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How do Project Teams Impact on Project Success

A dissertation submitted in partial fulfilment of the requirements of the Royal Docks Business School, University of East London for the degree of **[Msc, Project Management]**

[May/ 2013]

[15387]

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How do project teams impact on project success

Abstract

Purpose – The purpose of the research was to determine how do project teams impact on project success.

Although, there exists a plethora of organisational and project management literature on soft side of project management, but there is still need for more in-depth examination of those critical success factors which either drive the project towards successful completion or otherwise failure to attain desired outcome(s) of project(s).

Design/Methodology/Approach – To find out how do project teams impact on project success. This research study used structured questionnaire surveys to collect the responses from project teams currently, working on the Heathrow Terminal 2 project.

Findings – The findings of the study revealed that some of the variables predicted from other literatures (clear goals, leadership and senior management support, communication and motivation) were significantly linked to the outcomes of the project. However, some key success factors or some key drivers were not paid sufficient consideration.

Research Limitations/Implications – Limitations of the study included, for this research the data from 23 respondents from the project teams working on Heathrow Terminal 2 project was collected and analysed. This research can further be expanded to increase the size of data and diversity of participants. Further to this, the analysed factors for the study which significantly impacts project outcome(s) can vary from project to project; organisation to organisation and level of leadership.

Practical implications – The findings of the study suggest that effective management of personnel (project teams) can drive the project towards

either successful completion or otherwise failure to attain goals/objectives of the project.

Originality/value – This research determines by exploring whether the effectively and efficiently managing the team practices are generic and impacts the project outputs positively or vice-versa.

Keywords – Project Management, Personnel Management, Human capital Management, Project Teams, Leadership, Communication, Learning, conflict Management, Critical success Factors.

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GLOSSARY

The purpose of including glossary in dissertation is to explain the meanings of difficult terms or words which are repeated in this research over several occasions. In order to avoid ambiguities and to effectively understand the difficult wordings the researcher made use of in this research, the following are the terms used in research and their meanings:

- Learning and e-Learning: Wherever this word comes in research it refers to training and development of employees or project teams.
 - Overall Success: The researcher at various points made use of this word “Overall success”, which means the overall success of the project.
 - Organisation or organisational success:– The organisation refers to the parent organisation for which the project is being managed, like Heathrow Ltd, former BAA is managing the construction and development of Heathrow Terminal 2 project, On the other hand organisational success also refers to the success of parent organisation.
-

INTRODUCTION:-

The interest in improving project management practices in order to create conditions for successful attainment of desired outcomes is high for both practitioners and researchers (Kiser and Nicolai, 2005). Although much has already been written and explored about project management, that successful completion of project depends as much as on the effective management of project personnel as on technical management (Pinto, 2007). Whereas the project management literature is still silent on which project teams practises are pivotal to the successful attainment of desired outcomes of the project. There is still need for an in-depth examination of those critical success factors which either drive the project towards successful completion or otherwise failure to attain desired outcome(s) of project (Pinto, 2002). This research sets out to explore those critical factors which contribute significantly towards project outcome(s) attainment.

The dramatic evolutions in technology have changed the means of operating businesses. With the rapid advancements in technology, the world has become a global village. The competition and rivalry among the organisations keeps on increasing, In order to keep pace with the rapidly growing technological world, the businesses, organisations and companies are focusing and investing heavily in different projects to develop new products/services in order to achieve a competitive advantage within the industry and ensure the long term survival in the market at the rate of profit.

To keep pace with the changing priorities, needs, wants and demands of the customers/clients the organisations invest heavily in projects. In today's business environment leading a successful project is becoming increasingly complex. In spite the advancements in the project management field, it is generally overall agreed that many projects fail (Anantatmula, 2010).

The plethora of organisational and project management literature has identified the number of factors which contribute towards the success or

failure of the project. Among various other factors, the people of an organisation are said to be the most critical and significant, the effective utilisation of people of organisation, productivity and performance are directly and positively interlinked (Scott–young and Samson, 2008).

Successful project management depends on the identification of key success criteria's of project. Many studies have been carried out which identified the soft side of the project management as the critical factor which drive the project towards successful completion more than technical issues. However there still exists only a relatively small body of research which examines the soft side of project management. The professional associations such as “the project management institute (2002) or researches Pinto (2002), Scott–Yong and Samson (2009)” have highlighted the need for more in–depth examination of the relationship between the project team factors and project success.

Many of today's organisations are recognising the identification of project team success factors crucial to achieving asset competitiveness. Effective management and utilisation of the intricate ‘people side of projects’ is a glue that holds together a project of any calibre (Anderson, 2010). Gibson and Shapiro, (2001) highlighted the importance of work teams, according to them, in today's corporate environment those are the teams not the individuals which hold the key to business success. Not strategy, not finance and technology. It is the team work that remains the ultimate competitive advantage because it is so rare and so powerful.

Today the project managers face multiple issues beyond juggling time, cost, quality, risks, benefits and schedule constraints. Every area of the project management is constrained with one or more human elements. The project manager has to deal with number of issues every day. It is from many researches evident that a good majority of projects fail. If analysed carefully would lead into failure to recognise, address and prevent one or more human issues (Pillai, 2006).

According to Dvir et al, (1998), recent literature on the project management success has engaged in a fruitful debate. The project success traditionally was assessed on the triple measure set of time, cost and performance. A project was considered to be successful if it finishes within the allocated budget, within its initial scheduled time frame and performed as it was designed to.

As the field of project management has grown tremendously over the past few years, this triple set measure of iron triangle is now being considered too simplistic, as it ignores important outcomes such as, the employee development and indented user or customer satisfaction. Despite the fact that the soft side of project management or human factors in project management has got importance to organisations, the effective project team selection, management, utilisation and its impact on overall success of project, productivity and performance of an organisation has yet received little research attention.

The aim of the study is to analyse the significance of project teams and their contribution towards project success. The study will focus on various aspects of project teams and will also, address whether or not the effective utilisation of project teams have a positive impact on performance productivity and ultimately overall *project and organisational success.

As there is still need for more in-depth examination of the relationship between project team factors and project success, based on the extensive review of literature on project teams, the researcher has identified the need to find out the relationship between project team utilisation, project team factors which influence the performance and productivity and overall *project success. The review of literature led the researcher to develop research questions as outlined below and several hypotheses which are proposed later in chapter 2.

From the extensive review of the literature the researcher developed the research questions as:

- How do project teams impact on project success.
- Does the effective utilisation of project teams have a positive Impact on project performance and productivity?

The primary data for the study was collected using structured questionnaire method; the targeted recipients were the project team(s) working on Heathrow Terminal 2 construction and development project. The researcher has given the T2 project priority over other projects because from the literature it is evident that the Heathrow Ltd former BAA has managed several successful projects prior embarking on Terminal 2 project. The construction and development of Heathrow Terminal 5 project was also delivered by Heathrow Ltd former BAA working in partnership with British Airways.

The T5 project is regarded as the largest ever construction project taken by Heathrow Ltd former BAA (Flyvbjerg et al, 2003). This construction of T5 was broken down into 16 major projects and 147 subprojects ranging in size from £10m to £200 million. At a time it employed about 6,000 workers, and as many as 60,000 people got involved in project over its life time (Brady, Davies and Rush, 2006), and the goal of the project was to maximise airport's current capacity of passengers from 67 million to 95 million passengers a year (Doherty, 2008).

The construction and development of Heathrow Terminal 2 project is a replacement of 1950's Terminal 2 which is divided into two phases. Phase 1 is a £2.5 billion investment and is expected to come in operation by summer 2014. It is expected to increase the airports capacity to 20million passengers a year. The T2 project is designed specifically to build in a Live Airport environment whilst maintaining a safe, efficient operating airport.

Once in operation the T2 will bring 18 STAR alliance partners under one roof and next phase will add further 30million passengers a year which has been officially reported by Heathrow's new director of development as a delayed

second phase of Heathrow (running from 2019 to 2024) and could be worth as much as £5billion in construction value (www.heathrowairport.com). The project includes the main T2 building, a new 522-meter satellite pier (T2B), a new 1,340 capacity car park, an energy centre and cooling station, and associated road refurbishment. Like T5 the T2 is also regarded as largest ever airside project at Heathrow (Balfour Beatty, 2011).

In summary, because of the growing importance of soft side of project management and need to address the relationship between the effective utilisation of project teams and their impact on performance, productivity and overall success of project this research will contribute uniquely towards the project management literature. This research is unique because it also addresses the impact of effective project team selection, project team motivation, conflict management, project team empowerment and especially e-learning and e-communication and their impact on productivity, performance and overall *project success. The researcher has generated several hypotheses from an extensive review of literature outlined in chapter 2.

1.1 Organisation of study

This research consists of five chapters each fulfilling a specific objective. A brief description of which aspect each chapter will be dealing with is given below.

1.1.1 Chapter one provides the introduction to the study by presenting basic information underlying this study such as the definition of teams, importance of project teams, Human/personnel management at projects, a general overview of factors that drives the project towards either successful completion or otherwise failure to attain the objectives/goals. The rationale behind this study, research questions and objectives, the methodology and data and then finally, the organisation of the study which are all parts of introductory chapter.

1.1.2 Chapter two contains a literature review on the importance of human capital, human resources or personnel working for projects, the importance of project teams, and the importance, criticality and significance of those factors which add value towards the *project success and drive the project towards successful completion or failure to attain desired outcomes. In this chapter, the researcher has critically analysed, compared and contrasted what Human Resources and Project Management theorists and other academic scholars have written about how project teams impact on project success and significance of those factors which contributes towards attainment of project goals/objectives effectively and efficiently.

1.1.3 Chapter three deals with the methodology, evidence and evaluation of the research. The data for the study was collected from project teams working on Heathrow Terminal 2 Project using structured questionnaires.

1.1.4 Chapter four deals with the data analysis, data presentation, discussion and interpretation of findings in light of literature review.

1.1.5 Chapter five in this chapter finally the researcher draws the valid conclusions based on the collected and analysed data in agreement with literature review, recommendations and managerial implications are also part of this chapter.

2.0 LITERATURE REVIEW:-

2.1 Introduction:

This chapter provides an overview of previous research on the importance and significance of project teams and their critical contribution towards the *project outcomes attainment. The first part of literature review starts with the various definitions of team and ends up with project team definition. The second part explores the importance of people and project teams from organisational and project management perspective. The third part identifies and explains the critical factors which contribute significantly towards the project outcomes attainment. The fourth and final part will end with a brief summary. The hypotheses for the various sections are proposed on the basis of literature in this chapter.

2.2 Definition of team:-

Two or more than two people working interdependently towards a common goal is called a team (WHO, 2007). Simply getting a group of people together does not make a team. A team develops products or services that are the collective result of team's collective effort and involves synergy. According to APM Body of Knowledge, 5th edition; "the team work is when people work collaboratively towards a common goal as distinct from other ways that individuals can work within a group". A team is a group of people with different backgrounds, different skills and different tasks who work together for achievement of some common purpose(s). According to Cohen and Bailey (1997) "team is a group of people that can effectively manage any given task which it has been set up to do".

As these definitions are rather too simplistic, they do not explain how it might tackle tasks which need to be done and what effectively might mean. The definition of team put forward by, O'Neill (1997) is far more interesting and promising. It states that "a team is small group of people who recognise the need for constructive conflict when working together in order for them to make, implement and support workable decisions". The definition put

forward by O'Neill is intriguing because it also, takes into consideration and focuses on the role of conflict in team working.

As these are all general definitions of team, Pinto (2007, 2001) define the project team as "the project teams are different from other teams as they perform one off routine task, the members for the project team(s) are selected from almost all functional departments of an organisation, who brought together for a limited period of time to achieve common purpose". Once the project is completed the individuals either return to their functional or assigned to new project(s).

Usually the project teams are high educated specialists rather than generalists (Samson and Scott-Young, 2009). The performance of project is highly related to team work, the team work and good performance are inseparable, and you cannot have one without the other (Katzenbach and Smith, 1993).

In summary, as the aim of the research is to find out the significance and criticality of *project teams and its impact on *project performance and overall success. Hence by comparing and contrasting all above discussed definitions it is concluded that "project teams are the set of specialist individuals or groups, hired from almost all functional departments of an organisation, who are brought together for a limited period of time to perform certain specific task or to achieve specific goals/objectives". Once the project is completed the team is disbanded and individuals are returned to their functional departments or assigned new project(s).

Since long the identification of significant factors and their critical contribution towards the successful delivery of projects has remained the topic of debate. It is generally agreed, that for the successful delivery of the project the project must be fit for purpose and must satisfy the needs of all key stakeholders. Though the literature on the successful project management covers wider objectives, the central project management

delivery targets remain on time, cost and quality (Brouneta, 2007). The projects are the means of bringing Human Capital into play, and as well as implementing new kinds of methods and co-operations, despite this most projects fail (Beer and Nohria, 2000). The human factors are of paramount importance for the successful delivery of any project. The effective management of human factors on projects has direct and positive impact on *project performance and ultimately overall success of an organisation.

2.3:-The importance of people and project teams from organisational and project management perspective:-

The organisations now a days are increasingly regarding people as their most significant assets and a key source of competitive advantage (Rees and McBain, 2004). As the projects involve teams, and teams are formed by hiring specialist members from almost all functional departments of an organisation. They are brought together for a limited period of time to achieve certain goals, once the project is completed the project team is disbanded and individuals are returned to their functional departments.

The team work in organisations has received a great attractiveness. It is believed that teams drive for the improved competitive positions, profitability and superior quality (Jugdev and Muller, 2005). The effective project team formation and utilisation can have positive impact on overall goals/objectives attainment. The project team members are the main stakeholders and key players for the successful achievement of goals/objectives of project. Among all internal and external stakeholders of project, the project team members are those stakeholders, which helps organisation achieve the desired outcome effectively and efficiently and set the basis for competitive advantage.

