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Research paper



Leadership Capability Framework for the Construction Industry Leaders in Malaysia

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Abstract

This study aims to identify the leadership capabilities for Malaysia construction industry team leaders. This research apllied exploratory sequential mix-method research design where is qualitative followed by quantitative method. In the first phase, semi-structured interview was used and purposive sampling was employed in selecting 15 research participants. Team leaders and Human Resource Managers were selectetd to be reseach participants of this study. 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 examined 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 research 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 required leadership capabilities among construction industry team leaders. Findings also indicated that leadership skills was the important element to develop leadership capability. A framework developed can be used as a guide by employers in improving leadership capability of Malaysia construction industry team leader.

Keywords: *Capability; Leadership Capability; Team Leaders; Construction Industry*.

1. Leadership Capability in Construction Industry

Leadership is a dynamic concept and behavior. Leader's role with regard to the different conditions and traits using varies of leadership styles. Leadership behaviour plays a constantly important role in project effectiveness and productivity. Leaders help the team break the limits to build relationships and support each other, seeking the necessary information to accomplish objectives and complet the task given (1). According Muda et al. (2) leadership in contruction industry is the conglomeration of an individual's skills and capability to lead effectively a team of individuals in an organization. They further opined that ability, knowledge and experience, attribute and attitude are essential traits that an individual should possess in order for him or her to become an effective leader. Leadership capability, on the other hand, was perceived by the human resource managers and team leaders as the ability of leaders to influence subordinates with the knowledge and experience, good attitude and desirable leadership skill.

"*There are no poor engineers or scientists, only poor leaders. If leaders have excellent resources but manage them poorly, they will get nothing but poor results"* *(Lyn 2007, p.13)*

The quote enlightened that leadership skills are basis at the leadership level. Thus, actively involve in the organization to confirm the approach is connected to the whole business strategy is the first sign of the leadership. Findings from Abdelhaleem and Seymour (3) concluded with a big question of how the developed leadership mkodels and approaches were practical when applied to the construction industry. They also claimed that construction industry's basis in hiring and employing the supervisors, should be more systematically researched to ensure its applicability to construction industry.

Effective leadership is best defined as capabilities, not competencies (4). Webster's Dictionary states competent as appropriately or necessarily qualified, adequate for the specified purpose. Competency indicates the minimum required to do the job, whereas capability includes competence but also implies the capacity for more. Moving from the traditional managerial styles of competencies to leadership capabilities; going beyond functions to mindsets (capabilities) of leadership (5). Arain (6) claimed that construction industry is a challengingarena of socioeconomic, cultural, political, and business environment. In the construction industry, the building profession has played an indispensable role that determines the performance of the industry. Leadership is one of the most significant research areas receiving relatively slight attention in the construction industry. Leadership is often considered as a social exchange process in leader–follower relation. The issues of social and cultural differences of leadership, has been contributed significant impact on the performance of construction projects and is the key of project success (7).

Projects' executive leadership plays an important role on sustainability within which the success of sustainable projects rests on effective leadership competencies of the leaders (8). Besides, they emphasized that to be able to guarantee the success of project managers within construction, manufacturing, and other project based industries need to inspire team members to mature sustainable projects within the daily process of satisfying client and pro-

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ject requirements. There has been a lot of research on leadership was done in Malaysia, but less emphasis in the construction industry. (9) stressed that the importance of leadership as a generic skills in construction industry. However, several studies outside Malaysia show that the managerial and supervisory level, need an wide range of leadership and management capabilities, as well as professional and more generic skills to face the challenges of change and innovation, and to develop strong and sustainable organisations in the future.

The capability of leadership at the organizational level expresses as a combination where the organizational structure is integrated with leadership processes in organizational systems. An appropriate leadership approach can form subordinates' performance to fulfil requirement of organization and further can assist the smooth running of any construction project (10). Moreover, the factors influencing the leadership capability of construction industry leaders (e.g., personal and organisational factors) are not fully investigated. Most of leaders described that to reach the mission of company, a capability of a leader in conducting the project was required. Knowledge and experience were also stated as elements desired to be an effective leader in construction industry (2).

The leadership capability of leaders working in the Malaysia construction industry has become increasingly important due to the rapid and huge progress of the construction industry globally. This research was conducted to exploring the leadership capability of construction industry team leaders as influenced by their demographic background, personal credibility, organisational factors and leadership skills.

