LEADERSHIP CAPABILITY OF TEAM LEADERS
IN CONSTRUCTION INDUSTRY

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UNIVERSITI TEKNOLOGI MALAYSIA
LEADERSHIP CAPABILITY OF TEAM LEADERS IN CONSTRUCTION INDUSTRY

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A thesis submitted in fulfilment of the requirement for the award of the degree of Doctor of Philosophy (Technical and Vocational Education)

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To my beloved husband, parents, parents-in-law, late son, children and family
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ABSTRACT

This research was conducted to identify the important leadership capabilities for Malaysia construction industry team leaders. This research used exploratory sequential mix-method research design which is qualitative followed by quantitative research method. In the qualitative phase, semi-structured in-depth interview was selected and purposive sampling was employed in selecting 15 research participants involving team leaders and Human Resource Managers. Qualitative data was analysed using content and thematic analyses. Quantitative data was collected using survey questionnaire involving 171 randomly selected team leaders as respondents. The data was analyzed using descriptive and inferential statistics consisting of t-test, One-way Analysis of Variance (ANOVA), Pearson Correlation, Multiple Regression and Structured Equation Modeling (SEM). This study found that personal integrity, working within industry, customer focus and quality, communication and interpersonal skill, developing and empowering people and working as a team were needed leadership capabilities among construction industry team leaders. The research was also able to prove that leadership skill is a key element to develop leadership capability. A framework was developed based on the results of this study, which can be used as a guide by employers and relevant agencies in enhancing leadership capability of Malaysia construction industry team leader.
ABSTRAK

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<td>TVE</td>
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<td>ADA</td>
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CHAPTER 1

INTRODUCTION

1.1 Introduction

The construction industry is in a new arena of a challenging socioeconomic, cultural, political, and business environment. In addition to this complex array of challenges, the construction industry remains a key development industry with significant economic, social and environmental responsibility, especially as the pace of urbanization and resource depletion increases (Arain, 2008).

In the construction industry, the building profession has played an indispensable role that determines the performance of the industry. One of the most important research areas receiving relatively little attention in the construction industry is leadership. Leadership is often considered as a social exchange process in leader–follower relation. Leadership, further complicated by issues of social and cultural differences, has been found to impose significant impact on the performance of construction projects and is pivotal in determining project success (Chan and Tse 2003).

Leadership is a process by which a person influences others to accomplish an objective and directs the organisation to make it more cohesive and coherent. Leaders carry out this process by applying their leadership attributes, such as belief, norms, values, ethics, character, knowledge and skills. Nowadays, major industrial players are seeking a special breed of leaders to head their organisations. They are looking for individuals who possess critical ‘adaptive’ leadership qualities to help them prepare for a
challenging environment.

Davis (2002) contends that leadership capability will not undergo drastic changes rather, the organisations should expect a sharpened focus on current skills necessary to accommodate intensified conditions in business and society. The organisation therefore need to be more sensitive about leadership qualities and capabilities, besides fulfilling growing needs by creating diverse workforces and implementing technology improvements.

Capable managers are more confident and effective in dealing with their often complex and demanding jobs. They display higher levels of job satisfaction, commitment and engagement. Organisations with a strong commitment to leadership and management development find that the returns are positive and high, in terms of organisational productivity, organisational learning, continuous improvement and quality and customer service. In addition, leadership and management development has benefits that extend into the broader community (Callan, 2005). Good leadership also lies in giving attention to the rank and file. A leader should realise that the success of an organisation comes from workers who possess specific sets of skills and varieties of expertise.

The Bonn Declaration 2004, as cited by Bhuwanee (2005), claimed that by recognising that the vast majority of the worldwide labour force including knowledge workers, require technical and vocational knowledge and skills throughout life; it was agreed that skills development leading to age-appropriate Technique and Vocational Education (TVE) should be integral to education at all levels. It also affirms that preparation for work should equip people with the knowledge, competencies, skills, values and attitudes to become productive and responsible. Recent reports into TVE leadership are beginning to describe the range of staff in training organisations. Some reports focus on the primary findings of those reviews in terms of drafting a set of capabilities required of the executive, managers, teaching staff and support staff to be able to respond to changes, as well as competing priorities and tensions.
In Malaysia there has been a lot of research conducted on leadership, but less focus on leadership in the construction industry. Mahyudin and Norafidah (2010) emphasised the importance of leadership as a generic skills in construction industry. However, several studies outside Malaysia show that TVE workforces, especially at the managerial and supervisory level, require an extensive range of leadership and management capabilities, as well as professional and more generic skills to meet the continued challenges of change and innovation, and to build strong and sustainable organisations in the future.

