful project. The way the team works is by making our own planning on how to conduct the project and we have to make sure that we work our plan!*ö (MrB, R&D Executive,Wk1,ProjectF)

> *"Everyone in the team is responsible for our own tasks as well as to maintain the quality of our work. We have our daily meeting to ensure that we have our work plan ready and most of the time, each of us are well-prepared with our plan and our tasks are always completed as planned.*ö
> (MrM, Scientist,Wk2,ProjectF)

Since some of the team members have worked together in previous projects, they have experience dealing with each other and this enables them to easily adapt with each other.

> *"I did work with some of the team members previously and some of them are from my department. So, there is no problem for us to have any discussion regarding the project as we understand each other. Well, even if there are any problems, we can still solve it among ourselves."*
> (MissM,QualityController,Wk2,ProjectF)

> *"We've been in the same team before. They are easy to work with. And the culture in this company is for us to have close relationship with each other. So when the new member joined the team, we do our best to make him feel comfortable working together in the team."* (MrK, Scientist,Wk3,ProjectF)

The project team faces a problem with the supplier of the chemical substance needed for the project. Previously, they have been waiting for several months for some other

chemical substance to be delivered and now the same problem is repeating. Not wanting to waste time waiting for the chemical substance, as experienced previously, the team members decide to overcome this problem by discussing together within the team and reschedule their work plan. This enables the team to keep on progressing on the project while facing the delay of the supplier. They make their own decision on this matter and cooperatively they resolve the issue with their own solution which is to reschedule their tasks with everyone's agreement.

"Everyone in the team was concerned about this matter. We had planned for our tasks. We don't want things to be delayed and this interferes with all our other tasks. The supplier is always postponing the delivery. This is the second time things like this happen. We need to do something."
(MrB, R&D Executive,Wk5,ProjectF)

"I feel like we have to do something immediately. So, during our meeting the other day, everyone in the team listed out the issues that we are having regarding the delay from the supplier and we planned on what will be our next step instead of just waiting for the delivery of the chemical substance. Now that the Gamat is ready, we decided to proceed with some other tasks such as bringing forward some experiments which need not include the delayed chemical substance. Also we had planned some other tasks to bring forward so that we could still be working on something else other than just waiting for the supplier to deliver the stuff that we need."
(MrK, Scientist,Wk5,ProjectF)

"We believe what we did is the best thing. We can't afford to waste our energy and time waiting for the chemical stuff. The management might be expecting us to do the same thing too. So, our meeting was held and all of us agreed on our new task schedule and we will be working on something else while waiting for the delivery." *(MrM, Scientist,Wk5,ProjectF)*

"The team members had their meeting amongst them and they have decided to proceed with something else. I will need to talk immediately with the management about this supplier problem. This is not the first time. They should change the supplier. It is quite frustrating for the team as they are all well prepared for their project." *(MrSh, External Leader,Wk5,ProjectF)*

The team manages to overcome the issue by rescheduling their work plan and proceeds working based on their new work plan. The management is told about the issue and they will deal with the supplier to ensure that the chemical needed for the project to be delivered.

Week 6 to 9 of 12

In this phase of the project, the project team is facing a challenge that their competitors have announced a new discovery on their Gamat product. This increases the pressure within the project team as they need to ensure that their product is launched on time, as planned. The team believe that it is time for them to speed things up to ensure that they are producing the best product out of Gamat and this will enable them to compete with the competitors.

> *"When we heard the news about the other company and their product, we felt that it is really an eye opener for us. We are working on this project for several months now. This is one of our biggest projects in this company. As for me, I do feel the need for us (the project team) to show that we are capable of producing better product and we need to convince the client that our product is one of a kind. We've got to prove that."*
> *(MrK, Scientist,Wk7,ProjectF)*

> *"It was on the newspaper several days ago. The discovery...the achievement by another company. Now that they've discovered something new out of Gamat, we realised the needs for us to ensure that our team can also produce something which is much better, which is more beneficial for the society and that's what we are trying to do. I believe our formulation is better as we've got excellent team of scientists in our team."*
> *(MissM, Quality Controller, Wk7,ProjectF)*

Due to that, the project team decide to reschedule their tasks again in order to speed up their project considering that the competitors have announced the discovery of their product. The team realise at this stage that they need to compete with their

competitors to ensure that they are producing a better product. The team have discussions and they decide to amend some tasks in order to compete with others.

> *"We had an urgent meeting. We brainstorm on how we could make things better and trying to get ourselves agree on the good suggestions. Believe me, it was not an easy thing to do!"*   *(MrB, R&D Executive,Wk8,ProjectF)*

> *"We realised that it's time for us to change some of our work plan. Our main concern is on enhancing the product quality. This will help us to show to the client that we are producing the best product. So we had our meeting. We tried to figure out ways to improve everything. So all of us agreed that we need to do some changes here and there."*   *(MrK, Scientist,Wk8,ProjectF)*

> *"We had a long discussion on this. We know what we need to do. We took it as a challenge which is a good thing to motivate everyone. Everyone comes out with their opinions so we need to decide on which one is possible as well as achievable for the team to do."*   *(MrM, Scientist,Wk8,ProjectF)*

The amendment of the tasks is causing some disagreement within the team. During the discussion, in order to reach an agreement on what they should do and how to improve their product, some of the team members are having difficulties in accepting othersø opinions and suggestions. They believe that their own suggestion is the best and should be accepted and implemented by the project team.

> *"I'm sure that if they accept my ideas, we will be able to improve some stuff. I gave my suggestion and we discussed about it but they don't see it as something that will help our team. Well, we managed to agree on some stuff, we'll see how it turns out."*   *(MrK,Scientist,Wk9,ProjectF)*

> *"What we need to do is to work our plan. During the meeting we had so many different opinions presented by everyone and it was a good session that gives us several ways that we could implement for the project. However, we are not able to accept everyone's idea so it seems like there are people who is unhappy."*   *(MrM, Scientist,Wk9,ProjectF)*

> *"Not having someone to lead the team is quite difficult. Especially when we need to reach an agreement about something important. Everyone feels that their idea should be considered and as for me, I believe what I suggested is good for the project. We will be able to compete with the other company as we can multitask on some stuff and will speed up the whole process. But, now, I don't know."*   *(MrB, R&D Executive,Wk9,ProjectF)*

After the discussion, it is identified that even though they have made new plans for the project, some of the team members are not fully satisfied with the final plan. They feel annoyed due to the aggressive style of some people when they exchange ideas and giving different opinions during the recent project meeting. However, instead of ignoring or avoiding each other, they pretend in front of each other but behind them, they complain.

> *"I don't quite like his style. He acted as if he knows everything. We are working together, you are not suppose to…kind of forcing people to agree with you. That's terrible what he did in the meeting."*
> *(MissM,QualityController,Wk9,ProjectF)*

> *"I was talking with S about this. Both of us think that this is very annoying. His behaviour, I mean. When we were discussing, he got very pushy and he thinks that what he suggested need to be accepted and when we said that we need to make sure that it is achievable, he got upset. That's very unprofessional of him to do that."* *(MrK, Scientist,Wk9,ProjectF)*

> *"I know it is good for the team, for the outcome of the project specifically. They should know better as they've been involved in several big projects before. We should be implementing the new suggestion on the tasks division and having more people doing more than one task is not that bad. If we don't do this, how can we speed up everything? And at the same time, how can we be productive if this is their attitude?"* *(MrM, Scientist,Wk8,ProjectF)*

Some of them talk about this with the lab manager as they feel that they are not comfortable with the situation that some people are talking behind their back.

> *"They came to me with different stories. It is unbelievable out of a sudden, how things change! The meeting was supposed to be a session to voice out everything and to discuss in a good way on how to improve everything. There's supposed to be no issue of one man show. It is a discussion session which involves everyone and they usually will reach agreement on something and there will be no unsatisfied voices after that, but this time it is just different."* *(MrSh, External Leader,Wk9,ProjectF)*

"Not a good situation now with the team members. It was not like before that they are in a happy working environment. Well, even now that they pretend to be okay, that everything is all under control…but the thing is, they are not okay. One by one, they come to me and tell me different stories about each other."   *(MrSh, External Leader,Wk9,ProjectF)*

"Actually, I went to see MrSh to voice out my concern and what is the real situation that we are currently facing in the team, between the team members."   *(MissM,Quality Controller, Wk9,ProjectF)*

"I knew that when we talk, they seem to be very nice and with all smile plastered on their faces, but behind me, they've been talking bad things. Not a good working environment now. I talked about this with the manager. I think he might be able to do something about this."
                              (MrB, R&D Executive,Wk9,ProjectF)

Week 10-12

In this phase, the team members go to consult the lab manager about the situation.

However, he does not see the situation as something threatening to the project team

in terms of work, each of them are still performing well, as can be seen from their

daily morning briefing session that the team are well organised and they perform

their work well based on what they have planned.

"I talked with MrSh hoping that he could help us to handle this situation. Maybe if he interferes, things will be better. I think the team need someone to get us back to how we used to be."   *(MrM, Scientist,Wk10,ProjectF)*

"Yes yes, I'm sure everyone still do their very best in all of our assigned task, it is just that I believe it will be much, much better if we could do something to resolve this hidden, unspoken issue."   *(MrK, Scientist,Wk10,ProjectF)*

"Their relationship issue is getting worse nowadays that it has spread into various personal issues which sometimes are not even related to the project. They are having the uncomfortable feeling to deal with others but the have to because of work. And as for their work, as I can observe on the daily brief meeting that we had, they are maintaining their work quality."
                              (MrSh, External Leader,Wk10,ProjectF)

The team members accept the situation but they feel uncomfortable with the current working environment and that their relationship within the team is not as close as before. This is as everyone is aware of the situation that people are keeping things to themselves or sharing them only with those who agree with them. Even though they pretend that they agree when they are face to face they still feel tense when they communicate with each other.

> *"Well, it is quite a difficult situation, either we like it or not, we still have to do our work, and as most of the work will need us to communicate with each other, we still have to do it. How could we work on our own in a team? So, like I said earlier, either we like it or not, we still have to face the others."*
> *(MrM, Scientist,Wk11,ProjectF)*

> *"A bit awkward you know, to pretend that everything is okay when we actually know that it is not okay. But for the sake of the project and not to make things worse, let say if we face them and tell them directly we don't like this and that about them, things will be worse. We need MrSh or the management to help us to solve this."   (MrK, Scientist,Wk11,ProjectF)*

With the request by the team members, the lab manager decides to take action in order not to make matters worse. Most of them members agree that they would like to be back to normal as they do not want to continue working in an uncomfortable environment such as having people talking behind their back. The lab manager discusses with the management on ways to help the team to solve their relationship conflicts and try to find ways to prevent the same thing from happening again.

> *"I will be in charge of this. As they've been talking to me about this, I can see that they are unhappy with the situation, we need to make things better as soon as we can so that they can focus just on their work and not worry about some other things. Now that the competitors have announced their new discovery, we need to be able to show that we are better than them. So, the project team need to be ready for the challenge."*
> *(MrSh, External Leader,Wk11,ProjectF)*

"I decided to have a discussion with the management team. We are aware that even now that they are doing well in their tasks, but this is relationship issue we are talking about. It will affect everything else if we just let it be like that. We need to do something to fix this. DrW was also showing his concern on this matter and decided to come over and we will be able to do something on this." (MrSh, External Leader,Wk12,ProjectF)

The management team decide to come over, together, and spend one whole day with the project team to help facilitate their discussion to clear things up. They are given the chance to voice their concerns and the management becomes the mediator to help them in making their final decision and they are allowed to voice out whatever it is that they have in mind.

"We will be having our meeting in the next few days. We really hope that this will clear everything. I am sure that having the management to help us with this is a good thing for everyone." (MrB, R&D Executive,Wk12,ProjectF)

"Yes, the immediate action taken by MrSh is really good for us. I don't feel happy working in this current situation. We have to communicate and we want things to be fine between us and we don't think if we just confront with each other, it will be okay. So, having the management to assist us is a good thing!." (MissM, Quality Controller,Wk12,ProjectF)

"We'll see how the meeting turn out to be. At that time, we will be able to voice out all the disagreement and all the things that we are upset about. Having the management with us, especially DrW, I believe things will be better for us." (MrK, Scientist,Wk12,ProjectF)

The beginning of the project shows that they were having problems with the supplier for some of the chemical substance that they needed for the project. The project team overcame this by rescheduling their project. As time went by, the team had some other conflicts which caused them to have relationship conflicts as they started to feel unhappy with each other. Then the team members started to pretend that everything was acceptable, even though things were unacceptable. They realised this problem and they felt unhappy working in that kind of working environment so they went to

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see the lab manager and decided to leave the matter for him to help them solve their relationship and task conflicts which they were having within the team. The approach taken by the management helped the team to improve their situation and the team showed improvement in their conflicts.

4.7 Chapter Summary

This chapter presented the findings of the study which was based on weekly interviews with team members and some of the management personnel of six project teams. Each of the cases was divided into series of conflicts and conflict management strategies implemented by the project team. Different approaches to conflict at different situation were demonstrated and the transformation of leader positioning in the project teams was identified from the data (see **Appendix E** for the summary of the event of conflict and conflict management strategies in all of the projects). The next chapter compares the findings across the six cases.

CHAPTER 5

CROSS-CASE ANALYSIS

In this chapter, the cross-case analysis of the study is presented. The chapter is divided into four sections. The first section explores the existence of different types of conflict in SMPTs. Its effects and influences towards SMPTs will be presented. The next section compares conflict management strategies with different conflict types and situations. The third section explores the positioning of the external leader in different conflict situations. Finally, proposed models of SMPT transition, with regards to conflict and its management strategies, are presented.

5.0 Conflict Existence in SMPTs

It is evident from all the six cases that two types of conflicts exist in SMPTs: task conflict (TC); and relationship conflict (RC). These two types of conflict are interrelated where it is evident that one conflict is often related to the other. In Project A, the project team faced task conflict within the project team as well as outside the project team. The task conflicts were regarding an issue on finding an agreement on how to proceed with their task. The team members planned their task schedule and had different ideas on the task allocation and setting the deadline for

the tasks. In addition, the team needed to decide on the experiment protocols which also caused disagreement among the team members.

At the same time, the team was also involved with task conflict outside the project team. This was with another team with whom they were collaborating as they were having communication problems with each other as the other teams were located at different locations. Whenever both teams communicated via telephone, things kept changing, however, none of the changes were recorded. This, then, continued with relationship conflict within the project team. This is related with the task conflict that they faced which made them dissatisfied with each other and negative feelings started to occur amongst them as the team members started to feel annoyed while dealing with each other in the team. The relationship conflict continued where the team members started to reduce communication and interaction with each other as they did not want to deal amongst themselves as they were not feeling happy working with each other.

As for Project B, at the beginning of the interview, the project team had experienced task conflict with the clinical team which was from outside the project team. The two teams were working together on the project. Some of the procedures conducted by the clinical team were not according to what both teams had discussed previously. Problems occurred when the project team needed to proceed with their analysis. The project team was faced with task conflict due to the delay of getting the main equipment needed for the project. This also related to the delay in funding that they received from the funding agency. At the same time, the team were also faced with

lack of staff and the project team members were given more responsibility. This caused the team to delay some of their tasks and they felt unhappy that they were not able to complete their tasks according to the deadline that they had planned. Due to this, the project team also faced relationship conflict as some of the team members were located at different locations. There was lack of interaction between the team members and this caused some arguments as the working pressure was high for them. This relationship conflict resulted in a problem whereby the team members were unable to carry on with their task smoothly. Due to this, task conflict occurred as the team members were not communicating clearly with each other in order to perform their related tasks.

As for Project C, the project team was having task conflict within the project team as their client was not satisfied with the output that they had demonstrated. The team needed to improve their work outcome by using new software for the project. Therefore, the team needed to spend their time learning on the new software and this caused some conflicts as the team needed to speed up their work and at the same time learn to use the new software. As well as having problems with the condition of the machines provided by the company, this delayed the work of the project team. The task conflicts in the project team continued with the resignation of some of the team members. Over time, the team continued facing the task conflict as the project was having financial problems and the team members had not been receiving their salaries for the past several months. This made it difficult for the project to proceed as there were many constraints in terms of the issue of lack of team members,

financial support and equipment issues. Therefore, the project was stopped by the management.

For Project D, the team was having task conflict as the organisation lacked employees. Due to this, the management decided that the team members would need to take multiple roles in the project. However, the team members were not willing to do so. This caused poor performance of the team members and they started to disagree with each other. In the second phase, the same problem continued and at the same time, the team was faced with miscommunication issues as they were working flexible hours making it difficult for them to see each other. This caused relationship conflict as they were annoyed that some people were not easy to get in touch with in order to proceed with their work.