2. Methodology

This study was pursued using exploratory sequential mixed method design (qualitative research followed by quantitative research) in order to gain better insights and greater understanding of the concepts and variables being studied. The exploratory sequential mixed method design in this study involved collecting qualitative data and analysis, followed by quantitative data collection and analysis that build on the results of qualitative phase. This was done to initially explore the leadership phenomenon in Malaysia construction industry in first phase (qualitative research) of the study. In the case of this study, the qualitative research results were used to modify and enhance the survey questionnaire and the results were also used to triangulate with the quantitative research results. The qualitative research results can also be used as a guide to further improve the quantitative research design and instrument. It can be used to support and validate the quantitative research results. The interview guide was designed before the actual interview consisted of instruction for the interview process and the questions to be asked to the respondents. Interview guide is a fundamental aspect of the procedure of qualitative phase.

In the second phase of this study, quantitative method using survey questionnaire was employed. The purpose of using the quantitative method in this research was to predict and explain the phenomena through focused collection of numerical data. In this phase, the relationship between antecedent variables and leadership capability, the relationship between independent variables and leadership capability, the effect of mediating variable (leadership skill) on the relationship of independent variables and leadership capability were analysed. Moreover the results of the test of relationships were used to identify the best constructs that can be considered in developing the leadership capability framework. The questionnaire consisted of close and open-ended items. The instrument had four parts, which were Part A (demographic characteristics), Part B (Leaders credibility and organization domain), Part C (General understanding of leadership), and Part D (Ledership isuues).

2.1 Research Population and Sampling

Construction Project Managers and Construction Site Managers were chosen to represent the managerial position. They were selected because those were the posts closest to construction sites, while Civil & Structural Supervisors were chosen as representative of the supervisory position because they are the posts with the largest number of members. The qualitative research was done only in Peninsular Malaysia. The quantitative research, on the other hand, involved construction industry team leaders with technical and vocational certificate from all over Malaysia. Table 1 shows the study's research population from where the research samplers were drawn.

Table 1. Research Population

Position	No of Population
Manager of Human Resource Department	683
Managerial	
Construction Project Manager	22
Construction Site Manager	478
Supervisor	
Civil & Structural Supervisor	683

Purposive sampling was used to select 15 respondents for the in-depth interview were managers of Human Resource Department and construction team leaders. Simple random sampling was employed to identify the respondents for the second phase of this research. This type of sampling was employed as the random sampling works on the principle of randomisation. Based on the population of 683, the sample to be taken was 248. Of the 248 respondents throughout Malaysia including Sabah and Sarawak, only 171 questionnaires were sent back by the respondents, thus generating a retrieval rate of 69%.

3. Findings

There were 15 research particpiants in this research, eight of them were Human Resource Managers, who were in top-level management while seven were team leaders, who were in middle-level management in construction industry. Their names and responses were coded in order to conceal their identities. The findings from NVivo was further analysed succeeding the rigours of recurring theme analysis and content analysis. Recurring theme analysis, which is one of the fundamental tasks in qualitative research and contents analysis illustrates the range of the significances of the phenomenon and emphasises an united view of speech/texts and specific contexts.

Most of the research participants had the equal view about the concept of leadership is closely connected to the ability and attitude of leaders to handle the team. Most of them explained that a leadership capability is the capability of a leader in manage the project to achieve the company's goals. Knowledge and experience were also stated as elements needed to be an effective leader. The findings expose, common understanding of leadership is an important thing for both human resource manager and team leaders because with the understanding about leadership the leaders from any level can perform their responsibilities and duties as leaders well and effectively. The way they explained about leadership indicated that they knew their role as leaders, and to be better leader, continuous training is needed.

Through the interviews, seven leadership capabilities were given to the respondents and they were asked to choose the capability required to be a good leader in the construction industry. Figure 1 shows the summary of responses given by the interviewees.