Many studies have been carried out on human skills in project management. Some studies suggested critical skills such as problem solving and good communication for project managers (Cowie 2003; El-Sabaa 2001; Strohmeier 1992); whereas others recommended effective leadership as a critical factor in project management (Keegan and Den Hartog 2004; Zimmerer and Yasin 1998; Cleland 1995). Rowlinson et al. (1993) study on the leadership style of construction managers in Hong Kong revealed that human skills are of paramount importance in project management.

In 2003, the National Centre for Vocational Education Research (NCVER) published a paper focusing on transferable skills as the essence of employability that are relevant at different levels of organisational hierarchy. It discussed sixteen generic skills including leadership. This study shows that the most direct evidence is to be found in research that looks at employers’ increasing demand for generic skills. The increasing demand was brought about through changes such as the emergence of the flexible high performance workplace, as well as in the organisation and management of industries.

One of the mandates of Malaysia’s Construction Industry Development Board (CIDB) is to serve as a gateway for Construction Industry Players to get involved in the international construction marketplace, with the aim of enabling them to earn leadership positions in overseas ventures; as well as maintaining an open exchange of information with construction leaders worldwide. This however, calls
for a better understanding of leadership and leadership skills required in the national and international construction industry (CIDB, 2007).

The Minister of Works, Y.B. Dato' Seri Shaziman Abu Mansor stated that to implement the 10th Malaysia Plan, the Ministry will set the stage for a major national structural transformation, towards that of a high-income economy. To achieve this, the construction industry must invest in and give priority to its human capital enhancement. The industry needs to transform its resources in the area of knowledge, entrepreneurship, competency and innovation. With about 64,000 contractors and 800,000 workers, this includes professionals, supervisors, skilled and unskilled workers, the construction industry is seen as significant contributor to Malaysian economy.

It has been said that the construction industry must unleash its potential as a source of wealth creation and provide opportunity for the betterment of quality of life. In ensuring the quality of workmanship at construction sites, supervisory skills of site supervisors need to be enhanced (The 7th Malaysia Construction Sector Review and Outlook Seminar, 2010). Dato’ Seri Shaziman also stated that to match business growth and excellence overseas, we must recognize and act on the importance of continuously developing niche expertise and capabilities. Undoubtedly, the role of research in determining the specific leadership skills and the needed core capabilities cannot be over-emphasized.

1.2 Background of Study

The pace of change today is fast and we are forced to face new challenges with a lot of uncertainties. The proposition that the economic and social wellbeing of society, and those in it, is substantially dependent on the effective and efficient performance of organisations of all kinds, which in turn depend on adequate or excellent leadership and management capability that can be learned and developed, would be accepted by many as likely to be true in common sense and everyday
observation (Burgoyne, et al., 2004). Developments in the construction industry such as the growing volume of activity, rising number of active stakeholders, technology advancement, global competition, and demand for fast-track completion, have created many distinct challenges. Recent reports show that TVE workforces, especially at the leadership and supervisory levels, require an extensive range of leadership and management capabilities, as well as professional and more generic skills, to meet the continued challenges of change and innovation, to build strong and sustainable organisations for the future (Callan, 2005).

Quality is often related to the main competitive strategy (Petersen, 1991) and many high performance organisations have made quality one of the main components in their competitive strategies (Chen & Lu, 1996; Madu, 1998). The ability of an organisation to produce quality services and products is one of the key factors to compete in the international market. Many concepts and techniques have been adopted to improve the standard of services and quality of product. One of them is ensuring that organisations adopt quality management systems in all activities of the organisations (Ilias et. al, 2006). Team leaders of an organisation have the prime responsibility for the quality created by the organisation. Only team leaders have sufficient authority, influence, and access to information to begin quality improvements and maintain major organisational change.