Then, the project team faced task conflict which resulted from the relationship conflict that occurred as they were still having difficulties to get in touch with each other. Adding to that, there were two new members added to the project team. However, these new members were causing some problems which turned into task conflict as their work performance was not as expected. This was causing distraction to the other team members whenever they disagreed with each other in order to complete their assigned tasks.

As for Project E, the project team were faced with relationship conflict due to the attitude of one of the team members which caused annoyance amongst the team members and they felt pressurised when they were working together. Adding to that, the project team faced the problem of lack of manpower which caused the team to

have difficulties to perform their tasks as they were burdened with a lot of tasks. This task conflict led to disagreement that they were arguing on the task allocation for each of the team members and they started to have negative feelings towards each other when their opinions and ideas were not being accepted by others. This continued as there was less communication and discussion amongst the team members. The relationship conflict caused annoyance amongst the team members and affected their work and led towards task conflict as this caused some mistakes in their tasks especially when they were compiling their work which affected the progress of the project.

As for Project F, the project team was involved with task conflict with their supplier. The delay of getting the chemical substance for the project had happened several times and it caused delays to the whole project. This then led to task and relationship conflict within the project team as the team members were in disagreement on deciding on the project plan as some changes had to be made due to the delay of the chemical substances. This also led to relationship conflict as the team members were unhappy with some of the team members who used aggressive approaches whenever their opinions and ideas were not accepted by others. Then, the team members started complaining about each other behind their back and the working environment changed in the project team. This caused them to have task conflict as they could not reach an agreement on their tasks with the current working condition.

It is evident from this study that there exists causal link between these two types of conflicts in four different types: TC-RC, RC-TC, TC-TC, RC-RC. It is found that

task conflict that occurs within the team leads to relationship conflict as the conflict worsens and this affects the relationship within the team. The same thing applies to relationship conflict that occurs and affects the team members and leads to task conflicts. The continuation of task conflict at different situations is also evidence as the conflict expands into other task conflicts. Similarly, relationship conflict is also evidenced, occurring continuously covering different types of relationship conflicts over time as the conflict expands (see **Table 13** for the summary of the relationship between task conflict and relationship conflict).

Table 13: Relationship between task conflict and relationship conflict

Projects	Conflict Occurrences				Outcomes
Project A	**Conflict type:** Task conflict (1) (within project team)				
	Conflict type: Task conflict (2) (within project team)	→	**Conflict type:** Relationship conflict (within project team)	→	**Conflict type:** Relationship conflict (Intense) (within project team)	Resolved with management assistance (Leader-Dependent)
Project B	**Conflict type:** Task conflict (1) (outside project team)				
	Conflict type: Task conflict (2) (within project team)	→	**Conflict type:** Relationship conflict (within project team)	→	**Conflict type:** Task conflict (within project team)	Resolved with management assistance (Leader-Dependent)
Project C	**Conflict type:** Task conflict (within project team)	→	**Conflict type:** Task conflict (Intense) (within project team)			
Project D	**Conflict type:** Task conflict (within project team)	→	**Conflict type:** Task conflict ó intense (within project team) ↓ **Conflict type:** Relationship conflicts (within project team)	↗	**Conflict type:** Task conflict (within project team)	Resolved with management assistance (Leader-Dependent)
Project E	**Conflict type:** Relationship conflict (within project team)				
	Conflict type: Task Conflict (within project team)	→	**Conflict type:** Relationship Conflict (within project team)	→	**Conflict type:** Task Conflict (within project team) ↓ **Conflict type:** Relationship Conflict (within project team)	Resolved with management assistance (Leader-Dependent)

Project F	**Conflict type:** Task Conflict (1) (outside project team)					
	Conflict type: Task Conflict (2) (within project team)	→	**Conflict type:** Relationship Conflict (within project team)	→	**Conflict type :** Task conflict (within project team)	Resolved with management assistance (Leader-Dependent)

5.1 Relationship between Conflict and Conflict Management Strategies

Two types of conflict are identified from the data: Task Conflict (TC), and Relationship Conflict (RC). It is found that in the event of task conflict, conflict management strategies being implemented by the team members are: cooperative, avoidance and confrontation. The people involved tend to cooperate when task conflict occurs as it helps them in achieving the teamøs objective which is by cooperating with one another as it helps them to solve the conflict and then continue focusing on their assigned task. On the other hand, confrontation is being implemented whenever the project team is having task conflict specifically with outside project team. The team members confront those involved in order to solve the conflict.

Avoidance is another conflict management strategy being implemented by the project team during task conflict and it occurs whenever the conflict is more intense as time goes by. The people involved in the conflict tend to avoid dealing or communicating with each other and not directly deal with conflict. This then leads the project team to seek assistance from the management. Even though they are given the responsibility to solve their own conflict, as conflicts get more intense and

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time goes by, assistance is needed from the management. Below, evidence is presented from the projects on each of the conflict handling strategies being implemented in the event of task conflict.

5.1.1 Task conflict

Conflict Management Strategy: Confrontation

"I feel like we have to do something immediately. So, we had meeting with everyone in the team and list out the issues so that we can talk to the people there. We have to be in charge. It's our responsibility. In the end, I'm glad that we managed to solve it!" (MrRg, Bioinformatician,Wk5,ProjectB)

"Everyone in the team was concerned about this matter. So we decided to confront the people there so that it won't delay our work. We had planned for our tasks. We don't want that to get delayed just because of the people there." (MrZ, Scientist,Wk4,Project B)

"It is useful and helpful to have this kind of discussion. We can ask around and share whatever it is that we need to know. I guess most of us learn something from the meeting." (MrN, Graphic Designer,Wk5,ProjectD)

"What we did was to let others comments on our given task and then start to find out ways to improve. That, I found very much helpful to help us to maintain the quality of our work. And when we received comments from others, we will know what we are lack of. Sometimes we just don't realise that." (MrS, Multimedia Executive,Wk5,ProjectD)

"It's a relieve that we are able to talk directly with her on this matter. We wouldn't want to work under pressure every day and we wouldn't be happy receiving negative complaints about our work every day as if we are not able to conduct our task. The way she behaves before really annoyed most of us". (MrH, Scientist,Wk5,ProjectE)

"I'm glad that we are able to have a discussion with her regarding the matter. She claimed that she's doing her job but at the same time it is good that we suggested that she could do it in a better way, as in a better approach of giving us feedback. She accepted this and apologizes to us." (MrS, Scientist,Wk5,ProjectE)

"That's what we are doing now. We wanted them to know that there are things that the management needs to improve. It is not easy to directly talk with them as we are like a big family, but how could we do our work if things like this are distracting us" (MrK, Storyboard Artist,Wk3,Project C)

"We did protest but by doing what we did, it was not beneficial for us as well as the project. So now we decided to talk to the management about this."

<div align="right">

(MrS,Multimedia Executive, Wk5,ProjectC)

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Conflict Management Strategy: **Cooperative**

"We are in charge of our problem, after we have got clear idea on how to go and solve this problem, then we will proceed. We're still thinking of the ways that we can go forward. Because if I keep on continuing keying in the data...because we know the problems and if let say I enter another 10, then we will have the same problem."   (MissA, Bioinformatician, Wk3, ProjectA)

We are a group of professional people, it's well-balanced, each of them will share their experience and we will talk to each other what we will do and we will try to finish our work. It's a team work, not an individual work. So, everything we do, it is as a team."   (MrT, Bioinformatician,Wk3, ProjectA)

"We know that it can be avoided but still, it happened. So, what we did was we discuss...we discuss until we've found the right solution and that everyone is happy."   (MrT, Bioinformatician,Wk5,ProjectA)

"We believe what we did is the best thing. We can't afford to waste our energy and time waiting for the chemical stuff. The management might be expecting us to do the same thing too. So, our meeting was held and all of us agreed on our new task schedule and we will be working on something else while waiting for the delivery."   (MrM, Scientist,Wk5,ProjectF)

"The team members had their meeting amongst them and they have decided to proceed with something else. I will need to talk immediately with the management about this supplier problem. This is not the first time. They should change the supplier. It is quite frustrating for the team as they are all well prepared for their project."   (MrSh, External Leader,Wk5,ProjectF)

"We had an urgent meeting. We brainstorm on how we could make things better and trying to get ourselves agree on the good suggestions. Believe me, it was not an easy thing to do!"   (MrB, R&D Executive,Wk8,ProjectF)

"We realised that it's time for us to change some of our work plan. Our main concern is on enhancing the product quality. This will help us to show to the client that we are producing the best product. So we had our meeting. We tried to figure out ways to improve everything. So all of us agreed that we need to do some changes here and there."   (MrK, Scientist,Wk8,ProjectF)

Conflict Management Strategy: **Avoidance**

"Whenever we are having discussion, he always makes it difficult and complicated. I wonder why? Personally, I would prefer not to talk to them about any problems that we are facing."
                                    (MrS,Multimedia Executive, Wk4,ProjectC)

"I can feel the difference now. It's no longer the same as before. The team members are all doing their own task and when there are some issues, we won't talk to each other to solve it but we directly talk to the team leader. I don't think this is good for us."   *(MrZ, Scientist, Wk7, ProjectB)*

"It is very difficult you know...I would rather keep quiet than say something. These people are just there to point finger if anything goes wrong."
                                    (MrZ, Scientist, Wk 11,ProjectB)

"It's quite disturbing when we are not communicating well. We need to discuss about our tasks but someone else is not giving their feedback."
                                    (MrRg, Bioinformatician, Wk6, ProjectB)

"As what happened before, it causes some problems because of some the misunderstanding. So now, I would prefer to just straight away go to the management and let them deal with it. That's a huge relief that I don't have to deal with that anymore."   *(MrD, Animator, Wk9,ProjectD)*

It is evident that cooperation and confrontation are the conflict management strategies being chosen during task conflict in most of the projects and avoidance is implemented when the conflict becomes more intense as time passes. When the conflict gets more intense, and as a result of avoidance, assistance and intervention from the management is needed. The management will either mediate to solve the conflict or give advice and offer solutions for the team members.

Conflict Management Strategies: **Assistance from Management**

"We just follow what they say. Now it is so unstable due to the lack of resources and everything. We can't afford to make wrong decision. If we have problem, we will tell them, if we need help, we'll seek them. Everything will be on them. We don't want to be blamed later on."
<div align="right">*(MrZ, Scientist,Wk11,ProjectB)*</div>

"It is very difficult you know...I would rather keep quiet than say something. These people are just there to point finger if anything goes wrong. Let's just leave it to the management then".   *(MissAn, Scientist,Wk10,ProjectB)*

"As what happened before, it causes some problems because of some misunderstanding. So now, I would prefer to just straight away go to the management and let them deal with it. That's a huge relief that I don't have to deal with that anymore."   *(MrD, Animator,Wk9,ProjectD)*

"As what happened before, it causes some problems because of some the misunderstanding. So now, I would prefer to just straight away go to the management and let them deal with it. That's a huge relief that I don't have to deal with that anymore."   *(MrD,Animator,Wk9,ProjectD)*

"It is a good thing I guess to have someone to rely on whenever we are having problems. We used to solve our own problem, everything is just within the team, but with this changes, I would say that I feel more comfortable having MrSh, External Leader helping us with our project."
<div align="right">*(MrK, Scientist,Wk12,ProjectE)*</div>

"The management will need to help us on this. No one seems to agree on what to do next. We need to plan but everytime we had a meeting, there's no final decision being made."   *(MissM, Quality Controller,Wk7,ProjectE)*

"I guess DrW will need to be here, be in charge. He will have to get involve with the team so that we can solve this issue. We need his help so that everyone will be able to at least agree on something. We need direction on what to do next."   *(MrM, Scientist,Wk7,ProjectE)*

"I talked with MrSh hoping that he could help us to handle this situation. Maybe if he interferes, things will be better. I think the team need someone to get us back to how we used to be."   *(MrM, Scientist,Wk10,ProjectF)*

"Yes, the immediate action taken by MrSh is really good for us. I don't feel happy working in this current situation. We have to communicate and we want things to be fine between us and we don't think if we just confront with each other, it will be okay. So, having the management to assist us is a good thing!"   *(MissM, Quality Controller, Wk12,ProjectF)*

"We'll see how the meeting turn out to be. At that time, we will be able to voice out all the disagreement and all the things that we are upset about. Having the management with us, especially DrW, I believe things will be better for us."   *(MrK, Scientist,Wk12,ProjectF)*

5.1.2 Relationship Conflict

On the other hand, as for relationship conflict, the conflict management strategies evident from the data are avoidance and pretending. As relationship conflict involves emotion, it is revealed that the team members would rather avoid the people involved or pretend that everything is normal so that they are able to focus on each of their tasks. One of the factors identified to trigger relationship conflict was faultlines that was created by those with more work experience, who are likely to be the senior member of the group. This causes conflict whenever the issue of seniority and better skilled are involved. In order for the team members to solve the conflict, intervention from the management is important as that is the only way for them as they do not want to directly deal with the conflict.

Conflict Management Style: **Avoidance**

"I am so annoyed with his attitude towards this project. I don't feel like talking to him anymore. And actually, I haven't talk to him nowadays. I will let the management tell him this."   *(MrT, Bioinformatician,Wk 8, ProjectA)*

"Due to the stressful nature of doing our tasks and the short time period to finish each task, sometimes we did misunderstand each other but now, we just

keep it to ourselves. I guess performing and finishing the task is much more important than how we feel.”   (MissAn, Scientist, Wk7, Project B)

“I can feel the difference now. It’s no longer the same as before. The team members are all doing their own task and when there are some issues, we won’t talk to each other to solve it but we directly talk to the team leader. I don’t think this is good for us.”   (MrZ, Scientist, Wk7, ProjectB)

“Difficult to get in touch with each other nowadays. I emailed him but there’s no reply. I called his mobile, he didn’t pick up. Maybe he’s in the middle of a meeting or something but at least he could return my calls and reply my email. But that didn’t happen. It’s so annoying sometimes.”

(MrR, Scientist, Wk6, Project B)

“It’s quite disturbing when we are not communicating well. We need to discuss about our tasks but someone else is not giving their feedback.”

(MrRg,Bioinformatician,Wk6,Project B)

“We will share our problems and we will talk to each other of what we will do and how we are going to do it. It feels good that he (team leader) helped to decide and try to solve our problems. So now we could focus on our work rather than getting involved with other things.”

(MrS, Multimedia Executive,Wk11,ProjectD)

“He will worry about the problems and we can focus on our tasks. It is much better this way to have someone helping us in making decisions and such.”

(MrE, Modeler,Wk12,ProjectD)

“I don’t want to give any opinion. No one will agree and it looks like everyone is busy with their own task and we seldom communicate with each other unless it is very important. It is very quiet in the lab nowadays.”

(MrK, Scientist,Wk8,ProjectE)

“It’s no longer the same working environment as before. We are so quiet and I can see people coming in and out of MrSh office. I guess we would rather communicate with him rather than among ourselves now. The unhappy feeling that we are experiencing changed the team. I hope the management can help us to improve the situation. It is getting worse. How can we work with minimal interaction as we are in a team.”

(MrM, Scientist,Wk8,ProjectE)

Conflict Management Style: **Pretending**

"Not a good situation now with the team members. It was not like before that they are in a happy working environment. Well, even now that they pretend to be okay, that everything is all under control...but the thing is, they are not okay. One by one, they come to me and tell me different stories about each other."   *(MrSh, External Leader,Wk9,ProjectF)*

"I knew that when we talk, they seem to be very nice and with all smile plastered on their faces, but behind me, they've been talking bad things. Not a good working environment now. I talked about this with the manager. I think he might be able to do something about this."
                                        (MrB, R&D Executive,Wk9,ProjectF)

"Actually, I went to see MrSh to voice out my concern and what is the real situation that we are currently facing in the team, between the team members."   *(MissM, Quality Controller, Wk9,ProjectF)*

Conflict Management Style: **Assistance from management**

"No, we will always refer to the management. It's easier that way. That's most important. That's how we do it nowadays. We do not want to cause problems by making our own decision and then if it's a wrong one, we will be in trouble. We no longer want to take the risk."
                                        (MissA, Bioinformatician,Wk10,ProjectA)

"Because from my previous experience, if we just continue without really sitting down with the management, we will make mistake so that is what we don't want – to be blamed!. We are putting that on hold until Matt and Dr Pr comes back. Then, they will decide, I'm not taking the risk anymore."
                                        (MrR, Scientist,Wk10,ProjectA)

"It is very difficult to work with him. I am so annoyed with his attitude towards this project. I don't feel like talking to him anymore. And actually, I didn't talk to him nowadays. I will let the management tell him this".
                                        (MrT, Bioinformatician,Wk8, ProjectA)

"The management will need to help us on this. No one seems to agree on what to do next. We need to plan but every time we had a meeting, there's no final decision being made."   *(MissM, Quality Controller, Wk7, ProjectE)*

"I guess DrW will need to be here, be in charge. He will have to get involve with the team so that we can solve this issue. We need his help so that everyone will be able to at least agree on something. We need direction on what to do next."   *(MrM, Scientist,Wk7,ProjectE)*

"I always open my doors, and really, the door to my room is never close. This is to let them know that I'm always there to help them. But this has never happen before that every day the team members would come to me and complain and seeking for my advice. They wanted me to get the managing director and the management to be in charge and work out the solution for them."   *(MrSh, External Leader, Wk7, ProjectE)*

"This is causing some problems as they are now not interacting with each other. They should be communicating frequently as their tasks should be conducted together, this is giving some problems to the project. When you are doing things which are related to each other, how could you not talk with other people, especially those who are related to your task? This is a problem."   *(MrSh, External Leader,Wk9,ProjectE)*

These different types of conflict management styles affect the development of SMPTs in a way that the team members become dependent on the external leaders who are positioned outside the team. As when conflict gets more intense, team members avoid each other and choose the management to become the mediator between those involved in any conflict. This transforms the team into becoming leader dependent as they are seeking assistance from the management in conflict solving. **Table 14** shows the relationship between conflict management strategies and the different types of conflict in SMPTs.