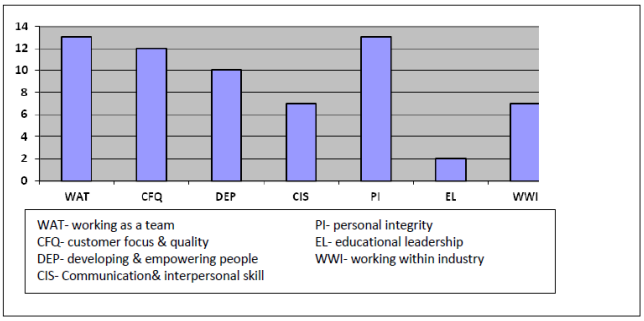


Figure 1. Core Leadership Capability for Team Leaders in Construction Industry as Perceived by Research Participants

Six core leadership capabilities were constantly chosen by the reseach participants as critical factors of leadership capability for team leaders. Figure 3.1 shows that 13 research participants consider that working as a team is one of the important capabilities to be an effective leader. They stressed out that team involvement contributes to the successful completion of any given project. Twelve research participnats chose being customer-focused and quality as equally important as working as a team. They believed that they have to satisfy and emphasis on customer demand and to establish good association with customers. Ten research participnats selected developing and empowering people as one of the factors of leadership capability. It indicates that the research participants knew that by empowering their team leaders, further will increase their confidence level thus they improve their self-worth. Seven research participants selected communication and interpersonal skills as an important factor of leadership capability. Communication is seen as the basis to have effective communication. Leaders with good interpersonal skills will support the communication to be more effective. Personal integrity was selected by 13 research participants. It refers to the good values in leaders themselves. Seven research participants chose working with the industry. They stated that, they need to know about other firms in order to create good working relationship with their subordinates. In addition, sustaining good working relationship with other firms is needed in construction field specifically in earning the latest information. The rest probably thought that educational leadership do not indeed contribute to the leadership capability.

Quantitative data derived from the survey questionnaire, descriptive and inferential statistics using SPSS version 21 and AMOS version 18 were applied to analyse all the items. From 248 sets of questionnaire distributed 171 sets were retrieved accounting to 69% response rate. The sets of questionnaire received have been completely answered without any missing value from respondents. Table 2 illustrates the distribution and percentage of respondents according to their background. More than half (57.3%) respondents were male and 42.7% were female.The result shows the distribution and percentage of respondents according to the number of years in leadership positions. A little less than half (45.6%) of the respondents has 6-10 years of working experience as a leader, while there were only 2.3% of respondents with 16-20 years of working experience.

Table 2. Socio-demographic Characteristics of The Respondents

Sociodemographic Characteristics		Number	Percent (%)
Gender			
	Male	98	57.3
	Female	73	42.7
Total		171	100
Years in leadership position			
	< 1	35	20.5
	1-5	24	14.0
	6-10	78	45.6
	11-15	14	8.2
	16-20	4	2.3
	≥21	16	9.4
Total		171	100

Inferential statistics allow the findings from research to be generalised. One-way ANOVA, Pearson Correlation, and multiple regression were used to determine the degree of relationship between the existing variables using Statistical Package for the Social Science (SPSS) version 21. Table 3 shows the analysis of ANOVA on team leader position.

Table 3. One-Way Analysis of Variance on Team Leader Position

	Sum of Squares	Mean quare	F	Sig.
Years in leader position	49.65	9.93	3.09	0.01*
Between Groups	529.59	3.21		
Within Groups	579.24			
Total				

ns Not significant, * significant at p<0.05

Based on the Table 3, a statistically significant difference was found between team leader position and leadership capability with F(5, 4)=3.09, p<0.05 . Thus, there were significant difference between years in leadership position with leadership capability. These findings showed that the core leadership capability is influenced by years in leadership position.

Pearson Correlation was used to analyse the relationship between leader's credibility and organisation domain with leadership capability. Table 4 shows the results of test of relationship between leader's credibility and organisation domain as independent variables with leadership capability.

Table 3.3. Relationship between Independent Variables and Leadership Capability (n=171)

Variables	M	1	2
Leadrship Capability	4.03	0.49**	0.60**
1. Leader's Credibility	4.04	--	0.51**
2. Organisation Domain	4.12	--	--

** Highly significant at p<0.01

The highest mean between these variables was organisation domain (mean=4.12), followed by leader's credibility (mean=4.04) and leadership capability (mean=4.03). Leadership capability was found to be positively correlated with leader's credibility with r=0.51 and organisation domain, r=0.60 (p<0.01) ; these were medium correlations according to Cohen (1988). Thus, there was significant relationship between leadership capability with leader's credibility and organisation domain. This means that leadership capability is correlated with leader's credibility and organisation domain. These results showed that leadership capability are influenced by leader's credibility and organisation domain.