It is the senior managements' or project managers' job to understand that the success of their project depends on commitment and productivity of each member of project team; hence the impact of project teams on the project in many ways is more profound than another group (Pinto, 2007). If the project manager(s) fail to develop an effective project team(s), it will be

no less than a miracle that the project will deliver its end product or service successfully. The effective team management no doubtly has a positive impact on overall goals and objectives attainment and has un-questionably tied corporate well being to the performance of teams.

The project teams are the real driver of the success of project of any nature (Rees and McBain, 2004). As project managers, entrepreneurs, designers and engineers, people in organisations are source of economic development, social advancement and wealth creation. The wealth in the business terms can be described in many ways, depending on the purpose and nature of business. The wealth can be expressed in financial terms such as profitability, cash resources or an asset value. In other terms the wealth could be measured as the benefits from the job, experiences, individual growth or job enrichment (Rees and McBain, 2004).

In today's business environment the successful project management is becoming increasingly complex. The effective utilisation and intricate "people side" is the glue that holds together project of any calibre (Anderson, 2010). It is not the technical side of the projects which result in project failure but, the people side also, called the "soft side" of the project management.

If the soft side of the project management is not managed effectively than there are rarely limited chances that the project will end up successfully. These are only the project teams which are the real engines of project and drive the project to successful completion (Anderson, 2010). Project teams are the vehicles through which the project goals are accomplished, so special emphasis has to be placed on understanding the dynamics of a team and how to be a good leader (Anderson, 2010).

Mullay's (2004) and Thamhain (1999), suggested many factors which drive project performance are derived from the human side. The organisations now days are facing a dynamic environment where the survival in the market is becoming hard. The success of today's organisations is tributary to their capacity to adopt their structures and develop effective and long lasting

relations with their surroundings. In this fast growing technological world, with the rapid advancements in technology the world has become a global village. With the rapid advancements in technology, the administrators can no longer ignore the effectiveness of such factors which add value and new blood to life of organisation and contributes towards its profitability. Many researches mutually agreed on the fact that the effective utilisation and management of personnel of an organisation is one of the most crucial elements for organisational success (Belout, 1997).

The project management refers to the creation of a group of specialist's people from different departments of an organisation. They are brought together for a limited period of time to contribute towards a specific project (Winch, 1994). Once a project is complete, the group is disbanded and members of the project either returned to their functional or assigned to other projects. The project management is about managing people to deliver the results not managing work (Turner, 1999).

From Turner's work it is clear that the only way to get desired outcome is the utilising project teams effectively and efficiently. The **efficiency** by definition is the "out maximisation for a given level of input" and **effectiveness** refers to "the attainment of goals or objectives; both are the goal oriented approaches to achieve success" (Belout, 1998).

In general the *efficiency* is commonly known as "doing things right", whereas the *effectiveness* is widely known as "doing the right things". The Project Management Institute (PMI) globally established a guide to the project management body of knowledge (PMBOK) does not define efficiency and effectiveness, but refers to such efficiency indicators as schedule and cost efficiency ratios (Jugdev and Muller, 2005).

2.4:-The importance of effective project team formation:-

Projects are managed using teams in a work environment that is complex for two reasons. Firstly, all projects are different and unique in nature and

secondly the team selection and motivation conditions are often far from ideal (Smith, 2001). So it is the responsibility of a person who is responsible for overall success and failure of *project to select and recruit the right people at the right time from right pool of talent in order to ensure the success of *project.

In context of the project management and for the successful completion of *project the personnel planning is very important. This is to ensure that there is a right number and the structure of *project team members at the right time and place. Building and coordinating an effective project team can be daunting and highly complex.

The project managers must use their leadership skills to negotiate with department managers to access highly skilled, competent individuals for team staffing. The project manager(s) must recognise that no project team comes “fully assembled” and ready to go. Simply collecting a diverse pool of talent and bringing them together is not the same thing as building an effective project team (Pinto, 2007).

The projects are unique in nature and have well defined starting and finishing points that are meant to successfully obtain new and complex results necessary to satisfy clearly defined objectives. In context of the project management and for the successful completion of *project, personnel planning is very important to ensure that there is a right number and structure of *project team members (at the right time and place) and hence for this dimension it is proposed that:

H1:- There is a positive relationship between effective project team selection and project performance.

2.5:-Clear Goals: –

Setting and communicating clear goals and objectives of the project are important for orienting project teams towards common objective. Shared

and clearly communicated strategic goals that are aligned to the organisation mission improve project performance (Scott– Young, 2009). It is evident that the organisations where the senior management sets the clear project goals in collaboration with the project team has shown reduce cycle time in new product/service development (Kessler and Chakrabarti, 1999).

The overall task assignment, its scope and objectives might have been discussed with project team members during the initial stage of the project but, it takes additional involvement and effort for the team members to feel comfortable with the assignment. In order to avoid ambiguities and to get the productive results the project managers should made the project assignment clear to every individual project team member. The clearly communicated and understood goals not only avoid conflicts and ambiguities but also enhance the productivity and performance which eventually leads to the overall success (Thamhain, 1999).

Among the number of causes for the project team failure and failure to achieve the desired outcome is absence of clear and commonly understood project goals which results into low morale, disagreements on work and finally project failure (Pinto, 2007). Clearly defined and communicated project mission and objectives would help develop a formal evaluation of project outcomes to determine project success. It also promotes synergy in teams, motivate them to perform well (Anantatmula, 2010).

A clear sense of mission is the key determinant of project success. Further to clear sense, the sense of mission must be mutually understood and accepted by all project team members (Pinto, 2007), and it is therefore concluded that the setting and communicating clear goals is related to improved performance, productivity and hence overall success of the project. Thus on the basis of these research findings and pragmatic arguments following hypothesis is proposed:

H2:- There is a positive relationship between defining and communicating clear goals of project, project performance and overall success.

2.6:-Senior Management Support

The support provided by the senior management to the project teams, during the life of project plays an important and critical role in the success of any project (Pinto, 2007). The senior management support plays a key role in project team success to achieve the goals and objectives of *project within agreed time, cost and quality constraints.

Pinto and Slevin, (1989) define the senior management support as the “willingness of the top management to provide the project team with the necessary information, empower project team members, provide them with all necessary resources and authority for successful completion of project”. The teams working on any project tend to be a mirror image of their leaders (Mullins, 2010), the leadership style adopted will influence the relationship between team and organisation.

The effective leadership and support from the senior management to project teams during the life of project, is also a significant factor which contributes effectively towards *project success (Prakash, 2001). The support and leadership from the senior management is vital and significant for any project. In order to keep the project teams motivated and committed towards the desired outcomes attainment, the senior management should provide all necessary support, information, help and direction to *project teams in order to enhance the chances of *project success.

Providing a project team with effective direction, top-down leadership and support are perceived as very important conditions for successful achievement of goals and objectives of *project (Thamhain, 1999), and thus the following hypothesis is proposed for this dimension:

H3: There is a positive relationship between support provided by senior management to project teams and project performance.

2.7 Learning:-

There has been a growing emphasis placed on the importance of work related training and development. In more recent times this has been extended to the idea of work place learning and organisational learning (Matthews, 1999). According to Rees and French (2010), “the permanent change in the behaviour, through the acquisition of new knowledge, skills and attitudes is called learning”. Mullins (2010) defines learning as “a relatively permanent change in behaviour, or potential behaviour that results from experience”.

The organisations train and develop their human resources via investing in learning opportunities. The investment in project teams by education, training & development, rewards and specific project management experiences will produce a valuable return in terms of improved performances (Brown et al, 2001). Many employees have some weaknesses in their workplace: skills, learning; training and development allows the individuals or groups to strengthen those skills which they need to improve in order to enhance the performance and productivity and ultimately overall success.

Brown et al (2001) investigated the relationship between investment in people and its impact on overall performance and concluded that “the investment in people via training and development is important for influencing the time delivery and quality of project’s output”.

Comparing and contrasting the above findings and arguments it will be appropriate to say that learning (training and development) is a change in behaviour, and by investing in project teams via training and development the organisation can generate value able returns in terms of improved performances, increased productivity which eventually leads to overall success and therefore for this dimension it is propose that:

H4 (a):- There is a positive relationship between learning and project performance.

2.8:- Learning Via e-Means:-

The dramatic evolution of the technology has changed the ways things used to operate. The electronic learning, e-learning or learning via technology is now a global phenomenon and it is central to many of today's organisations.

To find out the reason behind the growing popularity of learning via electronic means is not so difficult. The electronic learning offers the opportunity to provide a standard message(s) to a large number of audience(s) with minimum disruption to their personal, private and working lives. The online delivery of learning materials where the large number of learners are involved can bring cost per learner to negligible proportions, thus the learning has become easy, more accessible and cost effective than ever before. However the success rate for implementing technology based learning has not been so successful over the past 20 years, many of the organisations invest millions of dollars on failed initiatives of what is now called the e-learning (Mullens, 2010).

The e-learning is a good and cost effective approach for delivering knowledge, sharing experiences and understanding more effectively by computer than by any other way; however there are still some limitations for e-learning. There are numbers of skills which one cannot impart through e-learning course, for example, it may not be possible for someone to teach how to ride a bicycle or technical and practical skills.

In summary, with the rapid advancements in technology the learning (training and development) is no more limited to formal means (Class room, workshops or seminars based learning) of training and developing the employees of an organisation. The e-learning or learning via electronic means is now a global phenomenon and it is central to many of today's organisations. It is also widely accepted as an in-expensive, quick, effective

and reliable method of training and developing the employees of an organisation, therefore it is hypothesised that:

H4 (b):- There is a positive relationship between e-learning and project performance.

2.9 Communication:-

Day (1998) identified the close communications on projects as the critical for the successful completion of project of any nature. It is the project manager's job to enhance and facilitate the free flow of ideas and information during the life of the project. Pinto (2007), among other factors, identified the poor communication as a factor which results into project team failure to achieve goals/objectives.

There is a direct and positive relationship between effective communication and employee satisfaction; the less the uncertainty the greater the satisfaction, and finally the more the satisfied team individuals the high are the chances of project success (Robbins and Judge, 2007).

The ambiguities, distortions and in-congruities in communication all increase un-certainty and hence they have negative impact on satisfaction and, there will also be negative impact on overall performance which will eventually lead to failure to attain goals/objectives of *project. The extensive use of lateral, vertical and informal channels will increase the flow of communication, reduce uncertainty and will improve team performance and satisfaction (Bateman and Snell, 2006).

In summary, the organisations which allow the free-flow and close communications are tend to be more productive and have high market share. The communication is regarded as one of the most critical and significant factors, whose effective management and utilisation either drive the *project towards successful completion or otherwise failure to attain desired outcomes of the *project. Therefore for this dimension it is hypothesised that:

H5 (a): There is a positive relationship between effective and free-flow of communication during the life of project and project performance.

2.10 e-Communication:-

As the dramatic evolution of technology has changed the way things used to operate, the organisations now days are focusing heavily on e-communication implementation. The electronic communication or e-communication is defined as the “any form of computer mediated communication and to more traditional form of communication, such as the telephonic communication (since the telephone is also an electronic device), e-mails, and telecommunicating etc (Kock, 2001). Evidently it is from many studies evident that the computer-mediated communication (CMC) has increasingly become common in the organisations. Largely and conveniently used among all the electronic communication means, email is still the prevalent form of computer-mediated communication forms along with telecommuting, video conferencing and smart mobile devices (Derks and Bakker, 2010).

The original idea on electronic communication was to make lives easier at work and finding the cost effective, innovate; quick and convenient way's of communication. Also many researches make it apparent that e-communication plays an important and significant role in the individual's daily life. The effective utilisation of e-communication within and outside the organisations has enriched and facilitated business today in a sense that it is to communicate and exchange information with other people regardless of time and location (Derks and Bakker, 2010).

On the other hand, the smart mobile devices have increased flexibility helped improve response times besides the availability of individuals at work or in office. The importance of e-communication and dependence on internet can be realised when server goes down for a day.

Whereas on the other hand it has also made the individuals life hectic too. Many employees complain about the huge amount of emails they get every day, and responding to every single e-mail on an average day puts pressure on individuals, making the working environment stressful rather than flexible which has negatively impacted the performance and productivity (Derks and Bakker, 2010).

By comparing and contrasting above arguments and findings, it is summarised that, with the rapid advancements in technology the organisations rely heavily on electronic communication. The e-Communication now days have become global phenomena. It is regarded as the quick reliable and effective mean of communication. On the other hand it has also been reported that, it puts pressure on individual employees making working environment stressful which impacts the performances negatively. To find out whether or not the e-communication is quick, reliable and effective way of communication and has positive impact on *project performance and productivity, it is hypothesise that:

H5 (b):- There is a relationship between e-communication on projects and project performance.

2.11 Motivation and Reward management:-

Robbins and Judge (2007) define “the motivation as the process that account for an individual’s direction, intensity and persistence of effort towards goal or objective attainment”. In general motivation refers towards achievement of any goal, however, as the aim of study is to find out the impact of motivation and reward management of *project team members on *project

performance, productivity and overall success, so the author has limited himself to the organisational and project goals/objectives attainment.

The employee motivation and job outcomes are positively interlinked. The organisations which are good at motivating and rewarding their individuals fairly with either intrinsic or extrinsic rewards have the positive impact on productivity and performance. Thus this motivation, high performance and productivity lead to successful achievement of goals and objectives (Robbins and Judge, 2007). The motivated individuals can perform up to three times more than those of un-motivated or less motivated personnel (Armstrong and Baron, 2007).

Many studies were carried out to access the impact of motivation and reward management on performance and productivity. These studies concluded that the organisations which are effectively motivating its personnel, have fair reward management system in place are more than twice productive and have the higher turnover and market share than those organisations which are poor at motivating and rewarding its human resource (Marchington and Wilkinson, 2002).

According to Maslow Hierarchy of need's theory "within every human being there exists the hierarchy of five needs, when one need become satisfied the other becomes dominant or in other words the satisfied need no longer motivate the individuals" (Robbins and Judge, 2007). Following the Maslow's Hierarchy of needs theory in order to get the maximum out of the personnel, the manager(s) has to find out what level of hierarchy the person is at and motivate them accordingly in order to get the substantial performance and productivity.