Table 14: Relationship between conflict management strategies and conflict types

Conflict Management Strategies	Conflict Types	Project(s)
Cooperative	Task Conflict	A, E, F
Confrontation	Task Conflict	B, C, D, E
Avoidance	Relationship Conflict	A, B, D, E
	Task Conflict	B, C, D
Pretending	Relationship Conflict	F
Cooperating with assistance from management	Task Conflict	B, D, E, F
	Relationship Conflict	A, E

5.1.3 Trust and Commitment

It was evident from the data that trust and commitment appear at any point of time throughout the project duration. It was found that in any types of conflicts that the team experienced, the elements of trust and commitment still exist. It was also found that the conflict management strategies being implemented by the project teams were not influenced by the existence of trust and commitment.

> *"I will always try complete my daily work by the end of the day and try to finish the whole thing at the end of the week. We won't keep the things pending for next week and things like that."*
> *(MrP, Graphic Designer,Wk5,Project C)*

> *"Whenever we are having discussion, he always put a lot of effort to make sure all of us will benefit from the meeting. We always find difficulties in doing this project. But we are able to discuss and come out with good solutions for the team".*
> *(MrS,Multimedia Executive, Wk4, Project C)*

> *"I had been working with MrH before, he's nice. He is more experienced than me. Whenever I need some assistance with my work, I can just go straight to him and discuss with him."*
> *(MissA, Bioinformatician, Wk3, ProjectA)*

> *"I knew him since our previous projects. He is okay. Very nice. Easy to work with. He will always make sure he will spend his time to discuss anything with the rest of the team members."*
> *(MrZ, Scientist, Wk8, Project B)*

> *"I have been working with some of the team members in other projects for many times. So, I know them quite well. In fact, some of them are in the same department, which is why…you see, we are like brothers and sisters. We have no problem in working together. I don't need to ask for help because they are always there to guide and try to motivate me."*   *(MrRg,Bioinformatician, Wk9, Project B)*

> *"We are like a family. We will always go out for lunch or tea together. I feel that during that time was the best time for us to get to know each other better and also that is the time talk about other things than work. So this allows us to be closer to each other."*
>
> <div align="right">

(MissM, Quality Controller,Wk3,ProjectE)
</div>

5.1.4 Blaming

It is revealed from the data that blaming is the trigger for the changes of conflict management strategies from being cooperative and confronting, towards avoiding and pretending which leads the SMPTs toward being leader-dependent. It is evident that whenever any team members make a decision on solving any conflict, instead of taking the responsibility together as a team, he or she will be blamed if the conflict gets worse. This experience leads them towards avoiding each other so that they do not have to deal with the conflict. By avoiding, they will not be blamed and they are able to focus on their assigned tasks.

> *"Sometimes, I feel afraid to voice out my opinion... because you know, if I give some suggestions to solve any problem, and it turns out to be not a good one, people will put the blame on me. It happened before, I don't want that to happen again."*
>
> <div align="right">

(MrF, Animator, Wk 8, ProjectD)
</div>

> *"It is very difficult you know...I would rather keep quiet than say something. These people are just there to point finger if anything goes wrong. Let's just leave it to the team leader then".*
>
> <div align="right">

(MrR, Scientist, Wk 11,ProjectB)
</div>

> *"I don't want that to happen again. Now, what I'll do is just to follow his instruction. I'm sad of the accusation. They should understand that it was not my fault. I'm not going to take the responsibility of anything. Since then, I will ask his advice and wait for his decision on everything."*   *(MissA, Bioinformatician, Wk9, ProjectA)*

"We just follow what they say. Now it is so unstable due to the lack of resources and everything. We can't afford to make wrong decision. If we have problem, we will tell them, if we need help, we'll seek them. Everything will be on them. We don't want to be blamed later on."   *(MrZ, Scientist,Wk9,Project B)*

"I did tell him about the things that happened but he said because I didn't record down all the corrections and everything, so it should be my fault. But I don't think so…but he still said that it's my mistake."   *(MrD, Bioinformatician, Wk6, ProjectA)*

"MrM should refer to us whenever he's not sure with any single thing. Things would be better if they seek us first before completing the task. This will save plenty of time rather than showing us the output which is not as the project requirement."   *(MrF, Modeler,Wk4,ProjectD)*

"I have to wait for his co-operation, then only I can proceed. So many times it gets delayed and when things get delayed, there will be someone who starts to blame and this lead to some other issues. It's not a good thing to work in a team but failed to show the willingness to co-operate with others."   *(MrD, Bioinformatician,Wk7, ProjectA)*

5.2 Leader Positioning

During the event of conflict, either relationship or task conflict, it is evident from the data that the team members solve the conflict by themselves during the earlier weeks of the interviews. As their projects progress and conflicts become more intense, team members decide to seek assistance from the management in order to help solve their conflict. It is evident from the data that all of the projects, except for Project C, move towards leader dependent throughout the duration of the interviews as the projects progress. In the early weeks of the interviews, the team members manage to solve their conflict by themselves either within or outside the team. Below are the data showing how the team members are able to solve conflict without being dependent on the external leader or the management.

"In this project, we need to work together. Our tasks are inter-related, so we need to be willing to co-operate with one another."

(MissAn, Scientist, Wk3, ProjectB)

"We'll always try to do our best to solve our problems. I'll do it by myself and then I'll ask my colleagues for their opinions. Usually, that's how I do my work and solve any problems."   *(MrK, Storyboard Artist, Wk3,ProjectC)*

"Well, usually we will discuss everything among our team members. If someone knows about something, and someone don't, the person who know, will teach it. We also sometimes do some research on something and then if it's important to help us to improve the quality of our work, we will always share. That's how we work here. We share and combine."

(MrF, Animator, F2F, Project D)

"Everyone in the team is responsible for their own tasks as well as to maintain the quality of our work. We have our daily meeting to ensure that we have our work plan ready and most of the time, each of us are well-prepared with our plan and our tasks are always completed as planned.ö

(MrM,Scientist,Wk2,ProjectF)

"We believe what we did is the best thing. We can't afford to waste our energy and time waiting for the chemical stuff. The management might be expecting us to do the same thing too. So, our meeting was held and all of us agreed on our new task schedule and we will be working on something else while waiting for the delivery."   *(MrM,Scientist,Wk5,ProjectF)*

This is also agreed by the external leader:

"So, this means that even though there's no one sitting beside them, asking them to do this and that and forcing them, nothing like that, they just willingly working on their task. Just give the task and the due date, then they will work on it through themselves and through the team. That's how they solved their problems as well."   *(DrPr, External Leader,Wk1, ProjectA)*

"In my experience, the project team is very much capable of solving their problems and make their own decision. The daily morning meeting that we are having shows how they are working together as a team and try to achieve the best solution in order to achieve the team goals."

(MrSh, External Leader,Wk2,ProjectE)

"All the team members understood the goals of the project, so they are taking the responsibility to co-operate by preparing themselves before any discussion so that they can give constructive ideas to ensure the success of the project." *(DrPr, External Leader,Wk3, ProjectA)*

"I will always give the opportunity for the team to express whatever concern they might have. If they are not happy with anything or do not agree with any decision, they can bring it up, so that all of us can discuss and we can solve it together. But up till this moment, they are solving everything themselves." *(DrPr, External Leader, Wk4, ProjectB)*

However, as evident from the data, as the project progresses and conflict gets more intense, it is revealed, from the interviews, that the team members are no longer being independent as they need assistance from the management.

"No, we will always refer to the management. It's easier that way. That's most important. That's how we do it nowadays. We do not want to cause problems by making our own decision and then if it's a wrong one, we will be in trouble. We no longer want to take the risk." *(MissA, Bioinformatician,Wk10,ProjectA)*

"Because from my previous experience, if we just continue without really sitting down with the management, we will make mistake so that is what we don't want – to be blamed!. We are putting that on hold until Matt and Dr Pr comes back. Then, they will decide, I'm not taking the risk anymore." *(MrR,Scientist,Wk10,ProjectA)*

"We just follow what they say. Now it is so unstable due to the lack of resources and everything. We can't afford to make wrong decision. If we have problem, we will tell them, if we need help, we'll seek them. Everything will be on them. We don't want to be blamed later on." *(MrZ, Scientist,Wk11,ProjectB)*

"It is very difficult you know...I would rather keep quiet than say something. These people are just there to point finger if anything goes wrong. Let's just leave it to the management then." *(MissAn, Scientist,Wk10,ProjectB)*

"As what happened before, it causes some problems because of some misunderstanding. So now, I would prefer to just straight away go to the management and let them deal with it. That's a huge relief that I don't have to deal with that anymore." *(MrD, Animator, Wk9,ProjectD)*

"I'm quite surprised to see them coming to me and request for me to help them to decide because previously, it is up to them to manage and to make their own decision on their work. And they are good at that. I don't think there's any problem before." (DrP,External Leader, Wk7,ProjectA)

5.2.1 Triggers to the transition of SMPT towards being leader - dependent

The data from the interviews indicates three factors which trigger the transition of SMPTs towards being leader-dependent: **deadline**, **funding** and **reputation**. It is evident that by gaining assistance and being dependent on the external leader to solve any conflict, the team members feel that they are able to work more efficiently towards achieving their deadline. This is due to the pressure of meeting the deadlines and the lack of employees in some project teams, for example, in Projects E, which results in more workload on each team member, coupled with tight deadlines. By being highly dependent on the external leader the team members manage to focus on their task and do not have to deal with the conflict.

> *"I'm starting to feel the pressure now. I guess all of us are. We need to meet our deadline but at the same time we don't have enough people to do all the work! It is not easy to get things done with lack of team members."* (MissM, Quality Controller, Wk6, ProjectE)

> *"Nothing that I can do. I'll still have to do everything. I can't avoid that. But the management should know what to do. We need more people coming in. I don't think we can reach all the deadlines with this increasing workload and more additional requirement given for the projects."* (MrH, Scientist, Wk7, ProjectE)

> *"Well, the working hour duration is usually not enough, so we have to manage time ourselves. We have to finish our task that was assigned to us in that limited amount of time. So the whole 8 hours will have to be utilised in a proper way so that we won't have to work extra hours. But usually we won't be able to do that. We are now doing two three people's tasks at one time."* (MissAn, Scientist, Wk7, ProjectB)

"We don't mind doing our work, it is our responsibility but when we are given work which are supposed to be done by someone else, this is pressuring. The deadline is the same, but the workload is different. So, this causes lots of tension."   *(MrZ, Scientist,Wk7,ProjectB)*

"...should not a problem because by hook or by crook we must finish our work before the deadline. And it's not always that you have to bring your work home. I believe that if we manage to complete this on time, we will be getting the payment that they've promised."
          (MrS, Multimedia Executive, Wk7, ProjectC)

"The management should know better. This is not the company's first project. They should have thought about this at the very beginning. How could with this number of people, they are expecting us to work on this big project. Maybe during the planning stage, they didn't plan it properly. And now that the project requirements change again, more things are coming in for us."
          (MissM, Quality Controller,Wk9,ProjectE)

"I feel that I need to add more hands to do everything. The management should understand our condition. We've been telling them again and again and nothing happen. How could they think we will be able to survive this?"   *(MrS, Scientist,Wk9,ProjectE)*

Another trigger identified to be affecting SMPTs towards becoming leader-dependent is funding. Limited funding affects the resources needed for their projects. Human resources, as well as equipment needed, gives problems for the team and it affects them as they are not able to solve the problems unless they receive assistance from the management by providing them the things they need. Below are examples of data which provide evidence to the factors of funding which affected the project progress.

"This is a government funded project so, if the work is done by a private company, the work will be done even faster. Since this is a government-linked project and we are working in a government hospital, work is not being done as fast as we are thinking. So that's the main problem. Work is not being done as what we think."
          (DrPr, External Leader, Wk6, ProjectB)

"I'm not sure what to do. Now that they are taking back all the loaned equipments. It disturbed what we have planned earlier. And like now, we are in the middle of all the small experiments. So, having the equipments are very important. But now they are all gone."
(MrZ, Scientist, Wk9, ProjectB)

"We just follow what they say. Now it is so unstable due to the lack of resources and everything. We can't afford to make wrong decision. If we have problem, we will tell them, if we need help, we'll seek them. Everything will be on them. We don't want to be blamed later on."
(MrZ, Scientist,Wk11, ProjectB)

"Look at the condition of the equipments here. The computers need upgrading. It is not easy to work like this. The management should do something about this." *(MrP, Graphic Designer,Wk3,ProjectC)*

"The equipments, especially the hardware is not up to the new software requirements. It's not compatible. This is so annoying. How can we work efficiently when the equipment is outdated?"
(MrS, Multimedia Executive,Wk2,ProjectC)

Another trigger identified is reputation. Due to self reputation, a person with high self-esteem expects respect and admiration from others while person with low self-esteem anticipates disapproval and rejection. Reputation is defined as the reciprocal of image, which is considered as feedback from others concerning the credibility of others (Whetten & Mackey, 2002).

This occur as some of the team members have more working experience and are regarded as being an expert in the project team. Therefore, in order to maintain their good reputation, the more experienced members decide to focus on their task and let the management solve the team's conflict. This is to ensure that they will not be held responsible if the conflict is unresolved or gets worse as it will affect their reputation. However, despite the differences in work experiences, during the earlier weeks of the interviews, the team

members resolve conflict by themselves; conversely, as the project progresses, they decide to get the external leader to assist in solving conflict.