The multiple regression analysis result showed that nine components of leadership skills (i.e., coaching, problem solving, decision making, performance management, motivation, innovation, proactive, mentoring, and plan project) were significantly intercorrelated to leadership skills. All nine constructs can then be considered as important elements in leadership skill. The results using multiple regression analysis revealed that the constructs in leadership capability (personal integrity, working within industry, being customer-focused and quality, working as a team, communication and interpersonal skills, and empowering people) were statistically significant and contributed to leadership capability.

4. Leadership Capability Framework

Based on the findings and the discussions above, the leadership capability framework for team leaders in construction industry (Figure 3) was developed. It is the result of the integrative analysis done on the results of both qualitative and quantitative research aspects of this study. In developing the framework, the researcher considered only those leadership concepts and constructs that are significantly related or correlated with or to each other. Figure 4.1 illustrates the concepts and constructs that exert direct influence on the individual's leadership capability. It is proposed in the framework that the elements personal attributes, credibility, leadership skills and organisation domain are equally important in shaping an individual's leadership capability. One cannot be favoured over the other.

This framework was underpinned by the study's design, and has been tested through empirical work. The leadership capability framework involves the factors that can be employed in the leadership capability development process. Experiences and training are the element of leader's personal attributes. Experience allows leader to be better and effective for the team. Sternberg (11) noted that leaders draw from experience to deal with interpersonal and organizational issues. The experienced leaders are expected to recognize and identify a broader range of elements existed in any situation than are less experienced leaders (12).

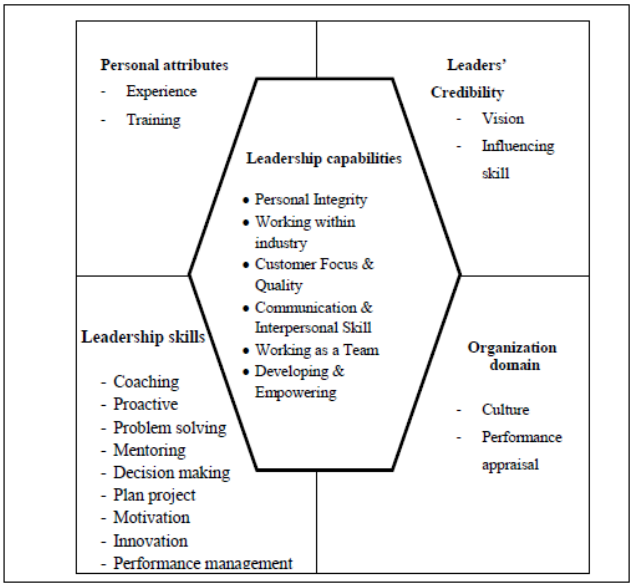


Figure 3. Leadership Capability Framework for the Construction Industry Leaders

The experienced leaders are likely to perceive situations and border the problems arise differently, and the ability to properly define the problem space, solution and take the action wisely. They own have a larger basic knowledge than leaders who have substantively less experience. Moreover, experienced leaders may be able to mix diverse concepts when assessing any situation in organization better than less experiences.

Apart from that, leadership training has been seen as one of the personal attributes. Leadership training can maximize productivity, shape a positive culture and promote harmony. Training provided should be able to help people gain crucial skills and allows the organizations to attack relevant, crucial, real-time issues. Leadership training program should be designed to increase effectiveness of leaders' professions by cultivating their leadership capabilities. Credibility therefore is an important component of leader's personal attributes. Credible leaders' are able to influence followers; leaders are seen as a credibility model to employees. McCann (13) pointed out that credibility is the key to strong leadership. Credible leaders are consistent in their words and their behaviours.

Organization domain encompasses the organization's culture and performance assessment. Organization culture is an important element in sustaining organizational performance, competitive advantage, and is the driving force behind a successful company. A great and healthy organizational culture is a factor that leaders can use to develop a dynamic organization. Madu (14) has argued that a leader who understands his organization's culture is capable of predicting the outcome of his decisions, thereby reducing other probable unsatisfactory consequences in future. Top level leaders must operate from a foundation of high morality and ethical discipline at all times as the steps taken at this level will affect mid level leaders within the organization.

Leadership is the ability to step outside the culture that created the leader and to start evolutionary change processes that are more adaptive to improve leaders' capability. Leaders, who understand the culture of organization, will have the ability to perceive the limitations of one's own culture and to evolve the culture adaptively is the essence and ultimate challenge of leadership. Leaders shape identity, how the organisation make sense of its work and environment also align organisation goals.