Human skills are of paramount importance as project managers need to interact with people frequently. About 88% of project leaders spend more than half of their working time interacting with others (Strohmeier 1992). This high level interaction demands that project managers are able to lead effectively and manage conflicts continuously in order to build good relationships and ensure the success of their projects. Limsila and Ogunlana, (2008), citing the works of other researchers, stated that the success of a construction project depends on several factors, one of which is the competencies of project managers. Their personalities, characteristics, skills and leadership styles also have much impact on project outcomes. Normally, a project is expected to be completed on time, within budget and meet with technical specification or customer satisfaction (Tukel and Rom, 2001). However, the difficulty and uncertainty of most construction projects creates daily problems for the
professionals who manage them (Chan and Chan, 2004). There is therefore a need to equip the team leaders with hard (technical) as well as soft (leadership and management) skills in order for them to effectively respond to these challenges.

Construction team leaders work in teams and assume leadership roles. They deal with various project stakeholders and regularly get involved in sensitive decision making and dispute resolution processes. In order to effectively deal with these, the team leader will need support from all levels in the organisation. It is also important to bear in mind that many other workers not recorded as leaders by occupation, need leadership and management skills. Most professionals manage projects, programmes or work and often staff while using their professional skills. Only a minority of them however, would be recorded as supervisors or team leaders, but they still need leadership and management development (Burgoyne et al., 2004).

A recent report from City and Guilds Centre for Skills Development (2008) shows that most Malaysian employers believe that a ‘skills crisis’ exists. They are less satisfied with the quality of training their employees receive in generic skills. They also pointed out that training provided falls short of enhancing the soft and generic skills of the individuals.

The construction industry generates impetus to the Malaysian economy. For many years it has played an important role in improving the quality of life for Malaysians through multiplier effects to other industries. Success in today’s international environment however, demands that construction industry team leaders develop their competency skills in leadership. The demand for such high level of leadership competency is further supported by the fact that employers tend to recruit engineering graduates who have a solid foundation in both technical and soft skills, where leadership is one of the important elements in soft skills that is highly valued by leading organisations (Lee and Tan, 2003).

Leadership affects corporate culture, project culture, project strategy, and project team commitment (Shore, 2005). Therefore, the success of a project can be
seen to mainly depend on human factors, leadership and effectiveness of project teamwork. A study carried out at Cambridge University's School of Business and Economics found that 80% of project failures are caused by poor leadership (Zhang & Faerman, 2007) citing primary leadership skills, lack of teamwork, weaknesses in communication and inefficiency in problem solving as major factors.

The importance of leadership qualities has yet to be looked at in depth in Malaysia (Lyn, 2007). Lyn made a comparison between Malaysian and Australian team leaders on leadership and stated that team leaders have an obligation to meet people and maintain interaction with them, as a leadership requirement. Lyn also stated that Malaysian team leaders are generally contented with current local practices and knowledge levels, whereas Australian team leaders are likely to strive for more knowledge.

In comparison to other fields of research, studies undertaken on the subject of leadership in relation to professional practice are very limited in the construction industry in Malaysia. In view of this, (Grant, 1984; and Djebarni-unpublished thesis, 1993) expressed their concerns on the little research being done on leadership in the industry. Bresnen et. al. (1986) remarked that leadership studies have rarely focused on the role of site managers as leaders of their teams, and the range of managerial styles adopted on site. This remains true up to this date, and is consistent with the result of preliminary interviews carried out in this research with Abu Bakar bin Hashim, an expert in leadership and a senior lecturer in the Faculty in Education at Universiti Teknologi Malaysia. said he stressed that leadership problems emerge in all organizations, whether big or small. The essential problem in any industry is they do not realize how important leadership skills are for their organizations. In the construction industry, they concentrate more on technical skills and other soft skills, but less in leadership. This has happened because top level managers have limited knowledge and information about leadership. Meanwhile Zakaria bin Mohd Yusof, environment construction lecturer in Faculty of Built Environment at Universiti Teknologi Malaysia stated that project leaders and site supervisors rarely apply what they learned and repeat the same mistakes in leadership, resulting in project failure. Zakaria further stated that some top level leaders/managers blame the bottom level
employees without realizing that the real mistakes were those of the leaders. While employees follow orders from their leaders, the leaders must plan and arrange the project, detailing wisely the strategies and activities with their team. He also said that most project leaders and site supervisors have limited knowledge of leadership. They like to discuss the technical aspects of work more than leadership and management processes to implement the project.