"It is very difficult you know...I would rather keep quiet than say something. These people are just there to point finger if anything goes wrong. Let's just leave it to the team leader then".
(MissAn,Scientist,Wk10,ProjectB)

"As what happened before, it causes some problems because of some the misunderstanding. So now, I would prefer to just straight away go to the management and let them deal with it. That's a huge relief that I don't have to deal with that anymore."
(MrD, Animator, Wk9,ProjectD)

"It is a good thing I guess to have someone to rely on whenever we are having problems. We used to solve our own problem, everything is just within the team, but with this changes, I would say that I feel more comfortable having MrSh helping us with our project."
(MrK, Scientist,Wk12,ProjectE)

"I would leave this to the management. I don't want them to see me being unable to give good suggestions on solving the issue. It's a dilemma as at the same time, I wanted to give my ideas but it might not work for the team   (MissM, Quality Controller, Wk10 ProjectF)

5.3 SMPT Transformation Summary

**Figure 4: Summary of SMPT Transformation during Task Conflict**
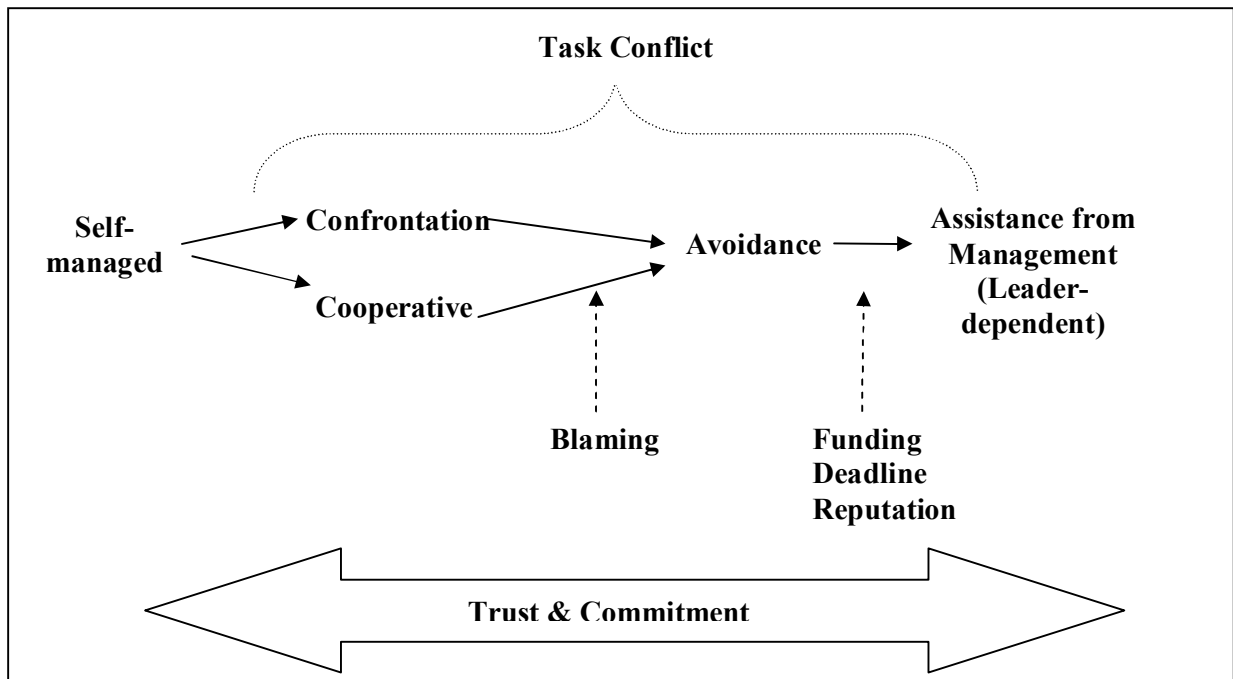
**Figure 5: Summary of SMPT Transformation during Relationship Conflict**
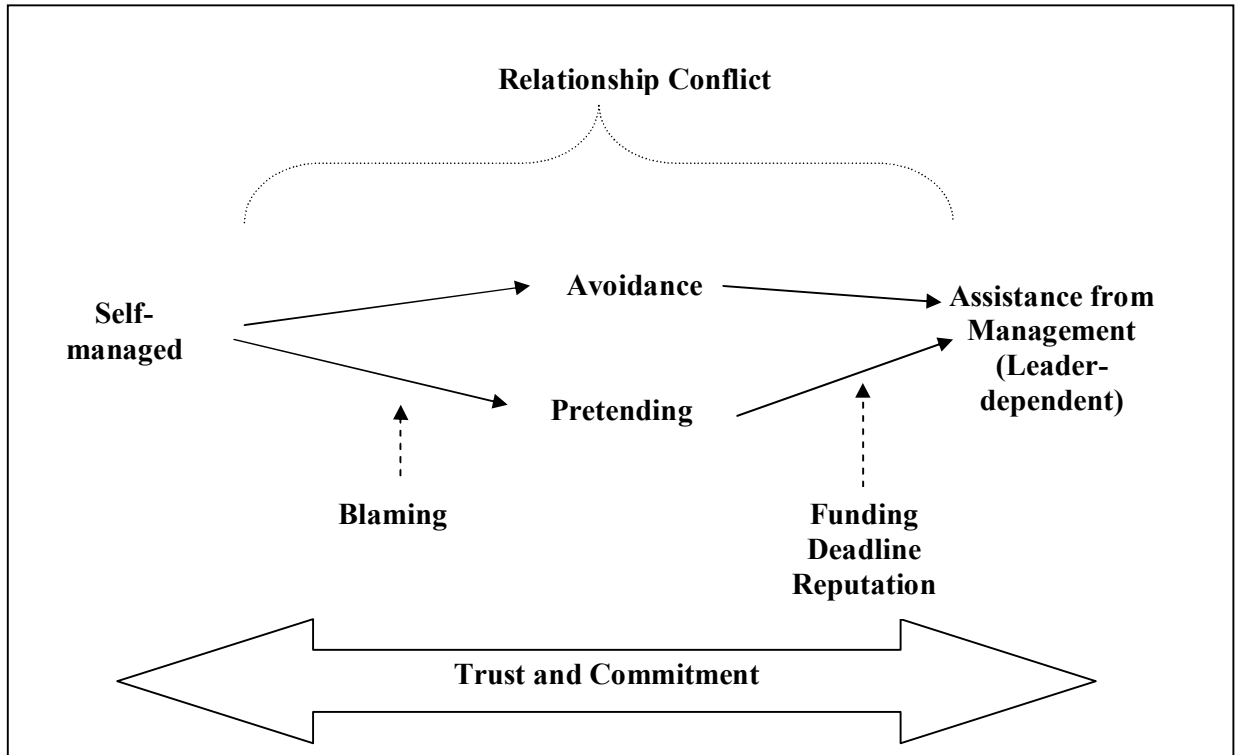
Figure 4 and **Figure 5** above, show the summary of overall transition of leadership positioning in SMPTs as a result of several factors. The existence of different types of conflicts at different points of time in a project is evident as factors of the repositioning. Elements of trust and commitment are also identified which occur throughout the project duration. Task conflict, as well as relationship conflict, is inevitable in each of the SMPTs. The various conflict management strategies that are implemented by SMPTs during conflict affect the team as when the strategies change, the team changes their dependence towards the leader.

It was found that during task conflict, SMPTs use the confrontation and cooperative approach toward conflict. Three out of six SMPTs use the cooperative approach towards conflict, and four SMPTs use a confrontation approach. These approaches are toward solving the conflict involving a face-to-face approach which makes it easier for them to exchange their ideas and opinions and an agreement can be reached towards solving the conflict with those involved. Conflict is able to be resolved quickly and the team members manage to proceed with the project.

However, at the midpoint of the interviews, three out of six SMPTs in this study demonstrated that their conflict management strategy changes towards conflict avoidance during task conflict. These result in being highly dependent on the external leader as the leader has to be responsible to solve the team∅s conflict as well as being responsible for the decision making process.

Meanwhile, in relationship conflict, it was evident that four out of six SMPTs use the avoidance approach and one project team use pretending approach as a way of being unwilling to get involved further in the conflict. As the project progresses over time, the strategies of avoiding and pretending lead the team members to be more dependent on the external leader. The direct involvement of the leader in the project team is evident in all of the cases which highlight the team dependency toward

the leader. This shows that the team members decided to get the leader to be involved in a way that they do not want to get further involved in the conflict and as the deadline is approaching, the team members feel that it is important for them to focus on their task and spend more time in the project rather than deal with the conflict.

The change of responsibility gives them more time to focus on their work and not to be blamed for any mistakes and the team leaders are fully responsible for solving any conflict. Adding to that, the financial resources, which include funding for the projects with limited duration, the approaching deadline as well as the issue of self-reputation are factors which are discovered from the projects to be the influencing the repositioning of leaders in SMPTs. This occurs due to blaming which makes them choose to either avoid or pretend during the event of conflict. This enables the team members to be more focused on their work rather than dealing with conflict. Factors that trigger blaming are identified: the unwillingness of the team members to get further involved in the conflict; being irresponsible for any mistakes; and disrespect towards each other.

5.4 Three Proposed Models of the Transformation of the SMPT

The models demonstrate that, over time, the positioning of the leader within the SMPT changes as the team members become leader-dependent which is evident when the team members begin to seek assistance from the management. This is influenced by the types of conflict that the team face as well as how the team

manages conflicts. Each of the models represents at least one SMPT that was being investigated in this study. Each of the models differs on the conflict management strategies that the project teams adopt at different phases of their project. Three different patterns of conflict management strategies are identified during different types of conflicts occurrence in SMPTs: confrontation-avoidance, cooperative-avoidance and cooperative-pretending. It is evident that the events of conflict increase over time and the team approach towards conflict management changes which, in the end, results in the changes in the positioning of the leader. Conflict avoidance and pretending with each other, especially with those involved in the conflict, are implemented whenever the team do not want to get involved further with the conflict.

The elements of trust and commitment are evident throughout the project teams. In the event of conflict, the team's commitment towards their project is still exists. However, both elements not the triggers for the interrelatedness between task conflict and relationship conflict. It is found that the changes of conflict management approach within the project team occur as a result of blaming. Blaming occurs when any suggestion given by the team members is not giving benefit or not helping the team towards solving their conflict. Blaming is identified as the implication of being irresponsible, disrespectful towards each other and the unwillingness of the team members to get further involved in the conflict either task or relationship.

The changes of conflict management approach towards avoidance and pretending result in the repositioning of the leader as the external leader later become an internal leader within the team. Assistance from the management required by the team members while dealing with conflicts, lead towards the repositioning of the leader into the team (as internal leader), which then leads the team into becoming leader-dependent.

It is identified that the changes occur in this phase where the teams are pressured by the needs to maintain their reputation or social face, the pressure of the approaching deadline and the issue of financial resources which is allocated for a limited time. By being dependent on the external leader, the team members are able to focus more on the assigned project and do not have to be responsible to manage any conflicts that occur regarding the project team.

**Figure 6: SMPT Transformation Model 1 (Confrontation - Avoidance)**
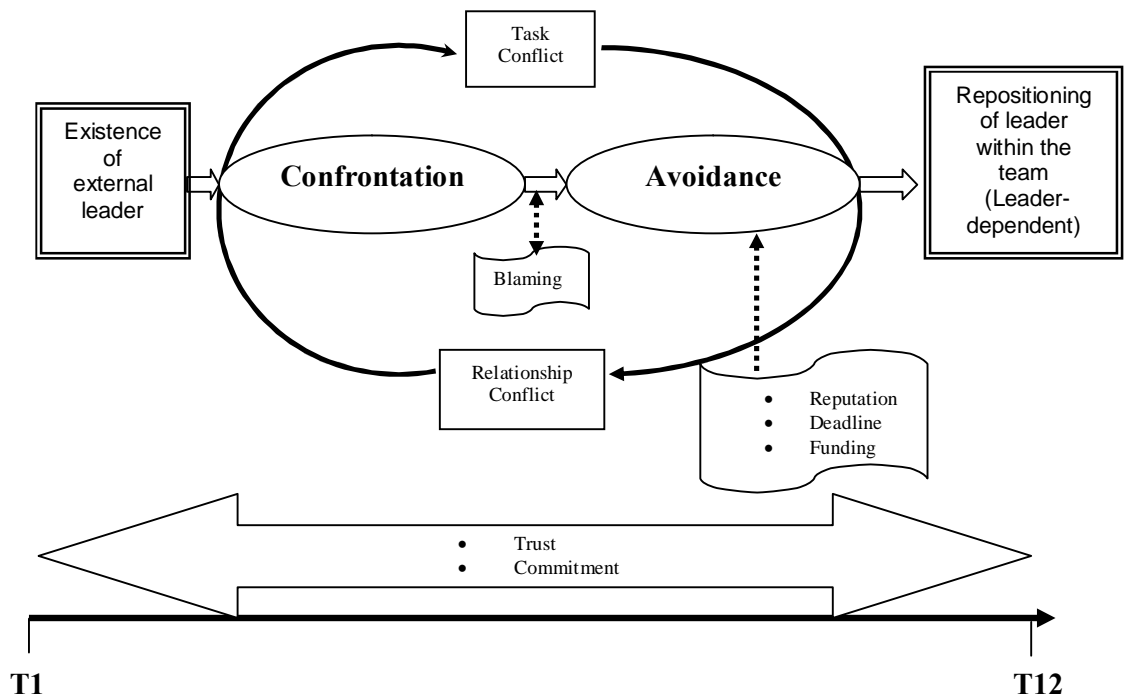
**Figure 7: SMPT Transformation Model 2 (Cooperative - Avoidance)**
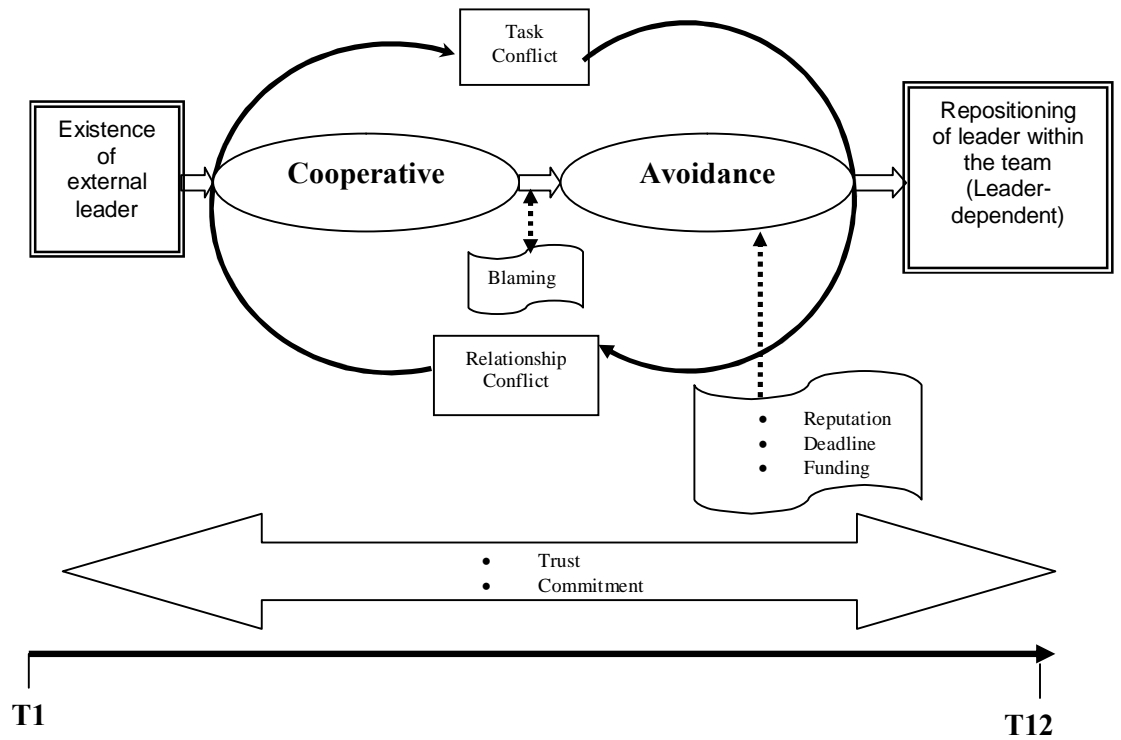
Figure 8: SMPT Transformation Model 3 (Cooperative - Pretending)
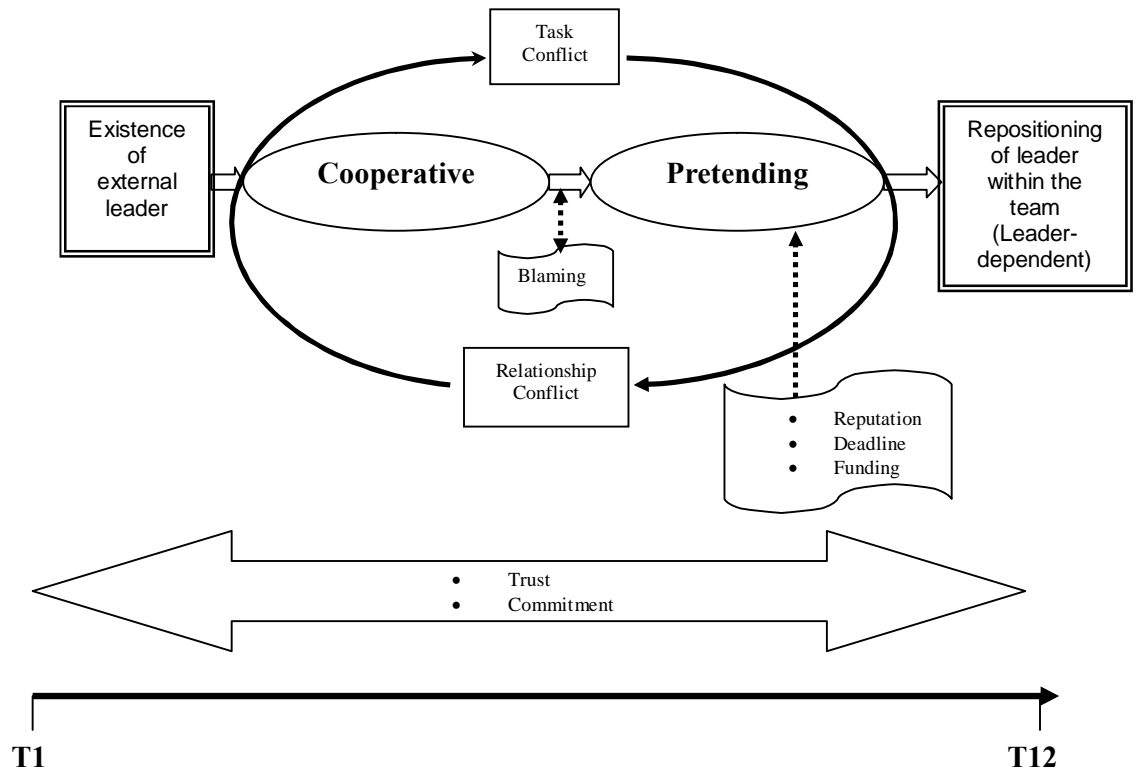
5.5 Chapter Summary

This chapter compared the finding across all six cases. The different conflict types and conflict management strategies were also compared across all the cases. Models of SMPT transformation, consisting of the transition of conflict management strategies over time which leads toward the changes of leader positioning were developed.