Good assessment is also a factor that has been integrated in the purposed framework. Performance assessment is an organizational element. The role of top-level leader and management is seen as very important in providing performance appraisals that are more transparent and comprehensive especially from the aspect of leadership capability. The construction industry expects to have project managers and site-supervisors with both technical and non-technical skills. It is therefore imperative to equitably assess the team leaders' technical and non-technical skill. Good performance appraisal will motivate their team members to become more productive. The performance appraisal of leadership skill and leadership capability should be made as part of the assessment procedure. The results of the performance appraisal can be used as a guide to improving the leadership enhancement opportunities for team leaders in the construction industry.

Leadership skill consists of nine components, i.e.: coaching, problem solving, decision making, performance management, motivation, innovation, proactive, mentoring and plan project). From the findings, these elements are statistically significant to leadership skill which means that these elements are necessary leadership skill components for construction industry team leaders. Problem solving often involves decision making, and decision making is especially important for leadership and management. These elements in leadership skill also can be explained by Cognitive Theories. The Cognitive Theory of leadership is unique from many other leadership constructs. It explains how leaders, supervisors, and followers process information and act upon these cognitions (15). According to Lord and Hall (16), leadership development is linked with individual progress of knowledge and information processing capabilities. As one increases their cognitive capacity, one can acquire greater leadership skills. Moreover, as one's self-concept continues to integrate values related to leadership, a greater degree of expertise in leadership skills is attained.

Coaching and mentoring are two personal development methods that nurture a person's own abilities in order to improve or enhance an individual's behaviour and performance. Derue et al. (17) stated that leader behaviors are often discussed in terms of whether the behavior is oriented toward task processes, relational dynamics, or change. An important aspect of their study is the recognition that leader behaviors are one possible mechanism through which leader traits influence leadership effectiveness. During the interview session, the interviewees stressed that company support is needed in order to develop their leadership capability. To provide appropriate leadership training, middle – level leadership skills must be polished by coaching and mentoring them in informal job-training this will eventually help them to enhance their own personal leadership capabilities. Most interviewees prefer to apply coaching and mentoring to their subordinates because these skills allow the leader and the team members to improve their work skills. They also take this action to train talented subordinates. Using coaching and mentoring skills will help the leader to find out who among their subordinates has the capacity and capability to be the next leader.

The integration among personal attributes, leaders' credibility, leadership skills and organisation domain will significantly enhance leadership capability of team leaders. These elements should be taken together as a whole and one component cannot be favoured over the other.

5. Conclusion

Through this study, the researcher has successfully obtained the team leaders and HRM's perspectives of the concept of leadership and leadership capability in the context of Malaysia construction industry. The research has also successfully found that six elements (i.e., personal integrity, working with industry, working as a team, customer focus and quality, communication and interper-

sonal skill and developing and empowering people) of leadership capabilities were required by construction firms. The findings also suggest that there are internal and external factors that influence leadership capability. Multiple regression analysis revealed that nine leadership elements (i.e., coaching, mentoring, decision making, problem solving, motivation, performance management, plan project, innovation and proactive) are inter-correlated and therefore can be considered as good predictors of leadership skill. These elements of leadership were also found to have strong relationship with the six core leadership capabilities (i.e., personal integrity, working with industry, working as a team, customer focus and quality, communication and interpersonal skill and developing and empowering people). It can be concluded therefore that leadership skill is a key element to develop and individual's leadership capability.

Taken together, the findings recommended the combination of leadership experiences, leadership training and the nine elements of leadership skills can and will significantly effect the core leadership capabilities. This research also found that commonly the team leaders in construction industry desired more opportunities to expand their leadership capability. The leadership capability framework can consequently be of a basis in monitoring their leadership development. In like manner, the framework could be a beneficial instrument in measuring the team leaders' leadership potentials and performance. The outcomes of this assessment can determine the areas demanding enhancement and therefore can be used as source in designing appropriate training and development programmes.

As a final conclusion, The Leadership Capability Framework can be used as a basis of an organized leadership development process for any level of leadership within an organization. The integration of internal and external factors in this framework will help the organization to increase the leadership capability of leaders, improve training and development programs and consequently enhance organizational performance.

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