In view of these findings, this research therefore embarked on determining the leadership capability required for team leader (i.e., project leaders and site supervisors) in the construction industry.

1.3 Statement of Problem

The Construction Industry Development Board (CIDB) (2007) found that industry leaders in the construction sector were not quick to follow the quality management systems promoted by the government. The industry is hampered by problems of low productivity, inconsistent labour supply, misguided human resource management, bad workmanship, non-existence of quality management and the challenges of reacting to the advent of information technology. These problems have emerged for several reasons. One of them is a lack of soft skill in an environment where leadership is high valued but not sufficiently developed in their organisations.

Leadership in the construction industry is not clearly understood owing to the lack of available literature and/or references in the area. Langford et al. (1995) claimed that the lack of understanding of knowledge of the industry, has led to the very low volume of leadership studies being pursued in the construction industry. Toor and Ofori (2007) offered two major reasons: First, social scientists undertaking research on leadership are uneducated on the construction industry (Langford et al., 1995) and the rich opportunities it offers for significant studies. Second, because the construction industry has tended to focus on management of projects and organisations, it has not stressed the importance of leadership; thus, the subject has
not emerged as a worthwhile study. Finally, few researchers have the necessary skills and (in most countries) adequate funding for such work (Chinowsky and Diekmann, 2004).

A suitable leadership approach can shape subordinates’ performance in a desirable way and facilitate the smooth running of any construction project (Limsila & Ogunlana, 2008). Moreover, the factors influencing the leadership capability of construction industry leaders (e.g., personal and organisational factors) are not fully investigated.

The leadership capability of TVE professionals working in the Malaysia construction industry has become increasingly important owing to the rapid and immense growth of the construction industry. This research was concerned with exploring the leadership capability of construction industry team leaders as influenced by their demographic characteristics, personal credibility, organisational factors and leadership skills.

1.4 Objectives

This study aimed to:

1) Identify Human Resource Manager and team leaders’ perspectives about the concept of leadership and leadership capability in the construction industry.

2) Find out the leadership capability required by construction firms of their team leaders.

3) Identify the leadership problems being faced by team leaders in the construction industry.

4) Determine the degree of relationship between antecedent variable and dependent variable.
5) Determine the degree of relationship between independent variable and dependent variable.

6) Determine the level of influence of leadership skills as mediator on the relationship between independent and dependent variables.

7) Propose a leadership capability framework for team leaders in the construction industry.

1.5 Research Questions

This study sought to find answers to the following questions:

1) What are the perspectives of team leaders and Human Resource Managers about the concepts of leadership in the construction industry?

2) What are the perspectives of team leaders and Human Resource Managers about the concepts of leadership capability in the construction industry?

3) What is the current leadership capability of team leaders in the construction industry?

4) What is the leadership capability required by construction firms from their team leaders?

5) What are the problems being faced by team leaders in the construction industry?

6) Is there any relationship between age and leadership capability among team leaders in construction industry?

7) Is there any relationship between gender and leadership capability among team leaders in construction industry?

8) Is there any relationship between educational attainment and leadership capability among team leaders in construction industry?
9) Is there any relationship between number of leadership course attended and leadership capability among team leaders in construction industry?

10) Is there any relationship between numbers of year in the leaders’ position and leadership capability among team leaders in construction industry?

11) Is there any relationship between leaders’ credibility and leadership capability?

12) Is there any relationship between organisation domain and leadership capability?

13) Does leadership skills as mediating variable influence the relationship between leaders’ credibility and leadership capability?

14) Does leadership skills as mediating variable influence the relationship between organisation domain and leadership capability?

1.6 Hypotheses

There are several null hypotheses for this study:

I. \( H_0 = \) There is no significant relationship between age and leadership capability of team leaders

II. \( H_0 = \) There is no significant difference between gender and leadership capability of team leaders

III. \( H_0 = \) There is no significant relationship between educational attainment and leadership capability of team leaders

IV. \( H_0 = \) There is no significant relationship between number of leadership course and leadership capability of team leaders
V. \( H_0 = \) There is no significant relationship between numbers of year in leaders’ position and leadership capability of team leaders

VI. \( H_0 = \) There is no significant relationship between leaders’ credibility and leadership capability

VII. \( H_0 = \) There is no significant relationship between organisation domain and leadership capability

VIII. \( H_0 = \) There is no effect of leadership skills as mediator in the relationship between leaders’ credibility and leadership capability