Pinto (2007) identified the lack of motivation as one of the factors which contributes towards the project team failure to attain overall goals and objectives of the *project. In light of above discussed findings and arguments, it is summarised that, with poorly performing project teams a common problem is lack of motivation among team members. The organisations which are fairly rewarding their human resources, and

motivating them effectively towards the attainment of desired outcomes are proved to be twice productive than others. Fairly rewarding the employees for their performances and motivating them effectively leads to improved performances, increased productivity and ultimately overall success, hence it is proposed that:

H6:- There is a positive relationship between motivating and rewarding project teams and project performance.

2.12 Conflict Management:-

The conflicts and disagreements naturally emerge within a project environment with project team members over the life of project (Larson and Gray, 2011). It is evident that the project manager spends more than 20 percent of their time dealing with conflicts, because so much of the project manager's time is taken up with active conflicts and their residual aftermath (Pinto, 2007).

Robbins and Judge (2007) define the conflict as “the process which begins when one party perceives that the other party is negatively affected or is about to negatively affect”. As this definition is too broad and is widely considered to be in the organisational context, Pinto's (2007) definition of conflict related to project environment states that “In the project management environment it is a process which begins when one individual project team members perceive that someone is frustrated or is about to frustrate a major concern of other individual member of project team”.

The conflict in project team may arise due to disagreement over priorities, resource allocation, quality of specific work, solutions to discovered problem and so forth (Larson and Gray, 2011). The conflict is any point in an ongoing activity when two or more two individuals while interacting with each other “cross-over” to become an interparty conflict.

The people within organisations come across range of conflicts, as the difference over interpretations of facts, incompatibility of goals, behavioural expectations disagreements etc (Robbins and Judge, 2007), the conflicts within the project team members give birth to grudges, disagreements, low morale, abhorrence of doing work properly, hatred for each other, flaws in team work which eventually result into low performance, productivity and hence failure to attain overall goals/objective. The literature on project management has identified various but mostly found three types of conflicts. The goal oriented conflict, administrative conflict and interpersonal conflict and stresses to negotiate and resolve the conflicts as early as possible so that it would not affect the performance and productivity (Pinto, 2007).

In summary, the conflicts are natural and project managers come across number of conflicts during the life of the project. The conflict can be any disagreement over work or disagreement over priorities. The severity of the conflict varies from conflict to conflict and its nature. Some conflicts severely impact the project performance negatively and some conflicts lead the upper management to make effective decisions in terms of cost and time saving or quality improvements. It is however in favour of project to resolve the conflicts as soon as they emerge on projects, therefore for this dimension it is proposed that:

H7:- The effective management of conflicts during the life of project impacts positively on project performance.

2.13 Employee Involvement and Empowerment:-

Mullins (2010) defines the empowerment as “allowing employees of an organisation greater freedom, autonomy, and self control over their work and responsibility for decision making”. The Cambridge dictionary defines empowerment as “to allow some one official authority or freedom to do something”.

The employee empowerment or employee participation in decision making is aimed at achieving staff participation and commitment through increasing

employee voice and decision making power (Honold, 1997). The employee empowerment and participation has a positive impact on organisational effectiveness, through power sharing and control between manager and employee collaboration having tendency to increase overall organisational effectiveness (Mullins, 2010).

The employee empowerment and involvement in decision making has found to be an effective way of managing and implementing change, ensuring customer satisfaction and encouraging innovation, improving performance and productivity (Raiden, Dainty and Neale, 2004). The modern leadership understand the fact that in order to get effective results in terms of productivity and performance, the manager has to give up control; this is all what empowerment is about (Mullins, 2010).

A study conducted on “leadership and empowerment” conducted by Ugboro and Obeng, (2000) concluded that “delegation of support, empowerment and sufficient authority to the individuals or groups to make the individual as well as collective decisions has a positive impact on the quality, productivity and overall performance of an organisation”.

In the light of above all presented definitions, research findings and arguments, it is summarised that, the empower means to “give power to”. In context of the project management the involvement of project teams in decision making and give up power to make individual as well as collective decisions has resulted in increase performances, productivity and attainment of desired outcomes. To get the maximum output from the individuals organisations have to free them and make every individual as a participant. The empowerment leads to increased commitments, motivation and satisfaction, resulting in high level of performance of team members. Hence it is proposed that:

H8:- The project team’s involvement in decision making and empowerment results in effective decision making and improved project performance.

Exhibit 1. Literature Review Findings

People-Related Factors**Reference**

Importance of human Resources	(Scott-young & Samson, 2008),(Anderson, 2010) (Pillai, 2006), (Beer & Nokria, 2000),(Baron & Armstrong 2007), (Procter & Muller, 2000), (Pinto, 2007), (Rees and McBain, 2004),(Berg & Karlsen, 2007), (Mullay's, 2004), (Thamhain, 1999), Belout, 1997)
Importance of project team selection	(Smith, 2001), (Robbins and Judge, 2007) (Pinto, 2007)
Clear Goals	(.Scott- Young &Samson, 2008), (Chakrabarti, 1999), (Thamhain, 1999), (Pinto, 2007), (Anantatmula, 2010), (Rickars & Moger, 2000)
Senior Management Support	(Pinto and Slevin, 1989), (Thamhain, 1999)
Learning	Mullens, (2010), A.W, Brown et al (2001)
Communication	Day (1998), Pinto, (2007), Robbins and Judge, (2007), Kock, (2001), Derks and Bakker, (2010)
Motivation	Robbins and Judge (2007), Armstrong & Baron, (2007), Marchington & Wilkinson, (2002) . Durham et al, (1997), Pinto (2007) .
Conflict Management	Larson and Gray, (2011), Pinto (2007), Robbins and Judge (2007).
Empowerment	Mullins (2010), Raiden, Dainty and Neale, (2004), Ugboro and Obeng, (2000), Honold, (1997) Honold, (1997),

2.14 Summary:-

In summary, this chapter has reviewed literature from academic journals and academic books on *project teams, importance of *project teams and factors which add value and contributes significantly towards *project success. In this chapter, the researcher has also critically analysed, compared and contrasted the findings and arguments on those critical factors which contribute significantly towards the attainment of project outcomes effectively and efficiently. Methodology, evidence and evaluation of the research are carried out in chapter3.

3.0 RESEARCH METHODOLOGY

3.1 Introduction:-

This chapter clearly defines the research methods used to conduct the research and the data collection techniques used to collect the data. The researcher in this chapter also explains how the necessary information and data for research and the identified research questions were collected, presented and analysed.

3.2 Research Questions:-

- How do project teams impact on *project success?
- Does the effective utilisation of project teams have a positive Impact on *project performance and productivity?

3.3 Research Philosophy:-

The research philosophy is a belief about the way in which the data can be gathered, analysed used and presented. What is known to be use the term epistemology as opposed to what is believed to be true the term doxology encompasses the various philosophies of research approach. It is therefore, the purpose of science to process things and transforms the things believed into things known: doxa to episteme. In the western tradition of science, two major research philosophies have been identified, positivist sometimes also called scientific and interpretive which is also known as anti-positivist (Galliers, 1991).

The main approach used by researcher for this study is Positivism. According to Levin (1988), positivists believe that reality is stable and can be observed from an objective viewpoint that is without interfering with the phenomena being studied.

Positivism involves ontology of a well-organised world consisting of observations and distinct occurrences which may be characterise by general schemes, regular pattern of incidents and constant conjunctions. It is only the observable that can be proven scientifically will be considered real. Social reality is perceived to be an intricate of the causal connections among events, presented as up and coming patchworks of links between constructs (Bridgman, 1927).

The researcher has used the realist's philosophical stance to make quantitative observations, where the hypotheses (H1-H8) were tested in agreement with literature review and analysis of primary data collected for study.

3.4 Research Design:-

Vaus (2001) define the research design as “a structure or plan for an investigation or a list of specifications and procedures for conducting and controlling a research project”. In simple words it is a road map or a master plan which indicates the strategies for conducting a research. The research

methodology used for this study was descriptive. The descriptive research according to Saunders et al (2003) “is a method which looks with intense accuracy at the phenomena of the moment and then precisely describes what the researcher sees”.

A survey was administered to the targeted population (*Project teams working on Heathrow T2 Project.). According to Robson (2011) the term survey “is commonly applied to a research methodology designed to collect data from a specific population, or a sample from that population and typically utilises an interview or a questionnaire as the survey instrument.

Justification:-

In order to portray an accurate profile of events, situations and persons the descriptive research design is used. It also, allows for the accurate; in-depth examination and analysis of the population to be studied and collection of data in large amounts in a cost effective way. The factual information generation about the study is also enabled by the descriptive research. That is why the descriptive research design relies much on secondary data which helps the researcher in case basing on facts, sustained by statistics and descriptive interpretations from archival materials and data.

3.5 Sources of Data:-

In order to come up with accurate and objective findings the researcher relied on both primary and secondary data.

3.5.1 Secondary Data:-

The secondary data by various academicians was defined as “ the statistical material which is not originated by the researcher or investigator himself but obtained from someone else’s record or the data that is collected for purpose other than the original use, it is the analysis of the data that already have been collected” (Vaus, 2001). This research is not solely based on primary data; the secondary data was also collected to study the significance

of soft side of project management and its impact on the project performance, productivity and ultimately overall success.

The secondary data for the research was collected via several means, which include the Internet (the main sources were Google Scholar, EBSCO and EMRALD), scholarly articles, journals, e-journals, international journal of project management, project management journal, project manager today and academic books were used to gather data.

The data collected via all secondary means for the study is a quality data. The researcher exercised all widely used secondary data collection tools, links and references for all the utilised data for the study can be found in references section.

Justification:-

Since the work has already been done to collect the data, using secondary data for the research saves time and cost. The use of secondary data also avoids the problems associated with the data collection process. The secondary data usually provides a source of data that is mostly permanent and available in form that may be checked relatively easily by others. Unlike the primary data, the published secondary data gives the researcher extra information on the research problems.

3.5.2 Primary Data:-

According to Jewel (2001) “the primary data is the data which is collected first time in the field or the data which has been collected for the purpose for which it is originally used”. The primary data for the study was collected via using structured questionnaires

Justification:-

As stated earlier in chapter 1, that the literature on project management still lacks the significance and importance of project team(s) and their impact on performance, productivity and overall success, the primary data collection

was given the priority in this research. From collected and analysed primary data and in line with the literature review, the researcher drew facts and figures directly from project teams

3.6 SAMPLING:-

According to the Business dictionary the Sampling is “Statistical method of obtaining representative data or observations from a group (lot, batch, population or a universe)”. The sampling is the shortcut method used to investigate the whole population.

The researcher made use of simple random sampling to gather the primary data for research. As stated earlier, the targeted population was *project teams working on Heathrow Terminal 2 project. The respondents were approached in collaboration with the team managers on site (as the project is still going) and provided with questionnaires on random basis.

3.7 Data collection techniques

The research was carried out using structured questionnaires.

3.7.1 Questionnaires:-

According to the Cambridge Dictionary questionnaires are defined as “a list of questions that several people are asked so that information can be collected about something”.

The questionnaire is a research instrument consisting of a series of questions, which is used for the purpose of gathering specific information (Rees, 2001).

For this research the researcher made use of only structured questionnaires to gather necessary data. It is evident that the structured or closed ended questions are meant to save the respondent’s time and get definite answers.

3.7.2 Questionnaires Distribution:-

The questionnaires for the research were delivered in person on site. The respondents were provided with enclosed questionnaires (in envelopes with stamps on) and were requested to fill up the questionnaires and post them back to the researcher at the given address. In total 60 questionnaires were distributed on site.

From 60 distributed questionnaires the researcher got 30 responses from which three questionnaires were completely blank and four were incomplete and hence the remaining 23 questionnaires were complete and valid for analysis.

Justification: –

A reasonable and moderate high response rate (30–50 %) is guaranteed with self administered (Saunders et al, 2003), hand delivered questionnaires. As in any questionnaire survey the respondents respond to the same standardised questions, it also provides greater uniformity across research situation, providing the respondents with plenty of time to fill up questionnaire and return them.

Finally, the element of anonymity associated with the questionnaire survey technique enhances the chances of getting honest responses.

3.8 Data Presentation and analysis:-

Once the data has been collected for the research, it needs to be analysed and presented in such a way that communicates information and enables conclusions to be drawn (Yin, 2009). As stated earlier the data for the study was collected using both primary and secondary sources, processed, analysed and presented.

Data Analysis:-

The data was analysed for the research using both Microsoft Excel 2007 and IBM SPSS Statistics software.

3.9 Data Presentation techniques:-

Out of several ways of data presentation, the most reliable, clear, accurate and appropriate ways of presenting data were chosen by the researcher for this research. Those several ways include Pie Charts, and Bar Graphs but the researcher has chosen Bar Graphs only to present the data for this research.

3.9.1 Bar Graphs:-

Bar graphs are one type of interpreting mean that uses bands of standard width and varying length to present magnitude. They are used to present data covering time.

Justification:-

The researcher used bar charts to present data because they help facilitate comparisons by virtue of their clear visual impact. They are also easy to use when presenting quantitative data.

3.10 Dependent variables: Project Outputs

The dependent variable is the variable (often denoted by y) whose value depends on that of another. For this study, the researcher identified dependent variables as: performance, productivity, *project success/failure.

3. 11 Independent Variables: Project Inputs

An independent variable is a variable (often denoted by x) whose value does not depend on that of another. The identified independent variables for the study are: project team selection, clear goals, learning, communication, motivation, conflict management and empowerment.

3.12 Reliability and Validity tests:-

According to Joppe, (2000) “the reliability is the extent to which the results are consistent over time and an accurate representation of population of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology then the research instrument is considered to be reliable”. The reliability asked whether the research measures will give same outcomes on other occasion, if there is a transparency in the use of figures whether other observers will arrive at the same observations. Whereas, on the other hand the “validity in a quantitative research truly measures that which it was intend to measure or how truthful the research results are” (Joppe, 2000). It also questions the success of measurements undertaken to establish causal relationships among tested variables, e.g. relation between communication and project success (McDaniel and Gates, 1996).

