Emotional Intelligence and Leadership Styles in Construction Project Management

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Abstract: Human factors are of paramount importance to the success of projects. Although a lot of studies have been carried out on human factors in project management, not much research has been done on emotional intelligence (EI). Studies have shown that EI is beneficial to both the individual and the organization. The benefits of EI to project management were investigated in terms of the style of leadership. The study was conducted in Thailand by interviewing project managers and engineers (PMEs); and client representatives. The results showed that EI affected leadership behavior of the project leader. PMEs with higher EI tend to use open communication and proactive leadership styles. It is also found that EI generates delegating, open communication, and proactive behavior, which can bring positive outcomes to the organization.

CE Database subject headings: Project management; Personnel management; Construction management; Employees.

Introduction

The role of project managers is very important as they are the ultimate persons responsible for the success or failure of projects. The human skill is of paramount importance as project managers need to interact with people frequently. In reality, about 88% of project managers spend more than half of their working time interacting with others (Strohmeier 1992). This high level of interaction demands that project managers are able to lead effectively and to manage conflicts continuously in order to build good relationships and ensure the success of their projects.

Project managers also need to possess skills to lead teamwork. Within the internal organization, project managers have to lead their subordinates, a situation which requires them to possess effective leadership skills necessary for facilitating workers to achieve project goals successfully (Lewis 1998; Loo 1996).

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

Emotional intelligence (EI) is increasingly being recognized as an important issue in the workplace. There is a surprising finding that intelligent quotient (IQ) is second after EI in determining outstanding job performance (Goleman 1995, 1998). According to Carmeli (2003), emotionally intelligent senior managers perform better on their jobs compared to their contemporaries with lower EI. The benefits of EI to project management are therefore proposed for study in this research.

The objective of the study is to investigate the benefits of EI in project management in terms of its relationship with effective leadership styles. The benefits of EI are being investigated because project managers need good human skills to lead project teams. This research therefore examines whether project managers with high or low EI have different leadership styles.

Emotional Intelligence

According to Goleman (1998), emotional intelligence is the capacity to recognize our own feelings and those of others, for motivating ourselves, and for managing emotions well in us and in our relationships.

Compared to the amount of research already conducted on IQ, the study of emotional intelligence is still relatively new. Nevertheless, EI is increasingly being recognized as an important issue in the workplace. Many studies have shown that high IQ does not necessarily guarantee a successful life. According to Goleman (1995, 1998), emotional intelligence is more important than IQ in determining outstanding job performance. Dulewicz and Higgs (2000) supported this assertion by saying that the IQ test has failed to provide sufficient variance in success criteria both in the educational and in the organizational environments. Research has indicated that emotional competencies (i.e., the potential of EI that has translated into practical capabilities) are twice as important as IQ and expertise in contributing to excellent and effective performance (Goleman 1998).

Goleman (2001) explained that emotional intelligence has two competencies, the personal competence and the social competence. The personal competence consists of self-awareness and self-management, whereas the social competence consists of social awareness and relationship management. Self-awareness means knowing one's feelings at the moment and using it for

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decision making, which is known as "intuition." A person who has this ability is aware of his/her own strengths and weaknesses, is open to feedback, and is willing to learn from past experiences. Self-awareness competencies are: emotional awareness (recognizing one's emotions and their effects), accurate self-assessment (knowing one's strengths and limitations), and self-confidence (a strong sense of one's self-worth and capabilities).

Self-management is the ability to regulate distressing factors such as anxiety and anger and to restrain emotional impulsivity. Given this ability, a person will be able to hold in mind the positive feelings that arise when he/she achieves goals or inhibit negative feelings, a situation that will help to boost motivation. Competencies of self-management are emotional self-control (keeping disruptive emotions and impulses in check), trustworthiness (maintaining standards of honesty and integrity), conscientiousness (taking responsibilities for personal performance), adaptability (flexibility in handling change), achievement drive (striving to improve or to meet a standard of excellence), and initiative (innovativeness and readiness to act on opportunities).