IX. \( H_0 = \) There is no effect of leadership skills as mediator in the relationship between organisation domain and leadership capability

1.7 **Significance of the Study**

This study has both theoretical and practical significance. The theoretical significance stands on three grounds. First, it provided a better understanding of the concepts of leadership capability and associated skills in the Malaysia construction industry context. Second, the research has demonstrated the usefulness of leader-member exchange theory, personality theory and behavioural leadership theory in studying leadership in construction industry. And lastly, the comprehensive analysis and interpretation of the results on the basis of the theoretical and conceptual frameworks and the existing theories, led to extending the body of knowledge that can be used by other researchers. The practical significance of the research lies on the leadership capability framework that was developed on the basis of the results of this study. The framework can be used by relevant organisations in designing their leadership development programmes and in enhancing the leadership capability of the construction industry team leaders.
1.8 Scope and Limitations of the Study

The qualitative research component of this study conducted mainly in the Peninsular Malaysia, involving Human Resource Department Managers and selected team leaders of construction firms. The quantitative research part of the research, on the other hand, involved team leaders from whole of Malaysia including Sabah and Sarawak. This study focused on six leadership capabilities: personal integrity, working with construction industry, customer-focused and quality, working as a team, communication and interpersonal skills, and empowering people.

Due to time and financial constraints, this study considered only the Construction Project Managers and Construction Site Managers from the managerial category; and Civil & Structural Supervisors from the supervisory category and the results can only be interpreted for these group of construction industry team leaders.

1.9 Operational Definition of Terms

The study was guided by the following definition of terms in the course of its implementation.

1. Leadership

Leadership is the influencing process of leaders and followers to achieve organisational objectives through change (Lussier and Achua, 2007). Locke et. al (1991) defined leadership as organizing a group of subordinates to achieve common goals. The leaders may to influence them to the willingness to exert high levels of effort to reach organizational goals. Koontz and O’Donnel (1976) also define leadership as an individual skill to influence the followers to face the problem and provide solution. In this study, leadership refers to the process of social influence of individuals to accomplish a common task. This process includes individual credibility, knowledge and skills of a leader.
2. **Team leader**

Zaccaro et al. (2001) defined teamwork and team leadership in terms of a group that has a formal, hierarchical leader responsible for its effective functioning. Day et al. (2004) proposed that team leadership can build its capacity through interacting with the goal of shared work. In this study, team leader refers to individuals in the construction industry who provide guidance, instruction, direction, leadership to a group of other individuals or in a team to achieve organisational goals.

3. **Leaders’ credibility**

Gradwell (2004) defined credibility as characteristic of a leader who is believed, trusted, honest, fair, competent, qualified, and authentic. Matthews (2010) described credible leaders as trustworthy, competent, dynamic, inspiring and accountable. This study focused on two concepts;

   a) **Vision-based leadership**

   Vision is often considered as corporate leaders’ tool. In this study, vision refers to the ability of the research participants to look forward on an idealized image with better planning for what is to come further ahead.

   b) **Influencing**

   In this study, influencing skill refers to the ability of the respondent to change peoples’ old assumptions or perceptions to new ones with the application of the right knowledge.

4. **Organisational domain**: A system is a set of two or more components where: the behavior of each element has an effect on the behavior of the whole; the behavior of the elements and their effects on the whole are interdependent; and while subgroups of the elements all have an effect on the behavior of the whole, none has an independent effect on it (Skyttner, 1996). According Martinelli, (2001) a system comprises of sub-systems that inter-related and inter-dependence move toward symmetry within the larger system. In this study, organisational system refers to elements in organisation.
that affect on the behaviour of individual and team in organisation with typical patterns of corporate life. This study will focus on;

a) Organisational culture

Martins and Martins (2003) defined organisational culture as a system of shared meaning held by members, distinguishing the organisation from other organisations. Arnold (2005) indicates that organisational culture is the combination of distinctive norms, beliefs, principles and ways of behaving to give each organisation its distinct character. In this study, organisational culture refers to holistic, a collection of specific values and norms that are shared by people and groups in an organization and that control the way they interact with each other.

b) Performance Appraisal – performance appraisal is the on-going process of evaluating employee. According to Murphy and Cleveland (1995) performance appraisal is a communication tool that is embedded in a larger organizational context. It is provides an annual review and evaluation of an individual's job performance. In this study, performance appraisal refers to the process whereby current performance in a job is observed and discussed for the purpose of enhancing the level of performance.