The researcher made use of the Chronbach’s alpha to test the reliability and validity of all constructs to make sure all the items are internally consistent and reliable for research. A coefficient alpha between 0.5 and 1 indicates all the responses within the construct are reliable for analytical purposes and coefficient alpha less than 0.5 indicates otherwise.

The table below contains the items and calculated Chronbch’s Alpha value for each construct.

Questions	Items	Chronbach’s Alpha value

I think selecting an appropriate person for the job can improve performance and productivity.	Project Team Selection	0.637
There is a positive and direct relationship between selecting competent candidate for project team and project success.		
If I know my task as a project team member I can perform well.	Clear Goals	0.549
I feel de-motivated to work when I am not clear what my manager expects me to do.		
I think if senior management helps me to improve my performance I can perform much better.	Senior management support	0.406
The senior management support plays an important role during the life of project.		
I do not get adequate support from senior management.		
I have been given every opportunity to develop my knowledge and skills.	Learning	0.707
I get the guidance and coaching I need from my manager to develop my knowledge and skills.		
I think learning has improved my knowledge to do the job.		

I think I will be able to use practically what I learn from training and development.		
I like using internet and prefer learning electronically.	e-learning	0.683
I think e-learning is an inexpensive and effective way of training and developing employees of an organisation.		
I am always told about the plans for my team.	Communication	0.414
I can contact anyone in the organisation at any anytime during working hours.		
I think the organisations should allow the free flow of communication because it helps improve performance and productivity.		
My manager regularly discusses with me how well I am doing my job and helps me improve the areas where I am not good at.		
I think the email is the most widely used and reliable way of communication.	e-communication	0.851
I think the e-communication is the fast, quick reliable and		

secure way of communication.		
I prefer someone to contact me electronically		
I am well motivated and rewarded to do a good job.	Motivation and Reward management	0.564
Performance based pays greatly increases my motivation to work.		
I think I can perform better and increase the performance and productivity if I am being rewarded fairly for my work.		
The performance pay scheme encourages better performance.		
I feel free to share ideas with my manager.	Employee involvement and empowerment	0.754
My manager always asks me to give my opinion in decision making.		
My manager values the opinions of me and my colleagues.		
I am given plenty of freedom to decide how to do my work.		
I think the employee empowerment has a positive impact on overall goal		

achievement.		
I get on well with my colleagues.	Conflict Management	0.321
My manager is very active in resolving conflicts when they arise.		
I avoid conflicts because they discourage me from doing work effectively.		
I think the conflicts should be resolved as soon as they arise because they have negative impact on project performance.		

3.13 Limitations of the Research:-

The findings from the primary data collected for the research gave statistically significant values for some but not all variables. In this research, the data from 23 respondents from the project teams working on Heathrow Terminal 2 project was collected and analysed. However the corporate management, senior management and project managers were not the part of study. The Project team managers and team individuals/groups were taken for this research. This research can further be expanded to increase the population size, size of data and diversity of participants.

In addition, the analysed factors for the study which contributes significantly towards the attainment of desired outcomes can vary from project to project and organisation to organisation and level of leadership. This research study is dependent on literature review and the primary data collected from the field. The project team formation procedures, leadership, senior

management support, learning, communication and other factors can vary from organisation to organisation and the nature of the project. Hence it might not be appropriate to use the findings of this research to study/analyse other organisation(s).

As the data was collected only from the project teams working on Heathrow Terminal 2 project the researcher therefore assume that these results are not applicable for geographically dispersed project teams. In addition to this, the role of senior management and contribution towards project team support, leadership and technology (e-learning and e-communication) could be different based on the disposition of project characteristics and the organisation or industry in/for which the project is executed.

4.0: Findings and Discussion

4.1 Introduction:-

The aim of this chapter is to present the findings & results of the research and to discuss and interpret the analysed data in line with literature review. To test the stated research questions and hypotheses a questionnaire comprises of 8 sections and 35 questions using a five point Likert Scale listed in appendices was used to collect responses from project teams currently working on Heathrow Terminal2 project.

In this research the author has explored the impact of critical team success factors identified from the project management, project team management, and Human Capital/Personnel management literatures. As stated earlier the primary data for the study was collected from the project team members working on Heathrow T2 project and hence following is the data analysis, interpretation and discussion of the collected and analysed data in line with literature, stated research questions and proposed hypotheses.

4.2.0:- Project team selection:-

This first section of the questionnaire covered the significance of selecting project team members and its impact on performance productivity and ultimately overall *project success. Though not central to the study, the project team selection contextualise the findings and formulation of appropriate recommendations to enable the project board or corporate management to select appropriate persons at right time at right place and enhance the chances of project success. Therefore below is the statistical analysis for the proposed hypothesis:

There is a positive relationship between effective project team selection, project performance and project success.

Q1

	Observed N	Expected N	Residual
Strongly agree	15	11.5	3.5
Agree	8	11.5	-3.5
Total	23		

Q2

	Observed N	Expected N	Residual
Strongly Agree	7	7.7	-.7
Agree	13	7.7	5.3
Neutral	3	7.7	-4.7
Total	23		

Test Statistics

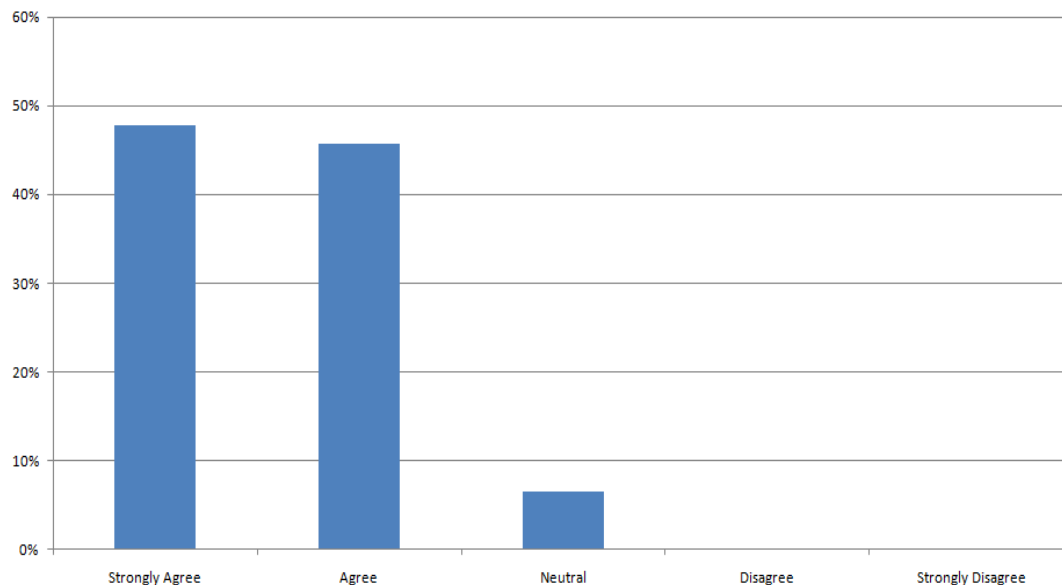
	Q1	Q2
Chi-Square	2.130 ^a	6.609 ^b
df	1	2
Asymp. Sig.	.144	.037

Hypothesis	P value	Accept/Reject
I think selecting an appropriate person for the job can improve performance and productivity.	0.144	Reject Null Hypothesis
There is a positive and direct relationship between selecting competent candidate for project team and project success.	0.37	Reject Null Hypothesis

On the basis of statistical data analysis the researcher has rejected the null hypothesis in response to alternative hypothesis. Therefore there is sufficient

evidence to conclude that the “there is a positive relationship between selecting an appropriate person for the project team, project performance and *project success. The discussion and interpretation of results in line with literature review are the following parts of this section.

The Bar Graph 4.2 below depicts the responses collected and analysed from respondents for hypothesis (H1) stated above:



Bar Graph 4.2

Evidence from survey confirmed Smith, (2001) and Pinto (2007) findings, that selecting and recruiting most competent and appropriate individual for the project team and project performance, productivity and ultimately overall success are positively interlinked. From the Bar Graph 4.2, it can be seen that high majority of the respondents (48% strongly agree and 46% agree) with the fact that there is a positive relationship between selecting competent candidate for project team and project success.

However in the final section of questionnaire, the respondents were asked for their opinions, According to one respondent “A team that comprises the right balance of experience, skills and personality types will be able to

deliver the project successfully. Team selection and composition is often not given sufficient consideration”.

Hence it is concluded that, though the selection and recruitment of project team individuals or groups sometimes might not be given sufficient consideration, but effective project team formation adds value towards better *project performance and productivity which results in goals/objectives attainment effectively and efficiently.

A true team is a constantly changing, living, dynamic force in which a number of people come together to work for specific purpose. As the purpose of the projects is to develop new products or services, hence while assembling the project teams apart from the proficiency in the specific field, the major factors like agility and flexibility of mind and working styles are also be considered.

4.2.1 Clear Goals:-

This section of the questionnaire covered the area highlighted by the researcher from the extensive review of literature as significant for the successful delivery of any project. The clear goals, one of the most important factors which can either drive the project towards successful handover or otherwise premature closure or failure to attain goals/objectives of project. The statistical analysis and data interpretation using Bar Graph are the following parts of this section for the hypothesis:

There is a positive relationship between defining and communicating clear goals of project and project performance and overall success.

Q3

	Observed N	Expected N	Residual
Strongly Agree	14	5.8	8.3
Agree	7	5.8	1.3
Neutral	1	5.8	-4.8
Disagree	1	5.8	-4.8
Total	23		

Q4

	Observed N	Expected N	Residual
Strongly Agree	11	7.7	3.3
Agree	7	7.7	-.7
Neutral	5	7.7	-2.7
Total	23		

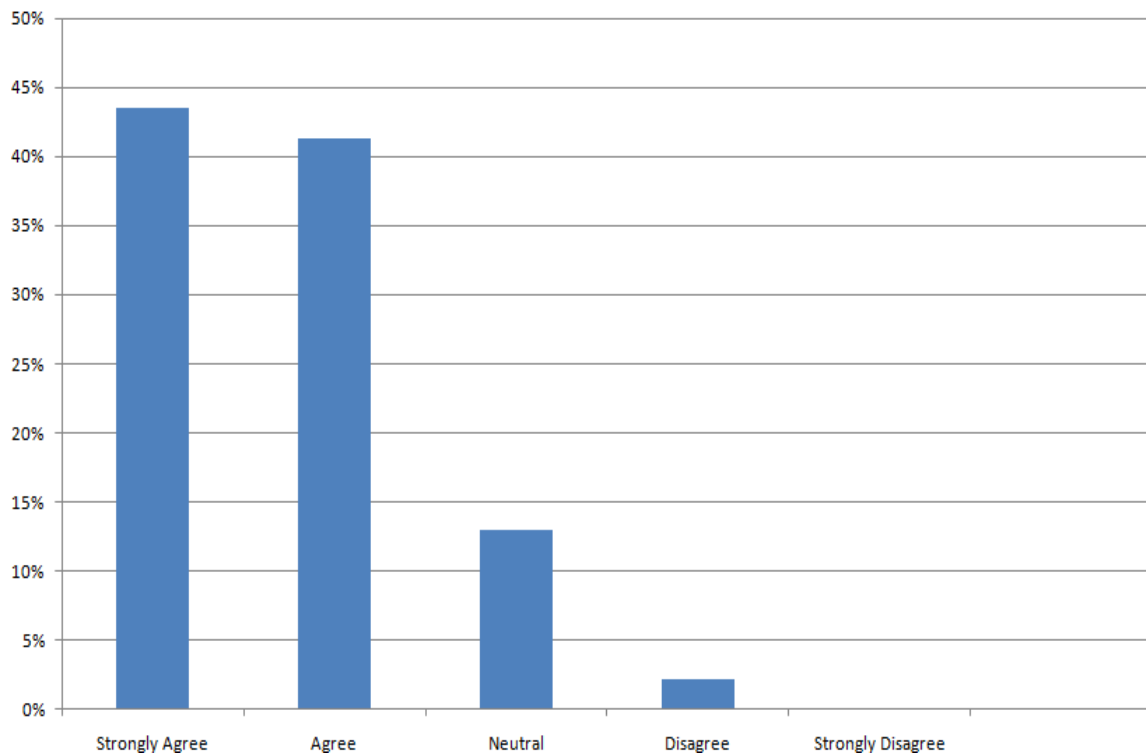
Test Statistics

	Q3	Q4
Chi-Square	19.957 ^a	2.435 ^b
df	3	2
Asymp. Sig.	.000	.296

Hypothesis	P Value	Accept/Reject
If I know my task as a project team member I can perform well.	0.00	Accept null hypothesis
I feel de-motivated to work when I am not clear what my manager expects me to do	0.296	Reject Null hypothesis

In accordance with the statistical data analysis, it is therefore sufficient evidence available to conclude that “There is a positive relationship between defining and communicating clear goals of project to all key stakeholders and *project performance and overall success. Hence on the basis of evidence available the null hypothesis is rejected. The discussion and interpretation of results in line with literature review are the following parts of this section.

The Bar Graph 4.2 (a) below depicts the responses collected and analysed from respondents for hypothesis stated above:

***Bar Graph 4.2(a)***

In agreement with Young; Kessler and Chakrabarti, (1999); Thamhain, (1999), Pinto, (2007) findings, majority of the respondents (44% strongly agree, 41% agree) said yes to setting and communicating clear goals of the project to all key stakeholders and *project performance, productivity and ultimately overall success are positively and directly interlinked. Among number of causes for the project team failure and fail to achieve the desired outcome is absence of clear and commonly understood project goals which results into low morale, disagreements on work and finally failure to achieve goals and objectives of project (Pinto, 2007).

It is the responsibility of person who is ultimately responsible for overall success and failure of the project to, clearly state and communicate the goals/objectives of the project and clearly communicate the expectations. Making individuals roles and responsibilities clear, contributes towards the high morale, increases employee satisfaction and boosts confidence which leads the project team(s) towards better productivity, performance and ultimately successful attainment of project goals/objectives.