CHAPTER 6

DISCUSSION CHAPTER

This chapter discusses the findings that were presented in Chapter 4 and Chapter 5 with reference to the existing literature and the supporting evidence from the findings. Discussion is presented on each of the main findings namely on types of conflicts, interplay between different types of conflicts, conflict management strategies as well as leadership positioning in SMPTs.

6.0 The Present Study

The first purpose of the research is to further explore the evolvement of conflict in project team particularly SMPTs by identifying the existence of different types of conflict in six projects in three Malaysian small and medium sized KIFs. Under this objective, the occurrences of different types of conflict within and outside SMPTs are being explored. The relationship between the different types of conflict is also revealed. From the data gathered in this study, it is found that different types of conflict occur throughout the project, either within or outside the team. The different types of conflict are found to influence the project team social dynamics as they can be either beneficial or harmful to the project team.

In the context of a project team, conflict is regarded as inevitable as a team consists of people with different ideas and opinions working towards the same objective. As the team work together, it is impossible for the various ideas and opinions from each of the team members to be implemented. Annoyances and negative feelings will also be involved in this process. As highlighted by Putnam and Poole (1987), conflict is generally defined as consisting of three elements: õinterdependence between the parties where each party might interfere with each other, perception of incompatibility among the parties' concerns as well as some form of interactionö. Although some researchers perceive conflict as disruptive (Jehn, 1995; Schwenk & Cosier, 1993) conversely, there are also researchers who find that conflict can promote group effectiveness (Amason, 1996; De Dreu & Van de Vliert, 1997). Therefore, this study reveals the various occurrences of conflict throughout a project, which can either be beneficial or disruptive to organisations.

The second purpose of this study was to determine the effect and influence of conflict towards SMPTs, while the third purpose is to further investigate the social dynamics of SMPTs in different conflict situations and the strategies being used in managing conflicts. Adding to that, the fourth purpose is to explore the influence of conflict towards leadership in SMPTs.

As small and medium sized KIFs depend on project teams to survive, it is important to ensure the effectiveness of teams throughout each project in order

to increase organisational performance. Therefore, understanding the effect of conflict and its management strategies towards SMPTs and its leadership can help the management to create an environment that facilitates the management of conflict and thus promotes conflict as beneficial to project teams. The findings from the study are, therefore, intended to contribute to the existing literature by providing a better understanding of the influences of conflict and conflict management strategies towards SMPTs and how SMPTs adapt or change in conflict situations.

6.1 Conflict Usefulness

The findings are intended to highlight the effect of different types of conflict; either useful and beneficial or harmful to the project team, particularly the SMPTs. Tjosvold, Poon and Yu (2005) highlight that the effect of conflict depends on the different types of conflict, which can either be useful or harmful to organisations. Previous researchers find that task conflict is useful and beneficial as it helps in improving a team's productivity (eg. Amason, 1996; Jehn, 1995). This is due to the varieties of ideas generated by the team members which will then provide the best solution towards producing high quality work outcomes. This will also assist in producing good decisions due to the brainstorming activities of the team members (Tjosvold, 1997).

On the other hand, relationship conflict is claimed as not beneficial in project teams as whenever it occurs, it will involve interpersonal issues and negative emotions amongst team members (Jehn & Mannix, 2001). In a way, it distracts the project team from focusing on the team's main objective (Amason, 1996) as

they would be focusing on interpersonal matters which will interfere with the completion of the teamøs project. This will then hinder the process of interaction within the project team. This is considered to be a threat to the project team as the process of interaction is very important when working in a team as the team members need to interact in order to share their knowledge and discuss the best ways to perform their tasks in order to meet the objective of the project team.

However, even though task conflict is known to be beneficial, especially for the decision making process in project teams, it is also argued that this type of conflict will interrupt the team members from achieving their goal and hinder the implementation of their project (Amason, 1996; Hambrick, Cho, & Chen, 1996). These occur when team members are being overwhelmed by the conflict that they are dealing with and the difficulties to reach an agreement to resolve the task conflict that they face (Amason & Schweiger, 1994).

In this study, it is evident that task conflict can either be beneficial or harmful depending on the stages or processes the team is going through in their project, meanwhile relationship conflict is found to be always harmful throughout the project. Task conflict is evident to be useful when the project is far from the deadline as the team members have plenty of time to work on their project. Whenever task conflict occurs, the team members sit together and discuss the best way to resolve the conflict, together, as a team. Task conflict is considered useful at the beginning or early stage of a project as it motivates the team

members to be involved with others in solving conflict as well as getting to know each other better during the process.

In handling task conflict, it ensures that the team members are clear of the project objective and everyone works together towards achieving the objective by solving the conflict. Task conflict that occurs will help to navigate the teamøs direction towards fulfilling the teamøs objective as they start to have responsibility towards their project and ensure that they are heading towards the objective in the right way. Dealing with task conflict at the beginning of a project will ensure that the team members are ready when the conflict occurs again throughout the project duration. This is useful as the team members have experience of how to deal with the conflict in an effective way, which will then assist them in managing conflict.

However, it is evident that, as time passed, the project progresses, and the deadline is approaching, task conflict becomes harmful as it distracts the team members from focusing on their main task thus delaying and interrupting the progress of the project. This finding is consistent with the literature which suggests that task conflict might be constructive as it stimulates discussion of ideas which will help team members in increasing their decision making quality and productivity (Jehn, 1995, 1997). However, in certain situations it distracts team members from focusing on their task. For example, as evident in this study, task conflict which occurs during the brainstorming process is beneficial as it enables the team to generate useful ideas in order to proceed with the project;

meanwhile, task conflict which occurs at a later stage of a project results in a distraction for the team members from focusing on their task especially when the particular type of task conflict has not occurred previously during the project.

The explanation for this is that there are situations during a project which need all team members to give their opinions and ideas in order for their task to be carried out or in order to solve any urgent problem which occurs. Task conflict occurs as the brainstorming process generates varieties of new suggestions for the project team. This will then enable the team to implement the ideas and this will benefit the project team in a way that might help to improve their working style as well as their work performance. Meanwhile, in a situation where the task conflict is no longer focusing on one issue and is becoming more intense in a way that it spreads into other issues and involves more people, it is no longer considered beneficial to the project team as they need to spend extra time and effort being involved in the conflict thus neglecting their main responsibility towards their task in achieving the project's objective.

Task conflict is claimed to be beneficial in a way that promotes creativity and effectiveness to the project team as, during the process, it generates new knowledge and insights which lead toward a more effective team (De Dreu, 2006). However, it is suggested that task conflict is only beneficial when it occurs during non-routine tasks where there is no standard solution (Jehn, 1997). Therefore, generation of creative ideas or opinions are needed from the team members to handle the conflict. However, in this study, it is found that the

usefulness or harmfulness of task conflict is not based on the type of tasks (either routine or non-routine) but is based on the stages and situation of the project that the team was working on. It is evident that even if the task conflict occurs on a non-routine task, it can be harmful to the project team whenever it interferes with the team concentration on their task. On the other hand, even if it is a task conflict over a routine task, it is evident that if it occurs at certain processes of a project, for example, at the beginning of a project during the planning session, it benefits the team in order to generate effective solutions.

The findings suggest that deadline is the main reason on how task conflict is perceived in SMPTs. This occurs when the team members are aware that the deadline is approaching, task conflict becomes a burden instead of an opportunity to generate new ideas for the project regardless of the type of tasks on which they are working. Subsequently, team members feel that focusing on each of their assigned tasks for the project is more beneficial rather than spending their time dealing with conflict. Task conflict is regarded as an interruption towards achieving the project deadline which will disrupt the team members.

In line with Gersick¢s (1989) findings, the deadline has been observed as a condition of time pressure for the teams in this study. It is perceived by the team members as part of the team¢s overall objective and they must work towards achieving the objective. The deadline induces SMPTs to move forward in their task completion. Therefore, heading towards the deadline, team members are

under pressure and do not want to get involved with anything other than their assigned task. Therefore, dealing with any type of conflict is considered as a distraction towards achieving each of their project objectives.

According to Waller et al. (2001), teams which consist of individuals with various conceptualizations of time may affect the flow of processes in a project which then affect the overall team performance. As evident in this study, as the deadline is approaching, it affects the team in a way that they want to ensure that the flow of their project is as planned. This, then, influences the team membersø perception towards conflict as conflict is no longer seen as beneficial but more of a distraction. The approach taken by the team in dealing with conflict changes affect the overall team processes. This supports the findings of Waller et al. (2002) who propose that work with stable deadlines will increase attention to time as the proximity of the deadline increases. Therefore the group increases their task performance activity and work towards meeting the deadline, thus ignoring any distractions along the way.

However, although it was revealed that task conflict can either be beneficial or harmful throughout a project, a different finding was evident for relationship conflict. The data gathered shows that whenever relationship conflict occurs it will impact the project team negatively as it involves emotions of the team members which is difficult to deal with as they need to work closely as a team but at the same time they need to manage their emotions.

In this respect, the researcher would speculate that the harmfulness of relationship conflict among the team members is influenced by the relationship ties amongst the team members as perceived by them. This is due to the close relationship between the team members who, in some cases, have been working together previously in various projects. Moreover, most of the team members claim that they are close and treat each other as families. Therefore, as the relationship tie is strong, the team members found that it is difficult for them to deal with the relationship conflict compared to with people that they have never known before.

As relationship conflict involves negative emotions and annoyance, it is difficult for those involved to overcome as they do not want to talk with each other about the issue because they do not want to take the risk of losing their relationship as well as being worried that it will affect other group activities. Therefore, relationship conflict becomes worse as the person involved will either take no action or will start talking behind the others' as well as influencing others to have negative feelings with those involved.

The finding contradicts the literature which claims that a strong relationship is associated with a low level of conflict in organisations. Relationship ties is claimed to be affecting the occurrence of conflict as a study by Nelson (1989) finds, it is typical of low conflict organisations to have strong ties amongst the members. This is because strong relationship ties are more likely to facilitate

cooperation thus reducing conflict within teams in organisations (Labianca, Brass, & Gray, 1998; Nelson, 1989).

Surprisingly, in this study, as the relationships between the team members are close with each other, the occurrence of relationship conflict becomes harmful to the project team. For example, during a relationship conflict, those involved were not talking to each other and trying not to get involved in doing their task. This becomes harmful to the team as they need to work together but are ignoring each other, which is not helping the team to meet their objective. This contradicts with the findings of Shah and Jehn (1993) and Murnighan and Conlon (1991) that, even though groups of friends experience more relationship conflict than groups of strangers, friend groups are better able to manage conflict successfully. These studies suggest that friendship increases relationship conflict in teams, but that these teams, also, are better able to harness the conflict to improve task performance.

Particularly for SMPTs, most decisions have to be made by the team members themselves but during relationship conflict it hinders the decision making process as the people involved are not communicating with each other. This is in line with by Wall and Callister (1995) who expound that stress and emotions which occur during conflict ÷prohibit straight and analytic thinkingø amongst those involved. Adding to that, it is also evident that the ways the team members handle emotions affect how they perceive relationship conflict. This causes the project team to react to conflict differently. As relationship conflict involves

emotion, most of the team members agree that it will get severe when being dealt with, therefore it is harmful when it occurs at any point of their project duration especially when they are having a close relationship with each other.

These findings on conflict usefulness are summarised in Proposition 1.

Proposition 1: Nearness to the deadline is negatively related to usefulness of task conflict and positively related to harmfulness of task conflict

P1a: The further a project is from the deadline, task conflict becomes useful to the project team.

P1b: The nearer a project is to the deadline, task conflict becomes harmful to the project team.

Proposition 2: Relationship conflict is always harmful to the project team

P2a: Regardless of the situation or stages of a project, relationship conflict is harmful to a project.

P2b: Close relationships amongst team members contribute to the harmfulness of relationship conflict.

6.2 Interplay between different types of conflict

Task conflict (TC) is triggered by the differences of opinions toward achieving the goals of a project team (Langfred, 2007) meanwhile relationship conflict (RC) is triggered by interpersonal annoyance that involves emotions which effect personal reaction and interpretation towards others (Simons & Peterson, 2000). The benefits and harms of both different types of conflicts in SMPTs have been discussed in the previous section.

In this section, the interrelatedness of task conflict and relationship conflict in SMPTs will be discussed. It is found from this study that there is interplay between task and relationship conflicts in SMPTs. It has been identified from the study that not only one way relation exists between the two types of conflict as suggested by Jehn (1997), but it appears that there exist causal link of conflicts in four different types within SMPT: Task Conflict (TC) - Relationship Conflict (RC); Relationship Conflict (RC) - Task Conflict (TC); Task Conflict (TC) - Task Conflict (TC); and Relationship Conflict (RC) - Relationship Conflict (RC). It is evident that task conflicts that occur within the team lead to relationship conflict as the conflict gets worse and this affects the relationship within the team. The same thing applies to relationship conflict that occurs and affects the team members and leads to task conflicts. The continuation of task conflict at different phases is also evident as the conflict expands into other task conflicts. Similarly, relationship conflict is also seen to be occurring continuously covering different types of relationship conflicts over time as the conflict expands.

This is adding to the literature which shows lack of research being done on the interrelatedness between different types of conflict (Jehn, 1997) as conflict is usually highlighted in the literature in a way that appears static - one type at a time in a project duration rather than dynamic and interrelated (Jehn & Mannix, 2001). It is found that the occurrences of conflict within SMPTs are interconnected either to a different or the same type of conflict which becomes more intense and involves other issues.

The interrelatedness which shows that task conflict is related to relationship conflict is consistent with the argument by Simons and Peterson (2000) that task conflict will increase relationship conflict. This occurs particularly in teams with low trust amongst the team members as low trust brings negativity to the source of the disagreement (Simons & Peterson, 2000). Thus, when trust is low or missing, team members are more likely to question othersø intentions and make non-adequate attribution towards others (Simons & Peterson, 2000) which then leads toward relationship conflict. However, if group members trust each other, task-related disagreements are less likely to be perceived as personal attacks.

On the other hand, the finding of this study show that the factor of the interplay between task conflict and relationship conflict differ from Simons and Peterson (2000) whereby it is evident that low trust is not an issue in this study which triggers the interrelatedness between task conflict and relationship conflict. This is evident from the data that trust exists within the team. The perception of trustworthiness is evident from the team membersø attitudes, moods and emotions toward others (Jones & George, 1998) as well as the behavioral exchanges between team members over time which determine the level of trust within the team (Jones & George, 1998). Trust is characterised as confidence in the group's reliability and expertise (Moorman, Deshpande, & Zaltman, 1993). Trust is also claimed to be influencing commitment which is defined as the effort and determination to perform better than the expected ÷standards of performanceø (Porter & Lilly, 1996). As team members perceive

that others in the group are committed, trust in the group increases. This is evident in this study which found that throughout the project duration, trust and commitment exists in the team.

However these two elements - trust and commitment, do not prevent the existence of blaming within the team. ‗Blaming‖ is found to be the trigger which leads towards the interplay between different types of conflict. For example, when dealing with task conflict, if a suggestion is not successfully implemented, blaming starts to occur. This, then, leads towards relationship conflict. The same thing occurs during relationship conflict, whenever people get involved with relationship conflict, the people involved will start blaming and this will affect the team work, which leads towards task conflict. Annoyance and negative emotion occur due to relationship conflict which will then result in blaming. Meanwhile, during a conflict, when blaming occurs, it will lead in intense conflict which will then hinder the performance of the project team. However, even in the event of blaming, the trustworthiness amongst the team members is still evident.

Blaming is used as a way of expressing and putting guilt on others rather than identifying ways to deal with the problem. Blame is being perceived as an antecedent of distancing (Folger & Skarlicki, 1998). Therefore, when people are not able to handle some problems, they will try to avoid them. It was found that the distancing tendencies increased with levels of blame for negative consequences to another person (Hodgins, Liebeskind, & Schwartz, 1996). This

will make oneself look competent at the expense of others (Alicke, 2000). Team members are seen to be interested in protecting their reputation which results in closed-mindedness and not learning from any mistakes (Tjosvold, Yu, & Hui, 2004).