5. Leadership Skills

Skill can be defined as an ability which can be developed and can manifest in performance, not merely potential (Katz, 1955). Nahavandi (2000) defined a skill as an acquired talent that a person can develops related to a specific task. In this study, leadership skills refer to abilities to lead a group of people toward a common organisation goal. In this research, leadership skills cover nine traits.

a) Coaching

Coaching is unlocking a person’s potential to maximise his or her own performance. Coaching can help to support employees, as it has the adaptability and flexibility to support a range of individuals with
different learning styles (Jarvis, 2004). According to Neufeld and Roper (2005), coaching is a set of activities related to developing the organizational capacity. In this study, coaching refers to the direct supervisory role to achieve collective objectives, for learning and developing increased performance by guiding individuals as they perform tasks, duties and jobs.

b) **Problem solving**

This is a process using cognitive problem solving skills such as reasoning and heuristics to search through the problem space. Problem solving involves defining a problem and creating solutions for it. In this study it is refer to a set of activities designed to analyze a situation systematically and generate, implement, and evaluate solutions for respondents’ ability.

c) **Decision making**

Harris (2009) defined decision making as a “process of sufficiently reducing uncertainty and doubt about alternatives to allow a reasonable choice to be made from among them”. Decision making is selecting option of action from among available alternatives. In this study, decision making is the process of selection of, and commitment to, a purpose or plan of action to make decisions.

d) **Performance management**

Tovey, (2001) defined performance management as a process of managing and developing people through everyday activities, where there is a clear understanding of what is to be achieved and how well it is to be achieved that contributes to organisational results. Performance management are the record of outcomes produced on a specified job functions, activity, or behaviour during a specified time period (Bernardin, et. al, 1998). In this study it refers to the process employed by team leaders to lead and develop subordinates through everyday task with common understanding of organisation goal.
e) **Motivation**

Nelson and Quick (2003) defined motivation as the process of developing and sustaining objective behavior. Motivation is the process that leads to behavior (Mohammed and Abdullahi, 2011). Pinder (1998) stated that motivation is the set of internal and external forces that initiate work-related behaviour, determine its form, direction, intensity and duration. In this study, motivation refers to internal and external factors that stimulate desire and energy in employees in order for them to be continually interested in remaining committed to a job and role to achieve organisation goals.

f) **Innovation**

Rogers (1983) defined innovation as a communication process of something newer or better. Damanpour and Schneider (2006), describe innovation as the creation or adoption of new ideas. In this study, innovation refers to the act of doing something new to improve services and quality of the organization.

g) **Proactive**

Crant (2000) considered proactive as taking initiative in improving current conditions that involves challenging the same condition rather than passively adapting present conditions. More recently, Grant and Ashford (2008) refer to proactive behavior as expected action that employees take to impact themselves and/or their workplace. In this study, proactive refers to team leaders thinking and acting ahead, awareness of the existence of choices that affect their job.

h) **Mentor**

Suiter (2004) defined mentoring as interaction between experienced people and a less experienced person; it provides guidance that motivates the mentored person to take action. Clinton and Clinton (1991) described mentoring as a relational experience through which one person (mentor) empowers another (mentee). In this study,
mentoring refers to a transfer of experience from wise and trusted team leaders to their subordinates.

i) **Plan project**

Plans are projected courses of action aimed at achieving objectives over some future period (Cole, 1998). NFSD (2005) described planning project as a process through which the overall goal and objectives of a project are set, partners identified, inputs assessed, activities specified and scheduled. In this study, it refers to a team leader’s overall planning that describes how the project will be accomplished to achieve project objectives; time frame, cost and quality involved.