4.2.2 Senior Management Support:-

This section of the questionnaire was designed to find out the impact of senior management support during the life of project and its impact on *project performance. The tables below contain the values from statistically analysed data for hypothesis:

There is a positive relationship between support provided by senior management to project teams and project performance.

Q5

	Observed N	Expected N	Residual
Strongly Agree	8	5.8	2.3
Agree	9	5.8	3.3
Neutral	5	5.8	-.8
Disagree	1	5.8	-4.8
Total	23		

Q6

	Observed N	Expected N	Residual
Strongly Agree	11	7.7	3.3
Agree	9	7.7	1.3
Neutral	3	7.7	-4.7
Total	23		

Q7

	Observed N	Expected N	Residual
Strongly Agree	1	4.6	-3.6
Agree	5	4.6	.4
Neutral	8	4.6	3.4
Disagree	8	4.6	3.4
Strongly Disagree	1	4.6	-3.6
Total	23		

Test Statistics

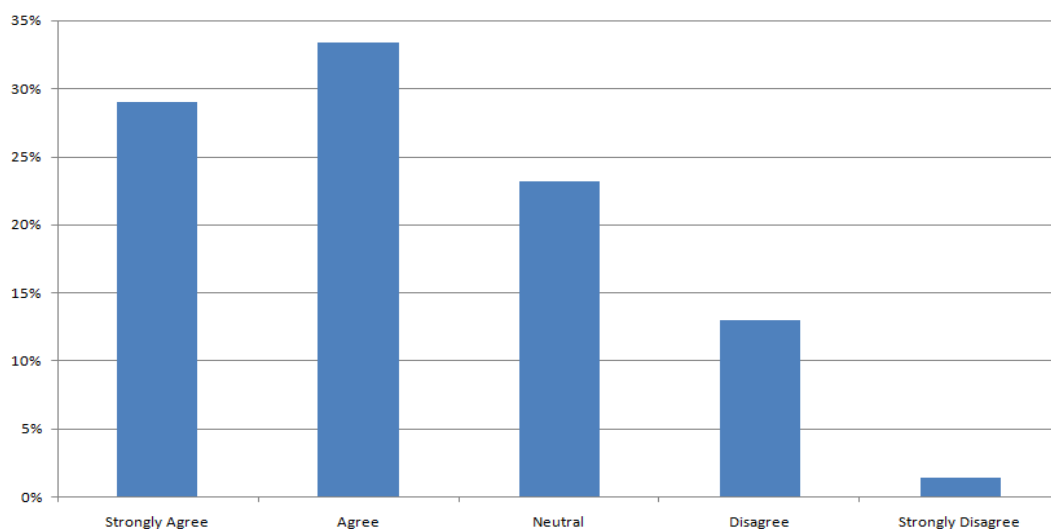
	Q5	Q6	Q7
Chi-Square	6.739 ^a	4.522 ^b	10.696 ^c
df	3	2	4
Asymp. Sig.	.081	.104	.030

Hypothesis	P Value	Accept/ Reject
I think if senior management helps me to improve my performance I can perform much better.	0.081	Reject Null Hypothesis
The senior management support plays an important role during the life of project.	0.104	Reject Null Hypothesis
I do not get adequate support from senior management.	0.030	Accept Null Hypothesis

In accordance with the evidence depicted in above table and according to statistical data analysis, the null hypothesis is rejected for this dimension. Therefore on the basis of data analysed statistically there is sufficient evidence available to conclude that “There is a positive relationship between support provided by senior management to project teams and *project performance”.

The discussion and interpretation of results in line with literature review are the following parts of this section.

The Bar Graph 4.2.2 below depicts the responses collected and analysed from respondents for above stated hypothesis:



Bar graph 4.2.2

In agreement with Pinto & Slevin, (1989); Prakash (2001) and Thamhain (1999) findings, the evidence of collected results in Bar Graph 4.2.2, high majority of the respondents (29% strongly agree 33% agree), that the senior management support and leadership during the life of project increases morale, inner satisfaction and energises towards the attainment of mutually agreed goals/objectives effectively and efficiently. The support and leadership provided by the senior management to project teams during the life of project is important for the success of any *project. Providing a project team with effective direction, top-down leadership and support are perceived as very important conditions for successful delivery of *project of any nature.

Hence it is appropriate to say that the support and leadership provided by senior management to project teams during the life of project plays an important and critical role in motivating the project teams towards attainment of desired outcomes.

4.2.3 Learning:-

This section of the questionnaire was divided into two sub-sections. The first part of the questionnaire dealt with the formal learning and its impact on *project performance. whereas the second part of the questionnaire was specifically designed to find out whether or not the e-learning is an inexpensive and effective method of training and developing project teams, and whether it has positive impact on project performance, productivity and ultimately overall success.

The tables below contain the values and figures calculated statistically for the proposed hypothesis:

There is a positive relationship between learning and project performance.

Q8

	Observed N	Expected N	Residual
Agree	10	7.7	2.3
Neutral	11	7.7	3.3
Disagree	2	7.7	-5.7
Total	23		

Q9

	Observed N	Expected N	Residual
Strongly Disagree	2	5.8	-3.8
Agree	10	5.8	4.3
Neutral	8	5.8	2.3
Disagree	3	5.8	-2.8
Total	23		

Q10

	Observed N	Expected N	Residual
Strongly Agree	8	5.8	2.3
Agree	13	5.8	7.3
Neutral	1	5.8	-4.8
Disagree	1	5.8	-4.8
Total	23		

Q11

	Observed N	Expected N	Residual
Strongly Agree	10	5.8	4.3
Agree	7	5.8	1.3
Neutral	5	5.8	-.8
Disagree	1	5.8	-4.8
Total	23		

Test Statistics

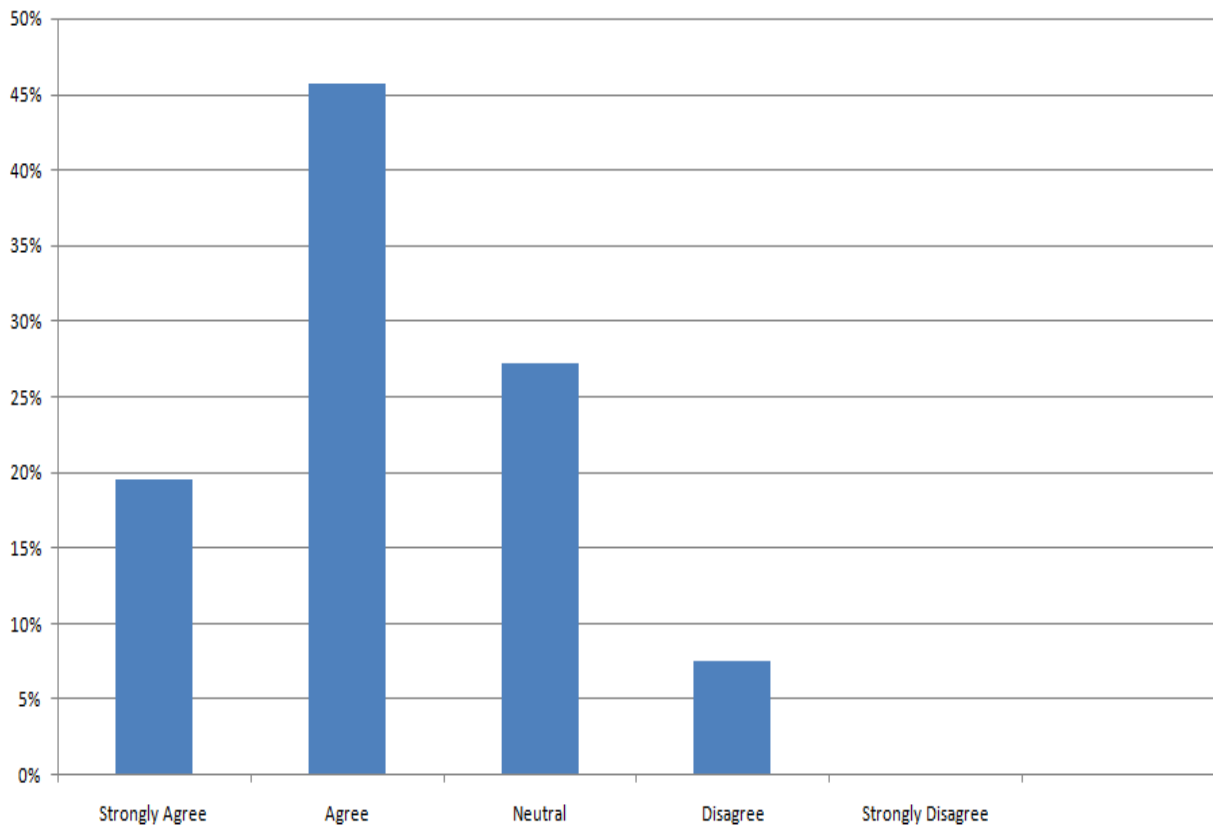
	Q8	Q9	Q10	Q11
Chi-Square	6.348 ^a	7.783 ^b	17.870 ^b	7.435 ^b
df	2	3	3	3
Asymp. Sig.	.042	.051	.000	.059

Hypothesis	P Value	Accept/ Reject
I have been given every opportunity to develop my knowledge and skills.	0.042	Accept Null Hypothesis
I get the guidance and coaching I need from my manager to develop my knowledge and skills.	0.051	Reject Null Hypothesis
I think learning has improved my knowledge to do the job.	0.00	Accept Null Hypothesis
I think I will be able to use practically what I learn from training and development.	0.059	Reject Null Hypothesis

The evidence depicted in table above and according to statistical data analysis there is sufficient evidence available to reject null hypothesis. Therefore on the basis of data analysed statistically there is sufficient evidence to conclude that the “There is a positive relationship between learning and project performance”.

The discussion and interpretation of results in line with literature review are the following parts of this section.

The Bar Graph 4.2.3 below depicts the responses collected and analysed from respondents for above stated hypothesis:



Bar Graph 4.2.3

In agreement with Matthews, (1999); Rees and French (2010) and Brown et al (2001) findings, high majority of the respondents (19% strongly agree & 46% agree) that, with learning (training and development) the project teams improve performance, increase productivity which eventually leads to the attainment of desired outcomes.

Many employees have some weaknesses in their workplace skills, training and development allows the individuals or groups to strengthen those skills which they need to improve in order to perform better, increase productivity which will eventually lead towards the project goals/objectives attainment effectively and efficiently.

As stated earlier this section of the questionnaire was divided into two sections. This sub-section II of the questionnaire was designed specifically

to find out the impact of e-learning on project performance and ultimately overall success. The tables below contain values and figures calculated statistically for the hypothesis:

There is a positive relationship between e-learning and project performance.

The tables below contains the statistical analysis of the above proposed hypothesis:

Q12

	Observed N	Expected N	Residual
Strongly Agree	5	4.6	.4
Agree	8	4.6	3.4
neutral	5	4.6	.4
Disagree	3	4.6	-1.6
Disagree	2	4.6	-2.6
Total	23		

Q13

	Observed N	Expected N	Residual
Strongly Agree	5	5.8	-.8
Agree	7	5.8	1.3
Neutral	8	5.8	2.3
Disagree	3	5.8	-2.8
Total	23		

Test Statistics

	Q12	Q13
Chi-Square	4.609 ^a	2.565 ^b
df	4	3
Asymp. Sig.	.330	.464

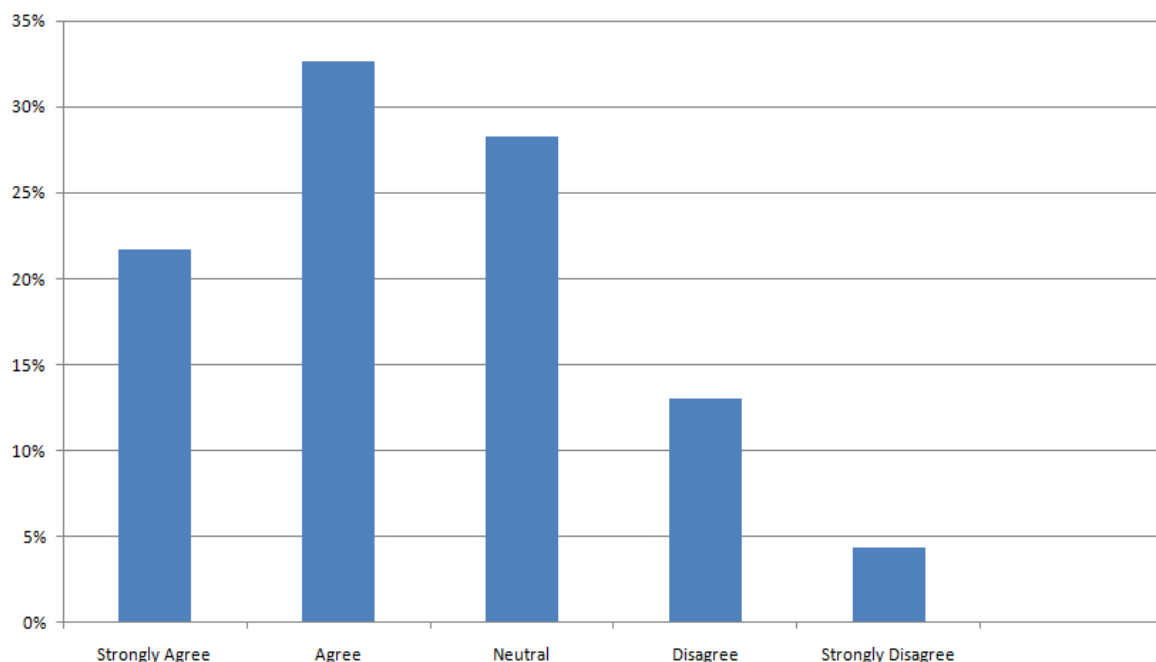
Hypothesis	P Value	Accept/ Reject
I like using internet and prefer learning electronically.	0.330	Reject Null Hypothesis
I think e-learning is an inexpensive and effective way of training and developing employees of an organisation.	0.464	Reject Null Hypothesis

In accordance with the statistical data analysis for the above proposed hypothesis, there is sufficient evidence available to reject the null

hypothesis. It is therefore on the basis of evidence available, concluded that “There is a positive relationship between e-learning and *project performance”.