With social awareness, a person can recognize the feelings of other people. An individual with this ability can read nonverbal cues for emotional currents from others. This is critical for job performance when the focus is on interactions with people. Social awareness competencies are empathy (understanding others' feeling and perspectives, taking an active interest in their concerns, and cultivating opportunities through them); service orientation (anticipating, recognizing, and meeting customers' needs); and organizational awareness (reading a group's emotional currents and power relationships).

Finally, relationship management is the ability to attune oneself to, or to influence, the emotions of other people. The competencies of relationship management are developing others (sensing others' development needs and bolstering their abilities); influence (welding effective tactics for persuasion); communication (listening openly and sending convincing messages); conflict management (negotiating and resolving disagreements); visionary leadership (inspiring, guiding, and commitment to individuals and groups); change catalyst (initiating or managing change); building bonds (nurturing instrumental relationships); and teamwork and collaboration (working with others to achieve shared goals).

Leadership Behaviors of Project Managers

Mintzberg (1980) identified ten managerial roles performed by project managers. Two of the roles investigated in this research are the ability to act as a leader and as a disturbance handler. A leader should influence people toward the attainment of organizational goals and should be able to manage conflicts whenever disputes or crises arise.

Thirteen leadership behaviors necessary to influence people were identified from extensive literature reviews.

1. *Visioning:* The leader communicates the vision and helps the team to clarify its goals (Boehnke et al. 1999; Katzenbach and Smith 2003).

2. *Inspiring:* This behavior is usually displayed by the communication of high expectations, using symbols to focus efforts, and expressing important purposes in simple ways (Boehnke et al. 1999; Humphreys 2002).

3. *Stimulating:* The leader helps subordinates to look at old problems from new and different perspectives. Intelligence and

Table 1. Respondents' Profile

Criteria	Value	Frequency	Percent
Position	Project manager	22	64.7
	Project engineer	12	35.3
Frequency of contact with client	Daily	16	47.1
	Weekly	13	38.2
	Monthly	3	8.8
	Others	2	5.9
Experience on construction sites (years)	≤5	4	11.8
	6–10	8	23.5
	>10	22	64.7

rationality are used in problem solving (Boehnke et al. 1999; Humphreys 2002).

4. *Coaching:* The leader pays close attention to individual differences among subordinates; and he/she teaches and advises employees with individual personal attention (Humphreys 2002).

5. *Rewarding:* The leader provides rewards and positive feedback to employees who meet agreed goals (Boehnke et al. 1999; Humphreys 2002).

6. *Punishing:* This style is characterized by giving punishment and negative feedback to employees who show undesirable and below par performance (Daft 2003).

7. *Delegating:* The basic concept of delegation is to transfer authority and responsibility to lower positions in the organizational hierarchy (Daft 2003) and to provide challenging and difficult tasks to subordinates to enhance their development (Boehnke et al. 1999).

8. *Leading by example:* The leader does the same real work and contributes in the same way like subordinates (Zimmerer and Yasin 1998; Littrell 2002; Katzenbach and Smith 2003).

9. *Sharing and open communication:* The leader shares all types of information throughout the organization, across functional and hierarchical levels (Daft 2003).

10. *Listening:* The leader grasps both facts and feelings to interpret a message's true meaning, and shifts thoughts to empathizing with others (Cacioppe 1997; Daft 2003).

11. *Directing:* The leader tells subordinates exactly what they are supposed to do. The leader sets the goals, standards, rules, and the regulations (Littrell 2002; Daft 2003).

12. *Participating:* The leader consults with subordinates before making decisions. Opinions, suggestions, and participation are encouraged in the decision-making process (Littrell 2002; Katzenbach and Smith 2003; Daft 2003).

13. *Proactive:* The leader actively seeks information from others and identifies problems at the early stage (Daft 2003).