In this approach, team members blame others as responsible for errors as they try to avoid being held responsible themselves (Argyris & Schön, 1978, 1996). This is evident in the current study in that, in order not to be blamed, the team members blame others first as they do not want to take the responsibility of the conflict that occurs. Thus, the interrelatedness between the different types of conflict is found to be the result of blaming which took place within the project team. This is in line with the claim by Tjosvold (2004) that fearing punishment or embarrassment, people try to hide errors and to cover up mistakes that might be attributed to them and, instead, seek to have mistakes attributed to others.

In the context of this study, the team members of SMPTs in KIFs consist of knowledge workers who are defined as people who create and disseminate knowledge and information in the organisation (Reinhardt, Schmidt, Sloep, & Drachsler, 2011). These people access, create and use information in ways that add value to their teams and organisations (Tymon & Stumpf, 2003). As all projects included in the study involved creating new products, the group of people chosen to be the team members possess necessary knowledge and skills in completing the projects. Additionally, it is important that in order to reach a

successful completion, there must be a process of knowledge combination and exchange amongst the group members in a project.

During this process, the culture of trust is essential in order to improve the process of knowledge sharing and organisational effectiveness (Sveiby & Simons, 2002). As according to Huener, Krogh and Roos (1998) the level of trust in organisation is also regarded as the most important factor which influence the willingness to share knowledge amongst workers. It was found that trust in SMPTs particularly in this study, is in line with previous studies (eg. Druskat & Wolff, 2001; Huener L. et al., 1998; Tschannen-Moran, 2001) which show that the existence of trust is crucial in teams specifically in KIFs.

Instead of trust, blaming is found to be the main factor that triggers the interrelatedness of conflict within SMPTs. This act of blaming each other and pointing to the weaknesses of others puts the team members under pressure in order to counter the accusation laid by others. Therefore, team members are tempted to try to protect their individual selves and blame other team members. Furthermore, being under pressure, individual team members may be highly fixed on their own ideas and insist that others agree with theirs. Research suggests that blaming makes discussions more threatening (Rybowiak, Garst, Frese, & Batinic, 1998) and as revealed in this study, blaming leads towards intense conflict which affects the project team.

In addition, it is evident in the study that when team members preserve the importance of social face, they tend to blame others first to protect themselves from being blamed and to show others that they are right. As this involves issues such as social face and right and wrong, it gets more difficult to be managed cooperatively (Tjosvold & Sun, 2000). Thus, this leads towards more intense conflicts as the findings revealed; regardless of the type of conflict the team members are dealing with. These findings on the interplay between different types of conflicts due to blaming are summarised in Proposition 3.

Proposition 3: Blaming increases amutually exacerbating effect between task conflict and relationship conflict

P3a: Relationship conflict leads to task conflict when blaming occurs

P3b: Task conflict leads to relationship conflict when blaming occurs

P3c: Conflict will become more intense whenever blaming occurs (TC-TC and RC-RC)

6.3 Conflict Management Strategies

Conflict handling strategies have been widely discussed in the previous literature (eg. Chen et al., 2005; De Dreu & Weingart, 2003; Tjosvold & Sun, 2002), including conflict avoidance, confrontation, cooperative and competitive styles which provide insight into different ways of managing conflicts in teams and organisations. The preferences of conflict handling styles to be adopted during conflict is claimed to be influencing other decision making activities in a team (Kuhn & Poole, 2000).

It is claimed that the choice of conflict handling style involves hidden ways of addressing the conflict situation rather than direct actions (Kolb, 1992; Tjosvold & Sun, 2000) and is considered very critical to organisations (Chen et al., 2005). Various ways implemented by organisations to avoid direct actions towards conflict have been discussed, such as purposely changing the topic of conversation, expressing disagreement by forms of body language, reacting via a mediator in order to have the individual enact the actual confrontation or by pointing out common values and aims instead of directly pursuing the matter of conflict (Kolb, 1992; Morrill, 1992).

Conflict handling strategies implemented by teams is claimed to be consistent throughout a project as a team will continuously adopt the same style when conflict occurs (Speakman & Ryals, 2010). However, this was not evident in the study which revealed that, over time, a team changes its conflict management style with the influence of the different types of conflicts that occur as well as when the conflict occurs in the project duration. Three different patterns of conflict handling strategies are identified as: cooperative-avoidance; confrontation-avoidance; and cooperative-pretending.

The finding is consistent with Vliert¢s (1997) suggestion that organisations are not limited to only choosing one conflict management strategy but typically use a combination of different strategies while dealing with conflict. The changes of conflict management styles are identified to be related to several factors

throughout a project. As found in the study, the concern on project deadline, individual reputation and project funding affects the choices for conflict management strategies by SMPTs. Concern on the project deadline results in ignoring conflict handling; therefore, the team members decide to focus on their task rather than solving conflict. Individual reputation is another factor which changes the approach towards conflict management strategies as team members are concern with their reputation and show others that they are doing the right things. This leads towards changing of the conflict handling approach to ensure that their reputation is being taken care of. As faultlines was identified due to the differences in working experience in the team, those who are likely to be the senior member of the group with more working experience, are more concern with self-reputation with others.

In order for the team members to solve the conflict, intervention from the management is important as that is the only way for them as they do not want to directly deal with the conflict.

The third factor identified is project funding which affect the way conflict is handled in organisations, indicating that with the limitation of resources, the team members are unable to take further action, unless being assisted by the management. These factors result in the changes of conflict management strategies by the team members towards conflict avoidance as well as pretending.

Conflict avoidance which was evident in this study has been highlighted in the literature as appropriate for collectivist societies where relationships are highly valued (Leung, 1997). Malaysians are described as collectivist that is their identity is not determined by individual characteristics, instead by the collectivity or group to which the person belongs (Abdullah, 1996; Mellahi & Wood, 2004). Adding to this, in the Malaysian context, it is very common for people not to discuss sensitive issues with other, as a result of cultural preference (Merriam & Mohamad, 2000). This means that the people will always try not to hurt others feelings. It could be assume that their action is due to wanting to preserve the relationship with others.

In the context of this study, the data is collected from KIFs in Malaysia which is a country that is culturally diverse. Therefore, the team members of SMPTs consist of Malaysian from different ethnic groups. Malaysian populations consist of the ethnic groups Malay (67.4%), Chinese (24.6%), Indians (7.3%) and Others (0.7%) (Department of Statistics, 2012). Interestingly, it was found that though Malaysians retain their own identity as Malays, Chinese and Indians, certain cultural values appear to be common to all Malaysian ethnic groups (Abdullah, 1996; Merriam & Mohamad, 2000).

For example, the identity of a person who is Malay is determined by the Malay community. The society will normally generalise his identity to that which describes Malays as a whole rather than an individual. Similarly, for someone who is of a Chinese ethnic, his identity is determined by what the local society knows about the Chinese community as well as for an Indian's identity to be

determined by what is known about the Indian community (Abdullah, 1996). Malaysians culture is also found to be ―relationship oriented‖. Their lives are all centred on family, country and social group ties. This entails the mutual and reciprocal respect and obligations they have for each other. It was also found that Malaysians are concerned with face-maintaining dignity (Abdullah, 1996). This explains why Malaysians avoid making others feel embarrassed or humiliated in public.

As evident from the findings, cooperative and confrontation strategies are being implemented by SMPTs at certain points during task conflicts whereas for relationship conflict, avoidance is being implemented all the time by the team members. This suggests that SMPTs are culturally bound due to the approaches taken by the team members regarding conflict situations. This is opposed to the individualistic culture of the Western country where people prefer to confront directly during conflict (Amason, 1996; Lovelace et al., 2001) and regards conflict avoidance as being selfish and not helping to solve any problems (Ohbuchi et al., 1999). Conflict avoidance, as revealed in the study, is evident to be the result of the needs to maintain harmony as well as close relationships amongst team members. This shows that in the society, cultural issues which involve individual reputation affect the social dynamics of SMPTs in dealing with conflict.

Meanwhile, another factor revealed from the study affecting the conflict management style in SMPTs is the issue of funding. Literature in the resource-

based view has generally grouped resources into four categories: financial, physical, human capital, and organisational (Barney, 1997). It is suggested that financial resources should be excellent in order for project teams to survive when competing with others. This is supported by the findings which show that, without the flexibility of financial as well as human resources, the social dynamics of the SMPT are affected, which then leads toward the suspension of the project, as evident in Project C; the organisation was unable to provide up-to-date computer equipment which hindered the project team members from showing good performance, thus creating unsatisfactory accounts from their clients. The financial resources of an organisation impact SMPTs in a way that the team members respond by not showing good work performance.

The discussion in this section has been summarised into the following propositions:

Proposition 4: Conflict management strategies in SMPTs changes over time due to issues of reputation, the deadline and funding.

P4a: The deadline leads to changes of conflict management strategies in SMPTs.

P4b: Importance of reputation leads to changes of conflict management strategies in SMPTs.

P4c: Funding issues lead to changes of conflict management strategies in SMPTs

P4d: Conflict avoidance occurs when team members are concerned with their reputation, the deadline and funding.

6.4 Leadership and Self-Managed Project Teams (SMPTs)

The SMPT consists of team members who are given the responsibility to manage and perform their tasks amongst themselves and being given the freedom on decision making processes (Cohen & Bailey, 1997; Hackman, 1986; Wellins et al., 1990; Yeats & Hyten, 1998). The independence of this type of team on conducting their tasks eliminates the importance of having a leader within the team especially in assisting the team as other traditional team leaders would do. This is the major difference of this particular type of team compared to other types of work team where each of the team members are given the responsibility to manage their tasks rather than depending upon the team leader as other types of work team.

However, despite the claim that the SMPT is a type of independent work team, it appears that the existence of a team leader is still required especially for the purpose of guiding the team activities. As according to Yeats and Hyten (1998), the leader of an SMPT differs from the traditional leader in the way that their role is as a coordinator rather than being highly involved with the team activities.

Meanwhile, Druskat and Wheeler (2003) highlight the existence of the leader for the SMPT who is positioned outside the project team who is known as the external leader and whose roles differ from the traditional leader was positioned within a team. As one of the characteristics of the SMPT is its independence and freedom in most of the team processes, the external leader requires a unique approach towards the team in that they are expected to lead the team by

delegating the process of monitoring and managing to the team (Druskat & Wheeler, 2003). The main role of the external leader has been identified to be the boundary spanner in creating and maintaining a link between the team and the organisation. This shows that the team is still being responsible for the decision making processes and the dependency of the team towards the external leader is being minimized for the project processes but in terms of bridging the team and the organisation, the external leader is being depended upon.

The findings of this study demonstrate that there is no formal leader within the project team but there is an external leader assigned by the management who is positioned outside the team. The external leader is responsible as a mediator between the team and the organisations and is passively involved with the team activities. However, as the project progresses, the findings demonstrate a change in the positioning of the leader.

During the earlier interview sessions, it is evident that the team members are being independent and a passive role is being played by the external leader with regards to the team processes. However, over time, the project team changes into being leader-dependent which shows that the team members require the assistance from the leader especially in dealing with conflicts. The leadership style changes from being passively involved towards actively involved with the team. This is triggered by the different types of conflicts that occur as well as the conflict management strategies that the project team adopt.

The external leader changes their role into being actively involved in SMPT in order to facilitate the changes of conflict handling approach which result in team members giving the responsibility to the leaders rather than dealing with the conflict as they usually did. The transformation of leader positioning in SMPTs is consistent with the argument by Wageman (2001) that external leaders in SMPT roles, responsibilities and duties need to be established in order to handles this specific type of team. As claimed, to be given the freedom in decision making it is evident that SMPTs still rely on the role of a leader at certain points of a project when conflict is perceived as a distraction and interferes with their work process.

The model introduced on SMPT transformation towards being leader dependent differs from the existing model of team development. Various group development models have been discussed in previous literature. For example, integrative models of group development, for example, Tuckman (1965) and Bion (1961), who indicate the combination of group development models define the patterns of group development as progressing through a sequence of stages and activities and focused on the order of these stages.

Tuckman's (1965) model proposes a sequence of stages consisting of forming, storming, norming, performing and the addition of an adjourning stage (Tuckman & Jensen 1977). Forming is described as the orientation phase, which continues until the storming stage where personal conflicts are exposed and addressed. The subsidence of the storm indicates that norms of behaviour have

been established which is in the norming stage. The performing stage follows, where team effort would then be directed toward tasks. Finally the team reaches task completion which is during the additional stage of adjourning (Tuckman & Jensen 1977). The model's implication is that teams pass through several developmental stages prior to effective performance. However, research on teams indicates that there are complexities which may not easily be described as simple stage sequences.

Meanwhile, a different type of group development model suggested by Gersick (1988) is the punctuated equilibrium model arguing that instead of developing gradually over time, groups experience long periods of inertia and undergo two-phase developmental patterns with a mid transition point occurring during group processes (Gersick, 1988). The punctuated equilibrium model describes changes in a group's time awareness and pacing activities over time whereas the integrative model describes changes in a group's structure and process including the task and socio-emotional dimension (Chang, Bordia, & Duck, 2003).

However, previous studies (eg. Lim & Murnighan, 1994; Seers & Woodruff, 1997) compare these two models of Tuckman's (1965) and Gersick's (1988) and suggest that both models complement each other. This offers the possibility that both models could be integrated. It appears, in the previous studies, that groups go through both punctuated equilibrium (i.e., group's awareness of time and pace as well as changes in the task) and linear development (i.e., changes in the

socio-emotional aspects of the group and how these impact task behaviour) (Chang et al., 2003).

Meanwhile in this study, the development of the SMPT shows changes in the social dynamics whereby conflict and its management strategy affect the team and triggers the transformation towards being leader dependent. Five out of six cases in this study demonstrate that their conflict management strategy changes towards conflict avoidance and one project team changes towards pretending as a way of being unwilling to get involved further in the conflict. By pretending, the team members continue dealing with each other as if the conflict never occurs. They interact as usual but do not include the issue with regard to the conflict in their interaction with each other. These result in being highly dependent on the external leader as the leader has to be responsible to solve the teamøs conflict as well as being responsible for the decision making process. This occurs due to blaming which makes them choose to either avoid or pretend during the event of conflict.

As the project progresses over time, the strategies of avoiding and pretending lead the team members to be more dependent on the external leader. The direct involvement of the leader in the project team is evident in all of the cases which highlight the team dependency toward the leader. This shows that the project team decide to get the leader fully involved with the team. The changes of responsibility gives them more time to focus on their work and not to be blamed for any mistakes and the team leader is fully responsible for solving any conflict.

The model demonstrates that over time, the positioning of the leader within SMPT changes as the team members become dependent on the external leader. This is influenced by the conflicts that the team face as well as how the team manages conflict. Each of the models represents at least one SMPT that was being investigated in this study. Each of the models differs on the conflict management strategies that the project teams adopt at different phases of their project. Three different patterns of conflict management strategies are identified: confrontation-avoidance, cooperative-avoidance and cooperative-pretending.

The changes of conflict management approach towards avoidance and pretending result in the repositioning of the leader as the external leader later becomes an internal leader within the team. It is identified that the changes occur in this phase where the teams are pressured by the needs to maintain their reputation or social face, the pressure of the approaching deadline and the issue of financial resources allocated for a limited time. By being dependent on the external leader, the team members are able to focus more on the assigned project and do not have to be responsible to manage any conflicts that occur regarding the project team.

Interestingly, the findings of the study oppose the stages of transition to self-directed teams proposed by Orsburn et al.(1990). Teams are expected to be going through several stages, beginning with the start-up where the team would be in the stage of confusion. After the start-up stage, the team would be a leader-

centred team. After a while, it becomes a tightly formed team. Finally, the team transforms into a self-directed team. This occurs as the team receives sufficient training and direction from the leader, up to a stage that they know and become an expert at what they are doing. Finally, the team become independent and transform into a self-directed team. It can be assumed that a team might be going through a circle of stages which begins with being self-managed and end with leader managed and the cycle continues until the end of the team project which results in the effect of external or internal factors as being focused in this research, the trigger for the teams transformation is conflict and its management strategies. Therefore, the standard forming, storming, norming, performing, adjourning group development model differ from the findings of this study which shows that a cycle of complex stages rather than a linear sequence.

In addition, this study shows how the team is affecting the external leadership as well as the team structure. By having the external leader being involved in the team and informally becoming internal leader, the functionality of the team has changed whereby the team members give the responsibility for decision making and problem solving to the team leader. This study also suggests that the transformation of the SMPT is related to the factors such as the teamøs deadline as well reputation and funding. The deadline and funding are factors related to the management meanwhile reputation is being related to both team members and the management.

Therefore, the three different models presented in the previous chapter summarised the findings which suggest three different conflict management strategies being implemented in SMPTs during the event of conflicts over time. Reputation, funding, blaming and deadline are evident as triggers toward the team transition. Responsibilities of managing conflict are being transferred to the external leader rather than the team leader as project progresses.

Proposition 5: SMPT changes towards leader dependent over time due to conflict and its management strategies.