The discussion and interpretation of results in line with literature review are the coming parts of this section.

The Bar Graph 4.2.3(A1), below depicts the responses collected and analysed from respondents for above stated hypothesis:



Bar Graph 4.2.3(A1)

Evidence from survey confirmed (Mullins,2010) findings, high majority of the respondents (22% strongly agree and 33% agree) from project teams working on Heathrow T2 project recorded their responses as they agree that e-learning is an effective and in-expensive approach to train and develop the individuals or group of individuals. However at the end of the questionnaire when the respondents were asked for their opinion, one respondent recorded that “I wouldn’t agree that e-learning is the most cost effective way

of learning. Formal seminar's/courses could prove to give better value for money. Also they could give the participants the opportunity to discuss the issues and enhance the learning".

So following the situation as stated earlier in chapter 1, the dramatic evolutions in technology have changed the means of operating businesses. Where the technology has changed the means of operating business, there on the other hand it is also gradually switching the classroom based formal teaching and learning methods to electronic teaching and learning. It is from many studies evident that with the rapid advancements in technology the e-learning is becoming dominant, even the universities now a days are offering the online degree programmes ranging from Diplomas to Masters and PhD degrees.

As the purpose of the research is to identify the impact of e-learning on project performance, hence the researcher has limited himself to project(s) related e-Learning, training and development methods. The PRINCE2, a methodology introduced and offered by Association for project managers, effective and efficient use of tailored PRINCE2 according to project scenario has increased the project success rates in UK and worldwide. It will be interesting to know that the majority of the course is being offered and taken online. According to the official website of association for project managers and ILX the main course awarding body, they have maintained the high pass rates of more than 98% in the PRINCE2 foundation exam and a pass rate of more than 90% (Practitioner and Foundation combined) for the period of August 2011 till May 2012 (www.ilxgroup.com).

Finally in-line with the literature review and primary data analysis the researcher assumes that as the technology is changing dramatically, with the gradual passage of time and rapid advancements in technology, learning via e-means is becoming dominant. Hence it would be appropriate to say that along with the formal teaching and learning, the e-learning is also an effective and in-expensive method of training and developing the employees

of an organisation which also has positive impact on performance, productivity and ultimately overall success of the *project.

4.2.4 Communication:-

This section of the questionnaire was again divided into two sub-sections like learning and e-learning. The aim of first section was to find the impact of effective communication on project performance, productivity and hence overall success. The second part of the questionnaire was designed specifically to study whether or not the implementation of electronic means in communication improves performance and overall *project success. The tables below contain values and figures calculated statistically for the hypothesis:

There is a positive relationship between effective and free-flow of communication during the life of project and project performance.

Q14

	Observed N	Expected N	Residual
Strongly Agree	4	4.6	-.6
Agree	3	4.6	-1.6
Neutral	9	4.6	4.4
Disagree	5	4.6	.4
Strongly Disagree	2	4.6	-2.6
Total	23		

Q15

	Observed N	Expected N	Residual
Strongly AGree	4	5.8	-1.8
Agree	10	5.8	4.3
neutral	7	5.8	1.3
Disagree	2	5.8	-3.8
Total	23		

Q16

	Observed N	Expected N	Residual
Strongly Agree	3	5.8	-2.8
Agree	11	5.8	5.3
Neutral	6	5.8	.3
Disagree	3	5.8	-2.8
Total	23		

Q17

	Observed N	Expected N	Residual
Strongly Agree	2	5.8	-3.8
Agree	6	5.8	.3
Neutral	11	5.8	5.3
Disagree	4	5.8	-1.8
Total	23		

Q18

	Observed N	Expected N	Residual
Strongly Agree	9	7.7	1.3
Agree	13	7.7	5.3
Neutral	1	7.7	-6.7
Total	23		

Q19

	Observed N	Expected N	Residual
Strongly Agree	1	4.6	-3.6
Agree	13	4.6	8.4
Neutral	2	4.6	-2.6
Disagree	6	4.6	1.4
Strongly Disagree	1	4.6	-3.6
Total	23		

Test Statistics

	Q14	Q15	Q16	Q17
Chi-Square	6.348 ^a	6.391 ^b	7.435 ^b	7.783 ^b
df	4	3	3	3
Asymp. Sig.	.175	.094	.059	.051

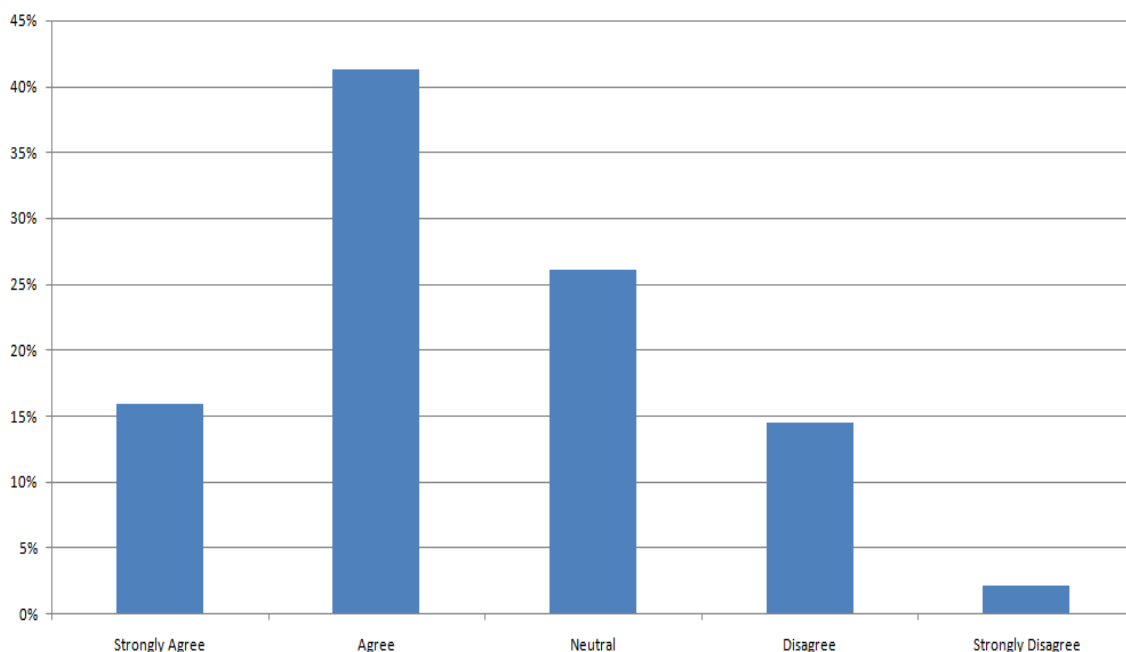
Hypothesis	P Value	Accept/Reject
I do not feel that I am fully informed about what the organisation is setting out to do	0.175	Reject the null hypothesis
I am always told about the plans for my team.	0.094	Reject the null hypothesis
Our organisation has an effective communication means.	0.059	Reject the null hypothesis
I can contact anyone in the organisation at any anytime during working hours.	0.051	Reject the null hypothesis
I think the organisations should allow the free flow of communication because it helps improve performance and productivity.	0.008	Accept the null hypothesis
My manager regularly discusses with me how well I am doing my job and helps me improve the areas where I am not good at.	0.00	Accept the null hypothesis

In accordance with the evidence depicted in above table and according to statistical data analysis, there is enough evidence available to reject null hypothesis for this dimension. Therefore on the basis of data analysed

statistically there is sufficient evidence to conclude that “There is a positive relationship between effective and free-flow of communication during the life of project and *project performance”.

The discussion and interpretation of results in line with literature review are the following parts of this section.

The Bar Graph 4.2.4 below depicts the responses collected and analysed for the above proposed hypothesis:



Bar Graph 4.2.4

From the above collected and analysed responses the researcher believes that the communication during the life of the project is extremely important in order to enhance the chances of success for any *project. It is from above depicted figures in Bar graph clear that, In agreement with Day (1998); Pinto (2007) and Robbins & Judge (2007), findings (16% respondents strongly agree and 41% agree) that the communication during the life of the project plays vital and significant role in increasing performance and productivity

which eventually leads to the attainment of desired outcomes effectively and efficiently.

On the other hand, as stated earlier at end of questionnaire the respondents were asked for their opinions on how do project teams impact on *project success . one respondent recorded “Although an environment of friendly, competent and professional teams is important in the project, there are factors like stress, miscommunication and lots of levels or layers of management that do not work together. The demands in a big project can be constant and ever changing. One of the most important (things) practices for a project is simple, clear and accurate communication between the project teams”.

Finally in agreement with all above discussed data it will be appropriate to say that close communication on projects is regarded as the most important factor, whose effective implementation and positive utilisation impacts the *project outcomes positively and vice versa.

In order to find out the impact of e-communication on *project performance and overall success, the tables below contains the statistically calculated values for hypothesis:

There is a relationship between e-communication on projects and project performance.

Q20

	Observed N	Expected N	Residual
Strongly Agree	5	5.8	-.8
Agree	11	5.8	5.3
Neutral	6	5.8	.3
Disagree	1	5.8	-4.8
Total	23		

Q21

	Observed N	Expected N	Residual
Strongly Agree	6	7.7	-1.7
Agree	8	7.7	.3
Neutral	9	7.7	1.3
Total	23		

Q22

	Observed N	Expected N	Residual
Strongly Agree	2	5.8	-3.8
Agree	6	5.8	.3
Neutral	10	5.8	4.3
Disagree	5	5.8	-.8
Total	23		

Test Statistics

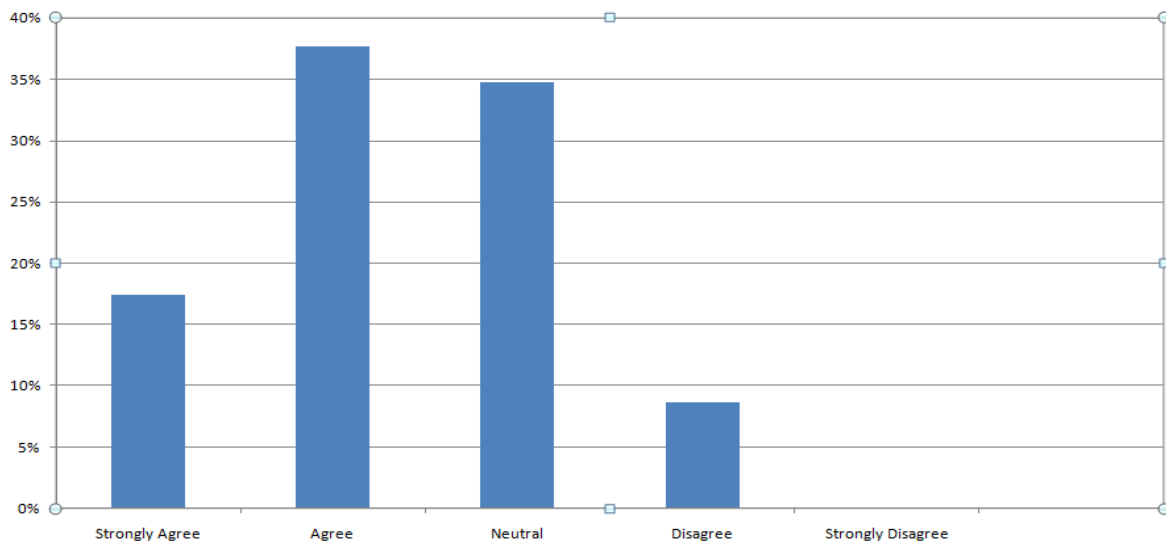
	Q20	Q21	Q22
Chi-Square	8.826 ^a	.609 ^b	5.696 ^a
df	3	2	3
Asymp. Sig.	.032	.738	.127

Hypothesis	P Value	Accept/Reject
I think the email is the most widely used and reliable way of communication.	0.032	Accept the null hypothesis
I think the e-communication is the fast, quick reliable and secure way of communication.	0.738	Reject the null hypothesis
I prefer someone to contact me electronically.	0.127	Reject the null hypothesis

In accordance with the statistical data analysis, the null hypothesis is rejected for this dimension. It is therefore sufficient evidence available to conclude “there is a positive relationship between implementing e-communication means on projects and *project performance.

The discussion and interpretation of results in line with literature review are the following parts of this section.

The Bar Graph 4.2.4 (A1) below depicts the responses collected and analysed for the above proposed hypothesis:



Bar Graph 4.2.4(A1)

Evidence from survey confirmed the Derks and Bakker, (2010) findings, 18% of the respondents recorded their responses, as they strongly agree and 38% said they agree that computer mediated devices are now a day's widely using communication devices.

They also agree that the e-communication is fast, quick, reliable and effective way of communication. According to one respondent "Communication is the key to success of any project team. It should not be limited to one form. Electronic communication is preferable as it is quicker and enable record keeping. But face to face communication and discussion should always be encouraged between project team members".

In agreement with the above discussed and interpreted data, it is to conclude that like face to face communication, the e-Communication is also preferable, quick, reliable and effective way of communication. It is though preferable way of communication but still face to face communication and discussion should always be encouraged between project team members.

The reason behind encouraging face to face communication between project teams could be the development of companionship and camaraderie. According to researcher's opinion and in agreement with Olson and Olson

(2012) findings, it is the human psyche that until and less people cannot see, touch and feel one other trust establishment and sense of camaraderie is hardly possible. The lack of companionship, trust and integration between project team members eventually leads not to disclose secrets & share opinions and no willingness to support each other, which in turn could result in low performance and productivity.

4.2.5 Motivation and Reward Management:-

This section of the questionnaire was designed to find out whether or not the motivation and reward management increases the *project team's satisfaction, morale, willingness to work effectively towards project goals/objectives attainment and finally *project performance and productivity. The tables below contain values and figures calculated statistically for the hypothesis:

There is a positive relationship between motivating and rewarding project teams and project performance.