6. **Leadership capability**

Capability is an integration of confidence in one's knowledge, skills, self-esteem and values (Stephenson, 1992). According to (Lewis, 2009) capabilities are ‘an all human quality, an integration of knowledge, skills, personal qualities and understanding used appropriately and effectively. In this study, leadership capability represents the key skills; abilities and knowledge of team leaders required at all levels. It relates to the capacity of an individual to achieve their mission. This independent variable will be measured using the following attributes:

a) **Personal Integrity**

According to Parry (2001), personal integrity is moral relativist tradition in which perceptions of appropriate behaviour can differ between peoples and cultures. Personal integrity is the characteristics of an individual that are consistently considerate, compassionate, transparent, honest and ethical (Duggar, 2009). In this study, personal integrity refers to individual leadership qualities that allow an individual to attract respect and trust from others.
b) Working with Construction Industry

NIEP (2010) defined working collaboratively in construction industry enables individual to more easily transfer knowledge to teams from project to project, ensuring continuous improvement. In this study, working within industry refers to the ability of team leaders to work in the construction industry, in terms of addressing emerging issues, collaboration, partnership and needs of the construction industry itself.

c) Customer Focus and Quality

Kamara (2000) describes the customer as the buyer of construction services, prospective users and other interest groups. According to Delgado-Hernandez and Aspinwall (2008) quality services are ensuring that drawings and specifications for the product are correct and readily address the needs of customers. In this study, customer focus and quality refers to the team leaders’ ability in developing better product and service to provide customer satisfaction.

d) Working as a team

Lencioni (2002) defined teamwork in terms of a group that has a formal, hierarchical leader responsible for its effective functioning. Zaccaro (2001) defined team leader as one who is primarily responsible for defining team goals, developing and structuring the team to accomplish these missions. In this study, working as a team refers to the ability of team leaders to enhance the performance of a group, particularly an operating team to achieve organisation objectives.

e) Developing and empowering people:

According to Rappaport (1987) empowerment is a concept that leans on its original meaning of investment with legal power; permission to act for organization goal or purpose. Based on NFSD (2005),
empowerment is an ability of leader to seize opportunities and control over productive subordinates that enable them to increase their quality of life and obtain the goods and services they need as well as to participate in the development process and to influence the decisions that affect them. In this study, it refers to the respondent’s performance in terms of fostering and developing talented people to encourage them to realise their full potential.

f) Communication and Interpersonal skills

Hill and Jones (1995) defined communication as the reaching of a common understanding. According to Stewart (2006) communication occurs when the people involved talk and listens in ways that maximize the presence of the personal differences. In this study, it refer to effective working relationships used to interact with others through empathy, good listening, passing on information and positive thinking.
REFERENCES


Administration For Native Americans (2011): Introduction To Project Planning And Development.


BERR (2008). Innovation In Construction Services: Supporting innovation in services


Callan, V.J., Mitchell, J., Clayton, B. and Smith, L. (2007). “Approaches for sustaining and building management and leadership capability in VET providers”. Published by NCVER


Evans, R.N. (1971). “Foundation of Vocational Education”. Charles Mill. Publisher, Columbus, Ohio. USA


Falk, I., & Smith, T. (2003), Leadership in vocational education and training: Leadership by design, not by default, NCVER, Adelaide.


Institute, School of psychology, University of Sydney.


and Non ISO 9000 Certified Contractors in Malaysia” (pp. 2-9). Universiti Sains Malaysia.


Children’s Ministry® Magazine at Group.


Kajornboon, A.B (2005). “Using interviews as research instruments”. Language Institute, Chulalongkorn University


Matthews, D.J. (2010). Credible Leader Delivers Results. Chief Learning Officer


Nutt, P.C. (2002). Why Decisions Fail: Avoiding the Blunders and Traps that Lead to De Âba À cles, Berrett-Koehler, Williston, VT.


Rowlinson, S., Langford, D. & Sawacha, E.(1993). “Safety Behaviour and Safety Management: Its Influence on The Attitudes of Workers In The UK Construction Industry”. Department of Surveying and Real Estate, Hong Kong University, Pokfulam Road, Hong Kong; Formerly of Brunel University, Uxbridge, Middlesex, UK
Sager, D.J. (1979). “Leadership and Employee Motivation”. Public Library of Columbus and Franklin County Columbus, Ohio


Simon, L. and Bonnici, A. (2011). This is it folks, over the top! How do we lead from the frontline in the changing VET environment? What skills and capabilities do our frontline VET educational leaders required. TAFE NSW: Northern Sydney Institute.


Tovey, M.D. (1999). “Mentoring in The Work Place”. Prentice Hall: Sydney

Tovey. M. D (2001). “Managing Performance Improvement”. Pearson Education Australia