P5a: Conflict avoidance transforms a self-managed team into being leader dependent.

P5b: The external leader changes position into an internal leader when a conflict avoidance approach is being implemented.

6.5 Chapter Summary

The chapter discussed, in detail, all the findings from the study that were presented in Chapter 4 and 5. Specifically, the chapter discussed each finding regarding the changes of SMPTs over time which involves the usefulness of conflict, conflict management strategies as well as leadership issue. The next chapter concludes the study as well as listing the limitations of the study and recommendation for future research.

CHAPTER 7

CONCLUSIONS

This chapter is structured into three sections. The first section summarises the findings of the study with regards to each of the research objectives. The second section highlights the limitation of the study as well as recommendations for future research and the final section concludes the study.

7.0 Summary of the Research Objectives and Findings

The objectives of this study and the findings of the present study are:

7.0.1 Objective 1:

To further explore the evolvement of conflict in project teams, particularly SMPTs, by identifying different types of conflict in teams. Under this objective, the occurrences of different types of conflict within and outside the SMPT are researched. The relationship between the different types of conflict is also explored.

Finding 1:

Two types of conflicts occurring in SMPTs were identified: relationship conflict and task conflict. The two different types of conflict were evident to be interrelated with each other. Task conflict leads towards relationship conflict and relationship conflict was found to lead towards task conflict. It was also revealed that when the two types of conflict are repeated, the conflict will become more intense.

7.0.2 Objective 2:

To determine the effect and influences of conflict in SMPTs. Under this objective, the effects of different types of conflict which occur throughout a project will be identified and how it influences the team will be investigated.

Finding 2:

It was evident from the study that the effect of task conflict towards the project team is related to the deadline of a project, meanwhile the effect of relationship conflict towards the project team is related to the closeness of relationship among the team members. Task conflict is beneficial when the deadline is further away and it becomes harmful as the deadline approaches. As for relationship conflict, it was revealed that it remains harmful at any point of a project and close relationships amongst team members lead towards more intense relationship conflict.

7.0.3 Objective 3:

To further investigate the social dynamics of SMPTs in different conflict situations and how each situation is being handled throughout a project. Under this objective, the team activities over a period of time will be investigated in order to identify conflict occurrences and its handling strategies.

Finding 3:

It was found that blaming occurs when the team members deal with conflict as the project progresses. This resulted in different types of conflict as well as intense conflict over time. Furthermore, the conflict management strategies implemented by the team members during conflict were identified. Three patterns are revealed from the study which shows the transition from cooperative ó avoidance, confrontation ó avoidance and confrontation ó pretending. The changes of approaches towards avoidance and pretending were influenced by the deadline, individual reputations as well as funding issues.

7.0.4 Objective 4:

To explore the influence of conflict towards leadership, specifically in SMPTs. As leadership within SMPT requires a different approach than traditional leadership styles, the involvement of the leader and their approach towards conflict situations in SMPTs will be investigated.

Finding 4:

External leaders were identified in the study, positioned outside SMPTs. However, as the project progresses, approaches taken by the team members

when dealing with conflict changed, affecting the leadership positioning and the team structure. When the team members avoided conflict, the responsibility of solving the conflict was given to the external leader. The external leader was required to become involved in the team activities in order to solve the conflict. This transforms the self-managed teams towards becoming leader-dependent teams.

Based on all of the findings above, the following propositions are forwarded:

Proposition 1: Nearness to the deadline is negatively related to usefulness of task conflict and positively related to harmfulness of task conflict

P1a: The further a project is from the deadline, task conflict becomes useful to the project team.

P1b: The nearer a project is to the deadline, task conflict becomes harmful to the project team.

Proposition 2: Relationship conflict is always harmful to project team

P2a: Regardless of the situation or stages of a project, relationship conflict is harmful to a project.

P2b: Close relationships amongst team members contribute to the harmfulness of relationship conflict.

Proposition 3: Blaming increases amutually exacerbating effect between task conflict and relationship conflict

P3a: Relationship conflict leads to task conflict when blaming occurs.

P3b: Task conflict leads to relationship conflict when blaming occurs.

P3c: Conflict will become more intense whenever blaming occurs (TC-TC and RC-RC).

Proposition 4: Conflict management strategies in SMPTs change over time due to issues of reputation, deadline and funding.

P4a: The deadline leads to changes of conflict management strategies in SMPTs.

P4b: Importance of reputation leads to changes of conflict management strategies in SMPTs.

P4c: Funding issues lead to changes of conflict management strategies in SMPTs

P4d: Conflict avoidance occurs when team members are concerned with their reputation, the deadline and funding.

Proposition 5: SMPTs change towards being leader dependent over time due to conflict and its management strategies.

P5a: Conflict avoidance transforms self-managed teams into being leader dependent.

P5b: The external leader changes position into an internal leader when a conflict avoidance approach is being implemented.

7.1 Limitations

In this study, the effect of conflict and conflict management strategies towards SMPTs was explored. While the researcher believes that her investigation provides additional insights into the understanding of conflict and its management strategies and how it affects SMPTs, there are a number of limitations that one should be aware of. Thus, the findings and the implications of this study must be considered in light of these limitations.

The first limitation of this study is that conflict occurrences and conflict management strategies were measured at group level, particularly SMPTs. The projects conducted in specifically knowledge-intensive firms may bring limitations also. Conflict occurrences, as well as its management strategies, may be experienced differently among different types of teams in various organisational projects.

Second, the other concern is regarding the team members interviewed in this study. Not all of the team members from each project were interviewed. Team members from outside of the company such as the clients were not interviewed. They were not included in the present study because the aim of this study is to explore the affect of conflict and its management strategies among team members of SMPTs who are working in the same organisation.

The third limitation is regarding the limitation of the research techniques employed for this study. The exploratory nature of the research objectives and

the dynamic nature of conflict occurrences within teams justified the adoption of the inductive approach in conducting the study. The study countered the limitations of interviews by adopting a diary study approach for data collection which uses longitudinal telephone interviews in order to gain processual data for the study. Therefore, occurrences of conflict at different points of time are captured. The different style of leadership identified is also subjected to the point where the research begins and ends. Adding to this, the longitudinal approach enables identification of leadership types in a comprehensive manner and its variation in different stages in team development process. Additionally, probes and further clarification were used to ensure the accuracy of interviewee responses.

7.2 Lessons for practice

The present study provides a number of managerial contributions. This section describes the contributions derived from the findings of the study to organisations.

The first implication concerns the role of leader during conflict. The study found that task conflict is useful in the early stage of a project. Therefore, it is important to understand that any disagreement during the brainstorming process within project team will contribute to new ideas and opinions which will enable the team to provide better solutions for their project. Therefore, managements should always facilitate the process of frequent discussions and brainstorming sessions in order to increase the team members understanding of their project goals and objectives. This then increases the chances for knowledge integration

within the team. However, organisations must be able to assist project teams during task conflict as the project develops in order to ensure that the team will benefit from the differences of ideas and opinions among them.

The study also suggests that due to the nature of relationship conflict which involves emotions, leaders in organisations should be aware that this type of conflict is always harmful to the project team in any stage of team development. The lesson to be learnt by organisations from this specific finding is the importance of a leader during the project implementation. This will encourage the team members to share any relationship problems that they have within the project team. Thus, focus should be put on providing assistance to the project team in order to understand the within team real situation. Managers need to understand previous history of interactions that the team members may have.

In order to strengthen and maintain the relationship among the team members, organisations must invest in more effort and resources. Trainings, seminars or forums which involved organisational members should be conducted more often in order to encourage interaction among them. Besides, the various types of trainings are known to be able to enhance employeesø skills and provide an opportunity for career development (Flood, Turner, Ramamoorthy, & Pearson, 2001). Knowledge about the importance of different types of conflict and how they can provide assistance may be used to help managers in dealing with the employees. Managers need to encourage good attitudes and behaviours to emphasise on closer relationships amongst employees. This in turn creates

positive actions towards dealing with conflict. Managers would be better prepared to manage the team if they have a clear understanding of the role that team members play in how they approach work and react during conflict.

7.3 Future Research Recommendations

This study offers several recommendations for future research. One important direction for future research is to conduct a longitudinal study involving multiple data collection procedure to explore the social dynamics of SMPTs as to how they are affected by conflict and its management strategies throughout a complete lifecycle of a project from the beginning till the end. As projects need various timeframes in order to be completed, a longer duration of data collection is needed. Researchers could incorporate this method to shed more light on the effect of conflict and conflict management strategy on SMPTs and its impacts on the success or failure of the project over time.

As this study was only conducted in KIFs, another extension of this work would be to apply this research to a broad cross-section of other industries. Researchers could examine the significant factors that influence the changes of SMPTs to distinguish whether such factors vary in different projects and different industries, and later prove or disapprove whether the same causal sequences exist across the industries. Such understanding would enable managers to make appropriate decisions in forming project teams in organisations.

7.4 Conclusion

In conclusion, this study has enriched the discussion in the current conflict management and SMPT literature. Using an inductive approach, the outcome is three transition models of SMPTs with regard to conflict and conflict management strategies which shows the transformation of the SMPT towards being leader dependent. This model explicitly revealed the interplay of different types of conflicts as well as the transition of leadership positioning in the context of SMPTs and the triggers of the changes. The study suggests that the SMPTs transform into leader-dependent over time resulting from conflicts. The study also suggests that conflicts, either task or relationship are interrelated with one another and may be harmful or beneficial depending on when it occurs in a projectøs duration. In any event, conflict and its management strategies are fostered or hindered by factors such as the approaching deadline, individual reputation as well as blaming.

In all, this study adds value in several ways. The processual approach contributes to an in-depth study of team membersø involvement in SMPTs so as to better understand the complex social dynamics of self-managing project team phenomena. Such in-depth exploration highlights the process dynamics, which could help explain the complex situations in SMPT regarding their conflict management strategies, such as conflict confrontation, conflict avoidance and others.

Secondly, the conflict management strategy perspective of exploring the complexity of the social dynamics of SMPTs could enhance the understanding of dilemmas faced by different parties within and outside project teams in organisations. Such processual focus could lead to the in-depth explanations of consequential dilemmas, such as autonomy, trust, leadership and others, in the SMPT settings. The approach contributes to another social dimension of group development which looks in-depth into conflict, particularly the managing strategy and the involvement of leaders in self managing project teams.

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Appendix A: Example of consent emails from organisations

To preserve the anonymity of the sender, contents related to the company are excluded.

1. BioTechCo

> From: ***
> Sent: Tuesday, October 10, 2006 8:01 AM
> To: 'Zaleha Yazid'
> Subject: RE: Conducting research in *
>
>
> Dear Cik Zaleha,
> Greetings! I am pleased to see your mail and we will be glad to accommodate your request
> to use *** as a case for your Ph.D programme. May I suggest that you make an
> appointment meet us and therefore
> we can review your requirements properly in order for us to be able to allocate decent
> amount of time and resource towards your needs. I thank you and regards,
>
>
> ***
> Group Chief Executive Officer
>
>
> -----Original Message-----
> From: Zaleha Yazid
> Sent: Monday, October 09, 2006 4:53 AM
> To: ***
> Subject: Conducting research in ***
>
> Dear Mr. ***
>
> I am Zaleha, a PhD researcher and currently attached with Universiti Kebangsaan
> Malaysia(UKM). I
> was recommended by Dr Khairul Akmaliah to contact you regarding my
> research. I would like to choose *** as my case study
> for my PhD research. In order to do this, I
> will need to conduct face-to-face interviews with your employees who are involved with
> any projects being conducted in ***
>
> The details of my research and data collection requirement are as attached.
> Thank you
>
> Regards,
> Zaleha

2. ITCo

From: ***
Sent: Friday, December 22, 2006 8:01 AM
To: 'Zaleha Yazid'
Subject: RE: Conducting research in *

Dear Zaleha,

Yes, let us arrange for a suitable day for us to meet. We can
communicate via email or you may call me at +6012-393-1101. I am normally
at my KL office which is at ***, but at least once a week I do go to my Bangi office.

Let me know what would be convenient for you, in KL or Bangi and then we can set the
date and time.

Regards and Salams

***

-----Original Message-----
From: Zaleha Yazid
Sent: Friday, December 22, 2006 5:50 PM
Subject: Research in ***

Dear Mr. ***,

I would like to follow up regarding our conversation via telephone this evening on
conducting my PhD research in your company.

Will it be possible for me to set an appointment with you anytime next
week or the week after?

Attached are the details of my PhD research and the data collection requirements.
Thank you.

Regards,
Zaleha

Appendix B: Example of Participant Information Sheet

Title of the study: Exploring Conflict in Self Managed Project Team in Small and Medium Knowledge Intensive Firms in Malaysia.

Researcher: Zaleha Yazid

Introduction

I am Zaleha Yazid, a PhD student in Strathclyde Business School under the supervision of Prof John Sillince and Dr Barbara Simpson. As part of my doctoral research on exploring conflicts in self- managed project teams, I will need to conduct interviews with team members of this particular type of team in order to collect the data for my research.

Purpose of the investigation

This aim of the research is on exploring the effect of conflict towards the social dynamics of the self-managed project team (SMPT) in small and medium sized knowledge-intensive firms (KIFs) specifically in Malaysia. SMPTs not only increase productivity in organisations, but also contribute towards increasing employeesø involvement, as the team is being managed by the team members rather than a formal leader who exists within the team. Therefore, it is important to understand the role of conflict and how it is managed within the SMPT in order to ensure the successfulness of this particular type of team. A model on conflict management in SMPT will be developed as a result of the study.

Do you have to take part?

Interviews will be conducted with the participants who are willing to be part of the study. The participant must be a member of a project team and also involved with a current project in their respective organisation. Each interview will be approximately 1 hour in length.

It is the participantøs decision to take part in the investigation or not (i.e. that participation is voluntary) and that refusing to participate or withdrawing participation will not affect any other aspects of the way a person is treated (i.e. participants have a right to withdraw without detriment).

What will you do in the project?

The participant is required to involve in the interview session and the date and venue will be discussed further to suit individualøs time and availability.

What happens to the information in the project?

I declare to respect the identity of the person and the organisation involved in the underlying interview and to grant anonymity, unless the use of individualised data and information (e.g. in the form of quotes or case studies) is permitted by the person and/or company.

What happens next?

If you agree to be involved in the project, please sign the consent form to confirm this. I would be happy to send you a summary of the findings after completion of the research.

If you do not agree to be involved in the project, thank you for your attention.

For any inquiries please do not hesitate to contact me:

Zaleha Yazid
Doctoral Researcher
Strathclyde Business School
Department of Management
University of Strathclyde
199 Cathedral Street
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Appendix C: Example of Consent Form

Title of the study: Exploring Conflict in Self-Managed Project Teams in Small and Medium sized Knowledge Intensive Firms.
Researcher: Zaleha Yazid (PhD researcher)

- I confirm that I have read and understood the information sheet for the above project and the researcher has answered any queries to my satisfaction.
- I understand that my participation is voluntary and that I am free to withdraw from the project at any time, without having to give a reason and without any consequences.
- I understand that I can withdraw my data from the study at any time.
- I understand that any information recorded in the investigation will remain confidential and no information that identifies me will be made publicly available.
- I consent to being a participant in the project
- I consent to being audio recorded as part of the project [delete which is not being used] Yes/ No

(PRINT NAME)	Hereby agree to take part in the above project
Signature of Participant:	Date

Appendix D: Sample of the interview transcript

In the following only an excerpt of the original transcript is shown.