Methodology

The questionnaire was prepared to study the benefits of EI in project management focusing on leadership styles. The first questionnaire was designed for assessing leadership styles and level of EI of contractors' project managers. The 28-question Emotional Intelligence Appraisal instrument developed by TalentSmart (2004) was adopted. The EI Appraisal instrument measured the four dimensions of EI identified by Goleman (2001) and is accepted by the EI consortium.

The project manager is the highest position on construction

Table 2. T-Test of EI of Respondents and Population

	N	Mean	Std deviation	t	df	Sig. (two-tailed)	Mean difference	95% confidence interval of the difference	
								Lower	Upper
Overall EI	34	74.29	5.48	−0.75	33	0.458	−0.7588	−2.6199	1.2082

Note: Test value=75.

sites in Thailand and the project engineer is one level lower. They are both responsible for project success and have frequent contacts with the client. Therefore, both were target respondents for this research.

Fifty-four ongoing projects in the Bangkok metropolis were selected for this study, and 34 project managers and engineers (PMEs) were available for interview. Out of the 34 sites where PMEs were available for interview, 30 pairs of questionnaires were successfully collected.

Characteristics of Respondents

Thirty-four PMEs, 22 project managers, and 12 project engineers participated in this study (see Table 1). About 47% of the PME respondents had daily meetings with project clients, 38.2% had weekly meetings, whereas 8.8% had monthly meetings. In general, the PMEs were experienced personnel as 11.8% had less than 5 years experience, 23.5% had 6–10 years experience, and 64.7% had over 10 years construction experience.

Analysis and Discussions

Average EI Score of Respondents

The average EI scores of the respondents (i.e., the PMEs) from this research is 74.29. TalentSmart (2004) measured the emotional intelligence scores of 13,248 respondents worldwide. The EI measured for respondents with a wide variety in age and job function averaged 75.

Attempt was made to compare the result from this study with the TalentSmart result. The hypothesis is as follows:

H_0=average scores from the TalentSmart study and this study are not different and

H_1=average scores from the two studies are different.

The hypothesis was tested using the T-test. Table 2 gives the result of the analysis using SPSS. The null hypothesis (significance value is greater than 0.05) cannot be rejected. In other words, the average score of emotional intelligence of the respondents in this research is equal to the average score of the greater population as measured by TalentSmart (2004).

EI and Leadership Behavior

In order to investigate the effects of EI levels on leadership behavior, the respondents were classified into two groups based on their EI scores. The first group comprised PMEs with EI scores lower than or equal to 70 and the second group comprised PMEs with EI scores higher than or equal to 77. Frequency method was used to form the groups, where 30–40% of the lowest and highest EI scores were separated to each group. The PME respondents

were asked to provide their perceptions on how often they use each behavior listed in Table 3. The hypothesis is as follows:

H_0=Leadership behavior of PME with high EI are not different from those with low EI ($\mu 1=\mu 2$) and

H_1=Leadership behaviors of PMEs with high EI are different from those with low EI ($\mu 1 \neq \mu 2$).

The result from the Mann Whitney-U is presented in Table 3.

Based on the mean scores, the result shows that PMEs with high EI scores used stimulating, rewarding, delegating, leading by example, open communication, listening, participating, and proactive behavior more than the PMEs with lower EI scores. Although there is no significant difference at the 5% level of significance, there are two significant differences at the 10% level of significance. PMEs with higher EI scores tend to use more open communication and proactive style than the PMEs with lower EI scores. This conforms to the theory of EI, which states that emotionally intelligent leaders will foster open communication. This is very significant because open communication is a key factor in organizational success as it opens up the possibility of getting the best from people (Rahim 1992; Goleman 1998). Further, proactive behavior is also important for organizations as it is essential to handle problems at the early stage.