Q23

	Observed N	Expected N	Residual
Strongly Agree	2	5.8	-3.8
Agree	15	5.8	9.3
Neutral	3	5.8	-2.8
Disagree	3	5.8	-2.8
Total	23		

Q24

	Observed N	Expected N	Residual
Strongly Agree	5	5.8	-.8
Agree	9	5.8	3.3
Neutral	4	5.8	-1.8
Disagree	5	5.8	-.8
Total	23		

Q25

	Observed N	Expected N	Residual
Strongly Agree	14	7.7	6.3
Agree	7	7.7	-.7
Neutral	2	7.7	-5.7
Total	23		

Q26

	Observed N	Expected N	Residual
Strongly Agree	7	5.8	1.3
Agree	10	5.8	4.3
Neutral	5	5.8	-.8
Disagree	1	5.8	-4.8
Total	23		

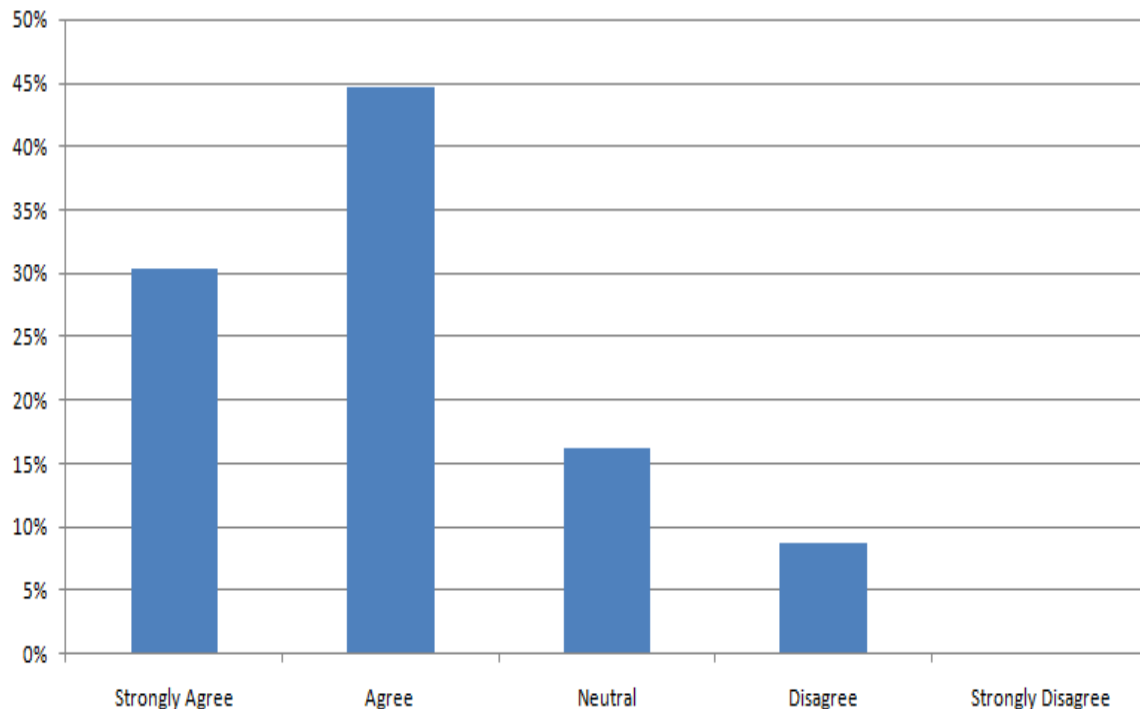
Test Statistics

	Q23	Q24	Q25	Q26
Chi-Square	19.957 ^a	2.565 ^a	9.478 ^b	7.435 ^a
df	3	3	2	3
Asymp. Sig.	.000	.464	.009	.059

Hypothesis	P Value	Accept/Reject
I am well motivated and rewarded to do a good job.	0.00	Accept null hypothesis
Performance based pays greatly increases my motivation to work.	0.464	Reject null hypothesis
I think I can perform better and increase the performance and productivity if I am being rewarded fairly for my work.	0.009	Accept null hypothesis
The performance pay scheme encourages better performance.	0.059	Reject null hypothesis

On the basis of statistical data analysis for above proposed hypothesis, there is sufficient evidence available to conclude that “There is a positive relationship between motivating and rewarding project teams and project performance”. Therefore the null hypothesis is rejected for this dimension.

The Bar Graph 4.2.5 below depicts the collected and analysed responses from project team members working on Heathrow Terminal 2 project for the above proposed hypothesis;



Bar Graph 4.2.5

The evidence from survey confirmed Robbins and Judge (2007); Armstrong and Baron (2007); Pinto (2007) and Durham et al (1997) findings, high majority of the respondents (33% strongly agree and 42% agree) that, the effectively motivating and fairly rewarding the individuals or groups working for organisation, increases morale and satisfaction, improves productivity and performance and ultimately results in goals/objectives achievement effectively and efficiently.

It is evident that the organisations which are good at motivating and rewarding their individuals fairly with either intrinsic or extrinsic rewards has positive impact on productivity and performance of individuals, hence this motivation increases the performance and productivity which eventually leads to successful achievement of goals and objectives (Robbins and Judge, 2007).

According to one respondent “A motivated project team is a key for a project success. To be motivated, the senior project managers have a key role, to coaching people and allocating people to activities that can do better”.

Finally in agreement with literature and primary data analysis, it will be appropriate to say that, to achieve the desired outcomes within time, cost and quality constraints, mutually agreed with all the key stakeholders, the effectively motivating and fairly rewarding the *project teams is a key to success.

4.2.6 Conflict Management:-

This Section of the questionnaire comprising of three questions covered the significance of conflict management and its impact on performance, productivity and hence overall success of the project. The tables below contain values and figures calculated statistically for the hypothesis:

The effective management of conflicts during the life of project impacts positively on project performance.

Q32

	Observed N	Expected N	Residual
Strongly Agree	8	7.7	.3
Agree	10	7.7	2.3
Neutral	5	7.7	-2.7
Total	23		

Q33

	Observed N	Expected N	Residual
Strongly Agree	2	5.8	-3.8
Agree	16	5.8	10.3
Neutral	4	5.8	-1.8
Strongly Disagree	1	5.8	-4.8
Total	23		

Q34

	Observed N	Expected N	Residual
Strongly Agree	8	4.6	3.4
Agree	7	4.6	2.4
Neutral	4	4.6	-.6
Disagree	3	4.6	-1.6
Strongly Disagree	1	4.6	-3.6
Total	23		

Q35

	Observed N	Expected N	Residual
Strongly Agree	11	7.7	3.3
Agree	10	7.7	2.3
Neutral	2	7.7	-5.7
Total	23		

Test Statistics

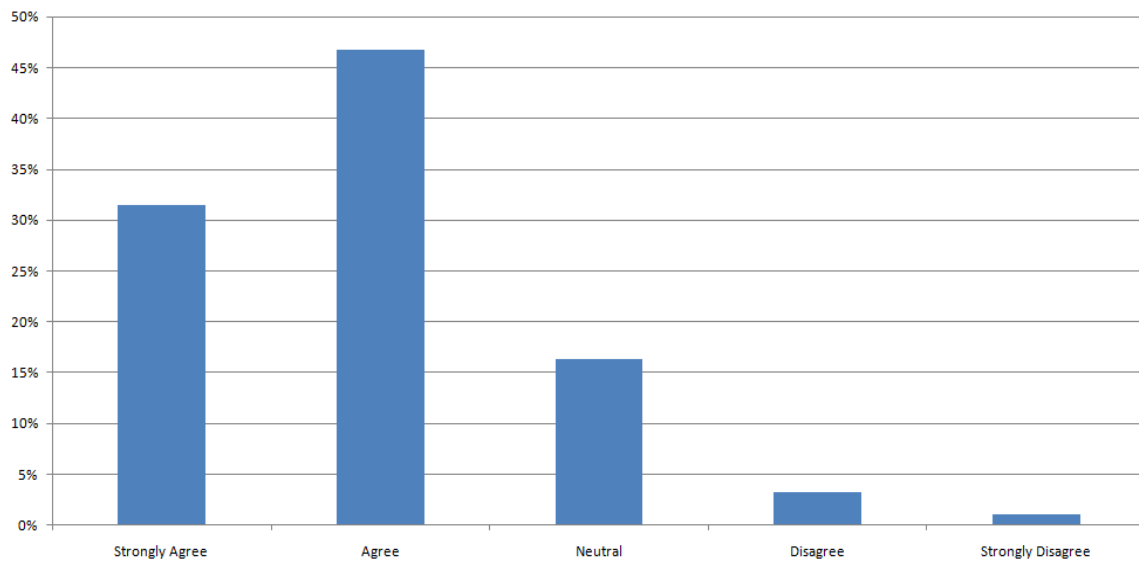
	Q32	Q33	Q34	Q35
Chi-Square	1.652 ^a	25.174 ^b	7.217 ^c	6.348 ^a
df	2	3	4	2
Asymp. Sig.	.438	.000	.125	.042

Hypothesis	P Value	Accept/Reject
I get on well with my colleagues.	0.438	Reject null hypothesis
My manager is very active in resolving conflicts when they arise.	0.00	Accept null hypothesis
I avoid conflicts because they discourage me from doing work effectively.	0.125	Reject null hypothesis
I think the conflicts should be resolved as soon as they arise because they have negative impact on project performance.	0.042	Accept null hypothesis

On the basis of statistical data analysis for above proposed hypothesis, there is sufficient evidence available to conclude that “The effective management of conflicts during the life of project positively impacts on project performance”. Therefore the null hypothesis is rejected for this dimension.

The discussion and interpretation of results in line with literature review are the following parts of this section.

The Bar Graph 4.2.6 below depicts the responses collected and analysed for the above proposed hypothesis:



Bar Graph 4.2.6

The evidence from above depicted figures in a Bar Graph confirms Pinto (2007) and (Larson and Gray, 2011) findings, Majority of the respondents (31% strongly agree and 49% agree) that the conflicts usually arise during the life of the project and they normally give birth to disagreements over work, disagreements over priorities, low morale and flaws in teams.

The conflicts as soon as they arise are if not resolved effectively and efficiently results in low morale, grudges among project teams, low performance and eventually low productivity which affects the overall *project performance.

Whereas on the other hand according to Larson and Gray, (2011) though the conflicts natural and they arise usually during the life of project, but they do not necessarily impact the *project performance negatively. Sometimes the conflicts on projects may lead the project manager or senior management to make effective decision in order to make better use of resources. Along with making better use of resources in order to maximise productivity, increase performance and enhance the chances of project success, the conflicts also support the goals of the group and improve *project performances.

Existence of conflicts during the life of project is unavoidable, but to some extent it is desirable. It will be appropriate to say that the conflicts are

neither bad nor good, however their impact on outcomes can be. It is the process which to be managed to be eliminated.

In accordance with the literature findings and primary data analysis, it is concluded that, the conflicts should be resolved effectively and efficiently as soon as they emerge on projects. However the conflicts may vary in nature, some of them might be critical which affects the *project performance severely whereas some might also lead the project managers or senior managers to make effective decisions in terms of costs and time saving or quality improvements. So the conflicts whether they are impacting project performance negatively or vice-versa, they should be managed and resolved effectively in order to ensure continues viability of project(s).

4.2.7 Employee involvement and Empowerment:-

The aim of this section of questionnaire was to find whether or not the employee involvement in decision making and employee empowerment results in effective decision making and increase *project performance, productivity and ultimately overall goals/objectives attainment. The tables below contain values and figures calculated statistically for the hypothesis:

The project teams involvement in decision making and empowerment results in effective decision making and improved project performance.

Q30			
	Observed N	Expected N	Residual
Strongly Agree	4	4.6	-.6
Agree	13	4.6	8.4
neutral	4	4.6	-.6
Disagree	1	4.6	-3.6
Strongly Disagree	1	4.6	-3.6
Total	23		

Q31			
	Observed N	Expected N	Residual
Strongly Agree	10	7.7	2.3
Agree	10	7.7	2.3
Neutral	3	7.7	-4.7
Total	23		

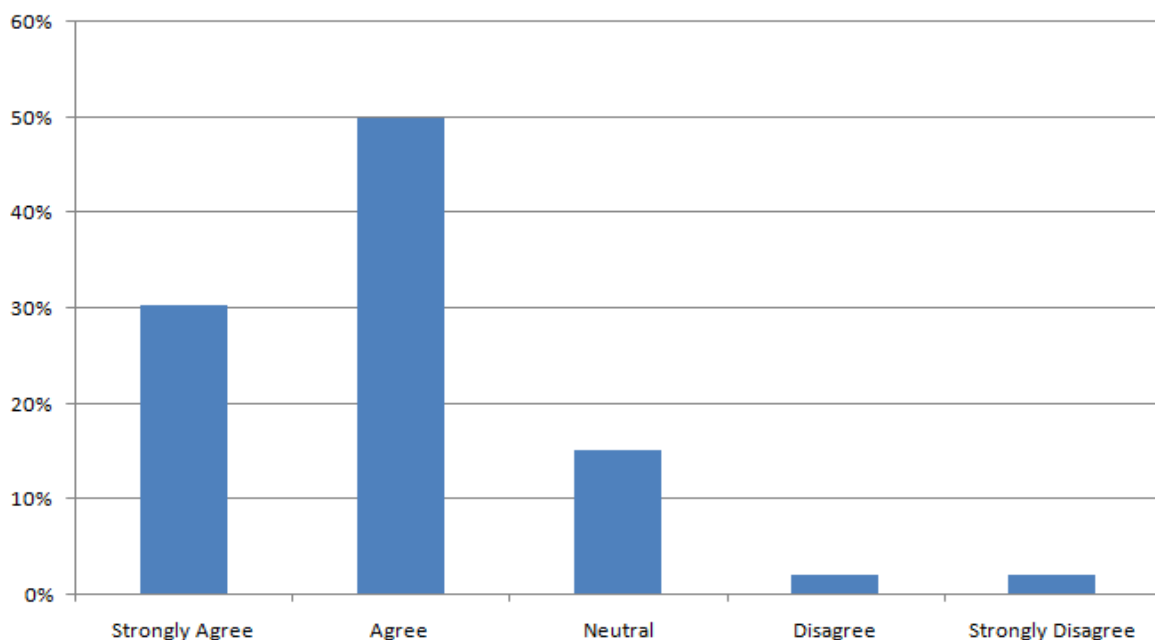
Test Statistics		
	Q30	Q31
Chi-Square	21.130 ^a	4.261 ^b
df	4	2
Asymp. Sig.	.000	.119

Hypothesis	P Value	Accept/Reject
I am given plenty of freedom to decide how to do my work.	.000	Accept null hypothesis
I think the employee empowerment has a positive impact on overall goal achievement.	.119	Reject null hypothesis

On the basis of statistical data analysis, as there is enough evidence available to reject null hypothesis, therefore it is concluded that “The project teams involvement in decision making and empowerment results in effective decision making and improved project performance”.