Organisation: BioTech Co (Telephone Interview Wk7)
Project: ProjectB (Case 2)
Date: 15.03.2007
Time: 10.45am-11.15am
Participant: DrPr, External Leader

Q	So at the moment, what is it that you are working on?
A	At the moment, what we have done is that we have recruited study subject and control subject. Study subject are those who are having the disease and then we are going to...once we take their informed consent, that means they agreed and signed the form that they can be part of the project and we will make them undergo a questionnaire about their histories, diet histories, smoking, alcohol and all and the clinicians will examine them clinically. Then blood will be drawn from them, like a normal medical testing and that will undergo biochemical testing as well as genetic testing that involve micro array also. So now we are actually doing the genetic testing of the blood that has been drawn from various subjects and then the control subject are those who are not having the disease but whom we keep them as control just to see whether those genes also present and express in those subjects and in order that we don't wrongly assigned that these genes are only expressed in these kinds of patients. So the clinical validation and the wetlab validation have been carrying on since end of last year.
Q	Any problems for the past one week?
A	Yes,..yes.. The problems are obvious. I will put it in two ways, one is people related and the other is non-people related. Non-people related is basically, there is no proper micro array setting, the hi-density micro array setting is not available so we have to tie up with a company called Illuminar, which belongs to a USA company. And getting those equipments which are costly, doing the budgets take lots of time because of the procedures that are carried out by the University that has to be done so it took two months, three months, and then it would be shortlisted, and hence the procurement of equipments and even the consumable is taking a long time because of the administrative hassle and that delays the project and people related is like our scientist, they joined, and they are continuing and then I can give an example of our lady scientist who is married, got kids and then she resigned. So, there is a break in the continuity and that affects the team work as well as the team morale. Because they started feeling that somebody has left and the newcomer will join and they have to get subjected to the new scientist and his way of doing his work. They don't seem to like it.
Q	Is there any solution being discussed?
A	Well, the solution is we try to motivate the remaining members to try to compensate by working more, they willingly work on weekends and holidays and sometimes late in the evening in the lab, and as far as the procurement thing is concerned, the university definitely trying to help it out by trying to do a fast procurement. Some conditions say, for example where there is only a sole supplier and certification can be produced only if there's no other

	supplier who can supply such kind of equipment that technical specification has been given by the research department, the research team, then they are trying to reduce the procurement process time by trying to do a fast procurement. So, that has helped us to try to go ahead and come back to our track, if we can put it that way.
Q	Are you involved in the discussion?
A	Well, DrP is obviously the guy, but well I think I wont be wrong if I can say that even I myself have been playing a major role, if I can put it that way. But each and everyone of the team members, gets the credit, it goes to everyone because as a team, if the project is long, its a group project, each individual has its own core area and strength, and it would be wrong on my part if theres only one of us trying to take the full glory of it. Its a team work and I think everyone of us are equally responsible and we own up the responsibility.
Q	What about your role?
A	So, since Ive mentioned about the three phases - the clinical phase, the lab and the micro array phase, the whole clinical phase, writing documentations, planning, creating the template, the forms, questionnaire forms, clinical datasheet, ethical clearances, trying to do the psychological assessment of the study subject before the testing and then following it up, what will happen after the testing, so the whole clinical phase has been coordinated and executed by myself. So that is one thing, and I also have been taking up frequent presentation to the scientist as to what are the clinicians perspective of this whole disease and Ive been training these scientists how the clinicians would look up at these subjects and what is routinely followed and then giving them the clinical perspectives of the genetic disease. So, thats my two major works as far as my role in the project goes.

Appendix E: Table of the relationship between conflict and conflict management strategies

In the following only excerpt of the original table is shown.

	Confrontation	Cooperation	Avoidance	Pretending
Task Conflict	*"I had a meeting with Dr AT and Prof R, who is the person in charge on their side. Mr R and I attended the meeting. We managed to clear some confusion. Because sometimes, we do not know what they want and sometimes they don't know what we want, so we managed to clear that out. We sat down and have a heart to heart talk".* (MrRg,Bioinformatician,Wk4,ProjectA) *"So, I will go and see their subordinate because at the end of the day, these are the people who are keying-in the data. So I think, it's better just for me to go and see the junior doctors instead of seeing the head. So, I will probably go and see the junior doctors next week and the week after and I will see junior doctors of each department, and I will sit down and discuss and find out what are the problems, why they didn't do this and that and you know, just to give them information, explanation. So, I will sit down with them."* (MrR, Scientist, Wk5, ProjectA) *"I feel like we have to do something immediately. So, we had meeting with*	*"So, this means that even though there's no one sitting beside them, asking them to do this and that and forcing them, nothing like that, they just willingly working on their task. Just give the task and the due date, then they will work on it through themselves and through the team. That's how they solved their problems as well."* (DrPr, External Leader,Wk1, ProjectA) *"In this project, we need to work together. Our tasks are inter-related, so we need to be willing to co-operate with one another.* (MissA, Bioinformatician, Wk3, ProjectB) *"We feel comfortable to discuss in the team. Easier to exchange and share our ideas and opinions."* (MrD, Animator, Wk5, Project C) *"We'll always try to do our best to solve our problems. I'll do it by myself and then I'll ask my colleagues for*	*"We purposely do not give good work progress. We did that as we are unhappy with the equipment. We need to use the new software for the project but they are not providing the high-end computers that we need. I don't know why they are not giving attention to this matter."(MrS, Multimedia Executive, Wk3, Project C)* *"We know that we could do better but this is just a way to tell them that they need to be aware of the conditions of the hardware especially the servers and the computers. This is a very big project and they should be paying attention to the most important thing - the computers.* (MrD,Animator, Wk4, ProjectC) *"I don't want to give any opinion. No one will agree and it looks like everyone is busy with their own task and we seldom communicate with each other unless it is very important. It is very quiet in the lab nowadays."* (MrK, Scientist,Wk8,ProjectE)	*"What we need to do is to work our plan. During the meeting we had so many different opinions presented by everyone and it was a good session that gives us several ways that we could implement for the project. However, we are not able to accept everyone's idea so it seems like there are people who is unhappy."* (MrM, Scientist,Wk9,ProjectF) *"Not having someone to lead the team is quite difficult. Especially when we need to reach an agreement about something important. Everyone feels that their idea should be considered and as for me, I believe what I suggested is good for the project. We will be able to compete with the other company as we can multitask on some stuff and will speed up the whole process. But, now, I don't know."* (MrB, R&D Executive,Wk9,ProjectF) *"I don't quite like his style. He acted as if he knows everything. We are working together, you are not suppose to…kind of forcing people to agree with you. That's terrible what he did in*

everyone in the team and list out the issues so that we can talk to the people there. We have to be in charge. It's our responsibility. In the end, I'm glad that we managed to solve it!" (MrRg, Bioinformatician, Wk5,ProjectB)

"Everyone in the team was concerned about this matter. So we decided to confront the people there so that it won't delay our work. We had planned for our tasks. We don't want that to get delayed just because of the people there." (MrZ, Scientist,Wk4,Project B)

"There are good arguments, bad arguments...arguments are natural in any organisation, but I think if we can handle arguments in a good manner, in non-discrimination way, I think arguments will facilitate our knowledge on the project that we are working on. So having discussion with them is a good way to overcome this."
(MrZ, Scientist,F2F,Project B)

"That's what we are doing now. We wanted them to know that there are things that the management needs to improve. It is not easy to directly talk with them as we are like a big family, but how could we do our work if things like this are distracting us."(MrK, Storyboard Artist, Wk3, Project C)

their opinions. Usually, that's how I do my work and solve any problems."
(MrK, Storyboard Artist, Wk3,ProjectC)

"So, it's time for us to decide whether the data is enough or not. It depends on us to decide whether the data that we have is the final one. So now, we have all agreed that whatever we have is the final one. Then we can proceed with the experiment protocol."
(MrRg,Bioinformatician,Wk5,ProjectA)

"Okay, since the project does not depend on only one, two or three person, so the project will go on even though people are leaving. It does not depend on only one or two individuals. So it will still go on. So there's no problem about that. Even if new people come, we just trained them and show them what the previous people has done. And that's not a problem. Better still, everything is solved within the team." (MrR, Scientist, Wk2, ProjectA)

"I am willing to help my colleagues if they have problems. I don't mind if they do not know exactly what to do. We can always discuss and find the solution together. The more we work

"For me, I would prefer to talk with MrSh if I need anything. He will be able to help. If I try to talk to others, we will be arguing as there are things that we are not happy with. Especially on the workload that we are burden with. I feel that we are not that cooperative anymore. Before this, everyone is willing to help each other and as our work is related to one another, there was no problem to seek for assistance and work together. But now, it's not the same." (MrS, Scientist,Wk8,ProjectE)

"It's no longer the same working environment as before. We are so quiet and I can see people coming in and out of MrSh office. I guess we would rather communicate with him rather than among ourselves now. The unhappy feeling that we are experiencing changed the team. I hope the management can help us to improve the situation. It is getting worse. How can we work with minimal interaction as we are in a team." (MrM, Scientist,Wk8,ProjectE)

the meeting (MissM,QualityController,Wk9,Project F)

"I was talking with S about this. Both of us think that this is very annoying. His behaviour, I mean. When we were discussing, he got very pushy and he thinks that what he suggested need to be accepted and when we said that we need to make sure that it is achievable, he got upset. That's very unprofessional of him to do that." (MrK, Scientist,Wk9,ProjectF)

"I know it is good for the team, for the outcome of the project specifically. They should know better as they've been involved in several big projects before. We should be implementing the new suggestion on the tasks division and having more people doing more than one task is not that bad. If we don't do this, how can we speed up everything? And at the same time, how can we be productive if this is their attitude?"
(MrM,Scientist,Wk8,ProjectF)

"They came to me with different stories. It is unbelievable out of a sudden, how things change! The meeting was supposed to be a session to voice out everything and to discuss in a good way on how to improve everything. There's supposed to be no

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"We need to discuss a lot at this stage as they are still some confusion on the development process and we wanted to make sure that we are able to produce the output as expected by the client. But all these discussions were just among us. It is better this way that we are able to discuss freely compared to the meetings with the management. This is a bit informal but very beneficial for the team."
(MrF,Animator,Wk1,ProjectD)

"We had our discussion every two days so that we can discuss anything especially on the development of the characters. It's something new to some of us so we need to discuss a lot on the matters. We are doing our best to produce the output as according to the client's requirement. It is a big project so we need to make sure that everything is perfect." (MrS, Multimedia Executive,Wk1,Project D)

"It is useful and helpful to have this kind of discussion. We can ask around and share whatever it is that we need to know. I guess most of us learn something from the meeting."
(MrN, Graphic Designer, Wk5, Project D)

"Well, usually we will discuss it in our groups. Let say, we show a character

together, the more we understand each other." (MrR, Scientist, Wk4, ProjectB)

"I will always give the opportunity for the team to express whatever concern they might have. If they are not happy with anything or do not agree with any decision, they can bring it up, so that all of us can discuss and we can solve it together. But up till this moment, they are solving everything themselves."
(DrPr, External Leader, Wk4, ProjectB)

"The management always highlights the importance of delivering high quality output. That's the challenge. The high quality work cannot be done in a blink. We need time to get familiar with our task and to discuss with one another" (MrN, Graphic Designer,F2F, Project D)

"Well, usually we will discuss everything among our team members. If someone knows about something, and someone don't, the person who know, will teach it. We also sometimes do some research on something and then if it's important to help us to improve the quality of our work, we will always share. That's how we work here. We share and combine." (MrF,

issue of one man show. It is a discussion session which involves everyone and they usually will reach agreement on something and there will be no unsatisfied voices after that, but this time it is just different."
(MrSh, External Leader,Wk9,ProjectF)

"Not a good situation now with the team members. It was not like before that they are in a happy working environment. Well, even now that they pretend to be okay, that everything is all under control…but the thing is, they are not okay. One by one, they come to me and tell me different stories about each other (MrSh, External Leader,Wk9,ProjectF)

"Actually, I went to see MrSh to voice out my concern and what is the real situation that we are currently facing in the team, between the team members." (MissM,Quality Controller,Wk9,ProjectF)

"I knew that when we talk, they seem to be very nice and with all smile plastered on their faces, but behind me, they've been talking bad things. Not a good working environment now. I talked about this with the manager. I think he might be able to do something about this."
(MrB, R&D Executive,Wk9,ProjectF)

and we will discuss on what we can do and then if it's nice, we will come out with the story and then from there we push our limit from where we can go and which can and can't be done. And then we go back and do research about it, and then when we come back, we will discuss again on whether you can do it or you can't do it. But nothing is impossible anyway, and it shouldn't be a problem."   (MrF, Modeler, F2F, Project D)

"We talked with the management. We told them that the equipments seriously need upgrading. It is just too slow to be used especially in a big project like this. They said they will do something about it. I hope that's not just a way to make us stop complaining. We really hope that they will do something about this."   (MrK, Storyboard Artist, Wk6, ProjectC)

Animator, F2F, Project D)

"This project is quite an important project for the company. As Gamat has been used by some of our competitors in the industry, we need to ensure that the one that we are about to produce has the highest quality. With the formulation of new ingredients to be added to Gamat, we are sure to produce something better. This is the motivation for the team. All of us are working together to ensure that we will meet our aim."   (MrS, Scientist,Wk1,ProjectF)

"The project team has been working on this project for several months now. We received great support from the management. We hope that this is going to be a successful project. The way the team works is by making our own planning on how to conduct the project and we have to make sure that we work our plan! ö (MrB, R&D Executive,Wk1,ProjectF)

| Relationship Conflict | "He should asked us or refer to us whenever he's not sure with any single thing. Things would be better if they seek us first before completing the task. This will save plenty of time rather then they show us the output which is not as the project requirement." (MrF, Modeler, Wk4, Project D)

"Well, I'm quite annoyed with his attitude. He could just ask us if he is having problems with his task. We are a team. During the frequent meetings that we had previously, he showed no sign of needing our guidance but now his output is giving us difficulties to compile. Now we need to spend more time on that." (MrS, Multimedia Executive, Wk4, Project D | "We will voice out our comments during 'Morning Market'. We will prepare our report at the end of each day so by the next morning we are well- prepared to report and also we need to plan on what to do for the rest of the day. If there's further action to be taken, the people involved will further discuss about it after the Morning Market. I really think that this session is beneficial for the whole team." (MrK, Scientist,Wk1,ProjectE)

"The 'Morning Market' is around 45 minutes to two hours, depending on the issues that we are facing. In terms of time, it seems a bit of a waste especially when we are approaching deadline for some of our tasks but anyway, we will still have to get involved as we are doing things that are related to each other. We need to know how things are getting on with others and work together to solve any problems." (MrS,Wk1,ProjectE)

"It is good to have this daily as we don't really keep any problem to ourself. Everything is shared and we do help each other. In a way it is good but sometimes it the meeting drags for almost two hours and still we are not able to come to a conclusion." (MissM, Quality Controller, Wk2, ProjectE) | "I don't want that to happen again. Now, what I'll do is just to follow his instruction. I'm sad of the accusation. They should understand that it was not my fault. I'm not going to take the responsibility of anything. Since then, I will ask his advice and wait for his decision on everything." (MissA, Bioinformatician, Wk7, ProjectA)

"It is very difficult to work with him. I am so annoyed with his attitude towards this project. I don't feel like talking to him anymore. And actually, I haven't talk to him nowadays. I will let the management tell him this". (MrT, Bioinformatician,Wk 8, ProjectA)

"I did tell him about the things that happened but he said because I didn't record down all the corrections and everything, so it should be my fault. But I don't think so but he still said that it's my mistake." (MrH, Scientist,Wk7, ProjectA)

"Due to the stressful nature of doing our tasks and the short time period to finish each task, sometimes we did misunderstand each other but now, we just keep it to ourselves. I guess performing and finishing the task is | |
|---|---|---|---|---|

"In my experience, the project team is very much capable of solving their problems and make their own decision. The daily morning meeting that we are having shows how they are working together as a team and try to achieve the best solution in order to achieve the team goals." (MrSh, External Leader,Wk2,ProjectE)

"I am always open for any discussion on any issues with the project team. They know that I will always be around to assist them but I believe they prefer to work on anything amongst themselves and solve it together." (MrSh, External Leader,Wk4,ProjectE)

"We are like a family. We will always go out for lunch or tea together. I feel that during that time was the best time for us to get to know each other better and also that is the time talk about other things than work. So this allows us to be closer to each other." (MissM, Quality Controller,Wk3,ProjectE)

"We will try to make our working environment comfortable for everyone. Especially for the newcomer, I don't mind if he makes mistake or doesn't know what to do. We, the rest of the team, are always willing to help."

much more important than how we feel." (MissAn, Scientist, Wk7, Project B)

"I can feel the difference now. It's no longer the same as before. The team members are all doing their own task and when there are some issues, we won't talk to each other to solve it but we directly talk to the team leader. I don't think this is good for us." (MrZ, Scientist, Wk7, ProjectB)

"Difficult to get in touch with each other nowadays. I emailed him but there's no reply. I called his mobile, he didn't pick up. Maybe he's in the middle of a meeting or something but at least he could return my calls and reply my email But that didn't happen. It's so annoying sometimes." (MrR, Scientist, Wk6, Project B)

"It's quite disturbing when we are not communicating well. We need to discuss about our tasks but someone else is not giving their feedback." (MrRg, Bioinformatician, Wk6, Project B)

		(MrK, Scientist,Wk2,ProjectE) *"Surprisingly, everyone is helpful. As for me, this is my first job, my first big project. At first, I'm worried of making mistakes which is not good for the team but I managed to get along well with the team members and I'm not afraid of requesting for their help or further explanation of things that I'm not sure of." (MrM, Scientist,Wk3,ProjectE)* *"Well, I've done my best and I've been doing the task for quite a while. I would be grateful is she stops complaining about the way I do my work. I know she is the one monitoring our work quality but it feels like everything that I do is being monitored, each and everything, and nothing will meet her standard. I don't feel good, it is quite annoying when people complaints about your work every single day!"* *(MrH, Scientist,Wk4,ProjectE)*		