The discussion and interpretation of results in line with literature review are the coming parts of this section.

The Bar Graph 4.2.7 below depicts the responses collected and analysed for the above proposed hypothesis:



Bar Graph 4.2.7

The evidence from the analysed data confirms Raiden, Dainty and Neale (2004) and Ugboro & Obeng (2000) findings. High majority of the respondents (30% strongly agree and 50% agree) that the project teams involvement in decision making and empowering project teams to make individual as well as collective decisions, results in effective decision making and improves performances, productivity and ultimately lead to overall goals and objectives attainment effectively and efficiently.

In order to get desired results and benefits out of the project teams the senior management have to give up power, they have to free *project teams and make every individual a participant. Every individual or a group has to know everything, so that they can make the right decisions by themselves. However to avoid pitfalls and disasters, before empowering the project teams, they should be prepared for the demand and challenges it poses.

An empowered project team would be the one where the senior management does not have to tell project team members how to do things. Simply tell them what to do and team should surprise the project managers and senior management. Hence on the basis of literature findings and primary data analysis, it is concluded that the along with various other factors identified for the research, the project teams involvement in decision making and empowerment contributes significantly towards the attainment of goals/objectives of the project .

4.2.8 Conclusion:-

This chapter presented the findings and primary data collected from field, and discussed and interpreted the results. In light of the analysed data and data presented, the researcher discussed and interpreted the findings in line with the literature review and clearly linked the findings with research questions and proposed hypothesis. This chapter deeply looked into all the identified factors for the study and their impact on *project performance, productivity and hence overall success. Finally on the basis of findings from

literature review and primary data analysis, the researcher draws conclusion and recommendations in following chapter.

5.0 Conclusion and Recommendations

Much has already been written about project teams. The volume of literature and availability of team counselors bear witness to the popularity and allure of the team ideal. In response to the plethora of the literature review on teams in general, *project teams and factors which drive the *project teams towards the attainment of desired outcome(s) effectively and efficiently are the vital and significant parts of the research study.

The findings from this research showed that though selection and recruitment of the *project team members are sometimes might not given sufficient attention but still it contributes significantly towards the better performance, productivity and ultimately overall success. The selection of competent and appropriate individuals or group of individuals add value towards better performance, increase productivity and hence overall *project success.

The study showed that prior embarking on any project, setting and communicating clear goals of the project to all key stakeholders, defining project processes, roles and clearly defined jobs and responsibilities is the first most important step for managing and leading *projects successfully. This will eventually lead to lay down the foundation to create clarity (what the objective of project is, what is it going to achieve, how is it going to achieve and what are the roles and responsibilities of individuals working on project). It will also help communicate clearly the expectations and employ consistent processes.

The support from the senior management throughout the life of the project and project leadership plays a critical role in establishing trust and managing outcomes of the *project. The data collected from the field in agreement with extensive review of literature clearly demonstrates that, in order to effectively and efficiently achieve the desired outcome(s), the senior management should help the project teams to make them understand what they don't and help them improve their performances. The senior management support during the life of the project to *project teams is

extremely important in order to get better performances, increased productivity which will eventually lead to overall success of the *project.

The research also showed that learning (training and development) is also significant for the *project teams to develop and upgrade those necessary skills, knowledge and competencies which are necessary to perform the job effectively and efficiently, in order to attain goals/objectives of the *project. It is also evident that, with the rapid advancements in technology the learning is no more limited to classrooms and formal means of training and developing the employees of an organisation. The individual's knowledge, competencies and skills can also be enhanced effectively by using e-means. The findings of the study showed that e-learning is reliable, effective, and in-expensive method of training and developing the individual's knowledge, skills and competencies.

In comparison formal learning (classrooms, seminars/workshops) could prove to give better value for money. Also they could give the participants the opportunity to discuss the issues and enhance the learning. Whereas e-learning offers the opportunity to provide a standard message(s) to a large number of audience(s) with a minimum disruption to their personal, private and working lives. The online delivery of learning materials where the large number of learners are involved can bring cost per learner to negligible proportions, thus the learning has become easy, more accessible and cost effective than ever before.

The research also explored the importance of communication during the life of the project and its impact on *project performance. The findings of the study showed that the close communication on projects and *project outcomes are positively interlinked. Among other factors which significantly contributes towards the effectively and efficiently attainment of desired outcomes of the project, the study find the effective management and utilisation of communication as extremely important for the success of any *project. The simple, clear, accurate and free flow of communication

between *project teams is also regarded as extremely important, critical and key to success of any *project.

The communication like learning is not limited to only method, now a days the electronic communication is widely accepted global phenomena in response to advancements in technology. The organisations around the globe are encouraging and adopting the implementation of electronic communications in organisations. The findings of the research showed that the e-communication like face to face communication is also preferable, quick, reliable and effective way of communication. The effective management and utilisation of e-communication on projects could also help project teams negotiate effectively during the life of project, which in turn could impact positively on *project performance.

The research also find the significance of fair reward management & motivation and its impact on *project success. In order to keep the project teams committed towards the goals/objectives attainment of the *project, fairly rewarding them for their performances increase satisfaction, morale and motivation. Motivation is regarded is one of the important factors which critically contributes towards better performances, increase productivity which eventually leads to the attainment of desired outcomes effectively and efficiently. Hence in order to keep project teams committed towards goals/objectives attainment, fair reward management and motivation is the key to success.

The conflicts are natural and they emerge during the life of project. Existence of conflicts during the life of project is unavoidable, but to some extent it is desirable. It will be appropriate to say that the conflicts are neither bad nor good, however their impact on outcomes can be. It is the process which is to be managed not to be eliminated.

The study showed that conflicts vary in nature, some of them if not resolved effectively and efficiently could impact *project performance negatively and vice-versa. Some conflicts could impact project performance negatively;

however some conflicts might lead the upper management to make better use of resources could help them make effective decisions in favour of time and cost savings and improving quality.

Therefore to make best use of resources, to make effective decisions and in order to avoid losses in performance and productivity the conflicts should be resolved as soon as they emerge beside their nature. Finally the project teams or project team managers' involvement on behalf of team in decision making and to empower them to make individual as well as collective decisions has shown increase in performance and productivity. To get the maximum output from the individuals, management have to free them and make every individual as a participant. The empowerment leads to increased commitments, motivation and satisfaction, resulting in increase in performances of team members.

In summary, this research explored the importance of those critical factors which contributes significantly towards the attainment of desired outcomes of *project effectively and efficiently. The effective management and utilisation of all identified critical factors for the research add value towards the successful completion of *project. These are only the *project teams which are the real engines of project, and drive the project to successful completion (Anderson, 2010). Project teams are the vehicles through which the project goals are accomplished, so especial emphasis has to be placed on understanding the dynamics of a teams and how to manage and utilise them effectively in order to attain goals/objectives of *project.

5.1 Recommendations:-

According to the findings of study, following recommendations are given for the, project managers, project practitioners or the persons who wish to broaden their knowledge about how do project teams impact on project success:

- The senior management pay careful consideration while selecting the individuals or groups from all the functional departments of an organisation for project team. The selection and recruitment of most appropriate and competent candidates for the project team can perform well and can help avoid failure to attain desired outcome(s).
- The person(s) who is ultimately responsible for overall success and failure of the project set and clearly communicate the aims and objectives of project to all the key stakeholders. Individual roles and responsibilities should always be made clear, it will also help communicate clearly the expectations and employ consistent processes.
- Learning is regarded as important factor in order to increase the knowledge of individuals, enhance the skills, capabilities and competencies in order to perform better. It is therefore recommended that the project teams should be trained and developed in order to get better performances.
- The senior management provide all the necessary information, support and help to project teams to make them understand what they don't, help them improve their performances and productivity and resolve the conflicts as soon as they emerge in order to achieve the objectives/goals of the project effectively and efficiently.
- It is also recommended that the management allow the close and free flow of communication among project teams and all functional areas of project. The research found that among other factors the close and free flow communication on projects is the most critical and significant factor. It is given the paramount importance and hence its importance should be realised and effective communication channels would be implemented in order to avoid failure to attend goals and objectives of project.
- It is also recommended for the management to reward the project teams fairly for their performances in order to keep them motivated and committed towards goal/objective achievement. The research also

found that the motivated individuals can perform up to three times more than those who are less or un-motivated.

5.2 Implications for Practitioners:-

This research has several and clear key research implications for project practitioners. To speed up the project and make it finish within time, cost and quality constraints the senior management pay more attention to management of their project teams, in order to increase the chances of project success. The findings from this study contributes uniquely towards the project management literature as it addresses the importance of those significant and critical factors which drive the project to either successful completion or otherwise failure to attain goals/objectives of the project.

Some of the identified key success factors for the research study do not appear to be directly related to improve performance, productivity. Among major findings of the research, the leadership and senior management support throughout the life of the project is said to be vital to keep the individuals motivated and committed towards the attainment of desired outcome(s).

The Project Managers need to clearly prioritise, set and communicate the goals/objectives of the project to all key-stakeholders in order to avoid ambiguities and conflicts; this practice will eventually lead towards the better performance.

Among other identified factors the close communication on projects is said to be the most significant and vital factor which contribute uniquely towards project success. Hence senior management and project managers pay utmost attention to enhance the free-flow of close communication on projects and allow the effective communication channels to back the free-flow of communication.

It has been generally overall agreed that, well motivated and fairly rewarded individuals can perform up to three times more, hence the implication for

motivation and reward management is that the managers pay attention to motivate project teams by providing different incentives and reward them either intrinsically or extrinsically for their performances in order to keep them committed towards the desired outcome(s) attainment.

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APPENDICES

Appendix A:

QUESTIONNAIRE

Dear Sir/Madam,

My Name is Samiullah Jadoon; I am currently doing Msc in Project Management from University of East London. As per our degree requirement, we need to do real world research in the field of project management, and to base our dissertation we should have to have a real project as a case. From the extensive review of literature I come to know BAA has managed several projects including successful Heathrow T5 construction project and has embarked on T2 project which is expected to be delivered by next year 2014, and therefore it developed my interest to study how effectively the organisation is managing its Human Resources in order to deliver successful project(s).

The aim of the study is to analyse the significance of project teams and their contribution towards project success. The study will focus on various aspects of project teams and will also address whether or not the effective utilisation of project teams have a positive impact on performance & productivity and hence overall success. To help me do this I am seeking your views, I would be grateful if you could spend 4 or 5 minutes answering some simple questions. Your contribution will play an important role in addressing the research questions and to make valid conclusion.

All information supplied will be held by the "Researcher" and will remain secure and confidential. Your provided data will solely be used for research purpose and will not be passed on to any third parties in accordance with the Data Protection Act 1998".

Yours Sincerely,
Samiullah Jadoon.
U1151435@uel.ac.uk.

Name: _____ Organisation: _____
Position: _____ Contact email (if any): _____

From the options given please tick only one

Q. No	Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
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1	I think selecting an appropriate person for the job can improve performance and productivity.					
2	There is a positive and direct relationship between selecting competent candidate for project team and project success.					
3	If I know my task as a project team member I can perform well.					
4	I feel de-motivated to work when I am not clear what my manager expects me to do.					
5	I think if senior management helps me to improve my performance I can perform much better.					
6	The senior management support plays an important role during the life of project.					
7	I do not get adequate support from senior management.					
8	I have been given every opportunity to develop my knowledge and skills.					
9	I get the guidance and coaching I need from my manager to develop my knowledge and skills.					
10	I think learning has improved my knowledge to do the job.					
11	I think I will be able to use practically what I learn from training and development.					
12	I like using internet and prefer learning electronically.					
13	I think e-learning is an inexpensive and effective way of training and developing employees of an organisation.					
14	I do not feel that I am fully informed about what the organisation is setting out to do.					
Q. No	Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
15	I am always told about the plans for my team.					
16	Our organisation has an effective communication means.					

17	I can contact anyone in the organisation at any anytime during working hours.					
18	I think the organisations should allow the free flow of communication because it helps improve performance and productivity.					
19	My manager regularly discusses with me how well I am doing my job and helps me improve the areas where I am not good at.					
20	I think the email is the most widely used and reliable way of communication.					
21	I think the e-communication is the fast, quick reliable and secure way of communication.					
22	I prefer someone to contact me electronically.					
23	I am well motivated and rewarded to do a good job.					
24	Performance based pays greatly increases my motivation to work.					
25	I think I can perform better and increase the performance and productivity if I am being rewarded fairly for my work.					
26	The performance pay scheme encourages better performance.					
27	I feel free to share ideas with my manager.					
28	My manager always asks me to give my opinion in decision making.					
29	My manager values the opinions of me and my colleagues.					
Q. No	Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
30	I am given plenty of freedom to decide how to do my work.					
31	I think the employee empowerment has a positive impact on overall goal achievement.					

32	I get on well with my colleagues.					
33	My manager is very active in resolving conflicts when they arise.					
34	I avoid conflicts because they discourage me from doing work effectively.					
35	I think the conflicts should be resolved as soon as they arise because they have negative impact on project performance.					

Your comments means a lot to me and they will be used in research as part of your contribution, if you want to make any comments on how do project teams impact on project success please ;

Thank You