Table 3 also shows that in most leadership behaviors, the average score of PMEs with low EI (mean=3.80) is lower than that of PMEs with high EI (mean=3.95). Although this is not

Table 3. Leadership Behavior of Respondents (Classified by the Overall EI Score)

Leadership behavior	Group 1: EI score ⩽70		Group 2: EI score ⩾77		Mann Whitney-U value
	Average	N	Average	N	
Visioning	4.09	11	4.00	14	0.647
Inspiring	4.00	11	3.93	14	0.830
Stimulating	3.91	11	4.21	14	0.344
Coaching	3.91	11	3.71	14	0.809
Rewarding	3.09	11	3.43	14	0.373
Punishing	3.18	11	3.07	14	0.767
Delegating	3.82	11	3.93	14	0.767
Leading by example	3.82	11	3.93	14	0.647
Open communication	3.55[a]	11	4.23[a]	13	0.093
Listening	3.91	11	4.00	14	0.851
Directing	4.36	11	4.29	14	0.687
Participating	4.00	11	4.36	14	0.222
Proactive	3.73[a]	11	4.29[a]	14	0.085
Total (average)	3.80		3.95		

Note: Likert scale: 1=Never; 2=Rarely; 3=Sometimes; 4=Often; and 5=Always.

[a]Different at 10% level of significance.

[b]Different at 5% level of significance.

Table 4. Correlations between Leadership Behavior and Dimensions of EI

Leadership behavior and dimensions of EI		Self awareness	Self-management	Social awareness	Relationship management	Overall EI
Visioning	Corr. coef.	0.114	0.035	−0.050	−0.096	−0.037
	sig. (two-tailed)	0.522	0.844	0.780	0.588	0.834
	N	34	34	34	34	34
Inspiring	Corr. coef.	0.103	0.030	0.054	0.127	0.033
	sig. (two-tailed)	0.562	0.867	0.764	0.473	0.852
	N	34	34	34	34	34
Stimulating	Corr. coef.	0.276	0.271	−0.015	0.276	0.260
	sig. (two-tailed)	0.120	0.127	0.933	0.121	0.144
	N	33	33	33	33	33
Coaching	Corr. coef.	0.309	0.006	−0.136	0.010	0.012
	sig. (two-tailed)	0.080	0.974	0.449	0.955	0.949
	N	33	33	33	33	33
Rewarding	Corr. coef.	0.206	0.046	0.258	0.213	0.203
	sig. (two-tailed)	0.242	0.794	0.140	0.226	0.250
	N	34	34	34	34	34
Punishing	Corr. coef.	0.035	0.091	−0.103	0.084	0.030
	sig. (two-tailed)	0.846	0.611	0.562	0.635	0.867
	N	34	34	34	34	34
Delegating	Corr. coef.	0.399[a]	−0.054	0.077	0.173	0.099
	sig. (two-tailed)	0.019	0.763	0.664	0.328	0.577
	N	34	34	34	34	34
Leading by example	Corr. coef.	0.172	0.173	0.055	−0.165	0.077
	sig. (two-tailed)	0.330	0.327	0.757	0.351	0.664
	N	34	34	34	34	34
Sharing and open communication	Corr. coef.	0.316	0.308	0.421[a]	0.037	0.326
	sig. (two-tailed)	0.073	0.081	0.015	0.840	0.064
	N	33	33	33	33	33
Listening	Corr. coef.	0.212	−0.019	0.152	−0.107	0.022
	sig. (two-tailed)	0.229	0.915	0.391	0.546	0.902
	N	34	34	34	34	34
Directing	Corr. coef.	−0.078	0.064	0.148	−0.203	−0.046
	sig. (two-tailed)	0.660	0.718	0.405	0.249	0.798
	N	34	34	34	34	34
Participating	Corr. coef.	0.234	0.178	0.296	0.081	0.230
	sig. (two-tailed)	0.182	0.314	0.089	0.647	0.190
	N	34	34	34	34	34
Proactive	Corr. coef.	0.180	0.514[a]	0.138	0.046	0.288
	sig. (two-tailed)	0.308	0.002	0.436	0.796	0.099
	N	34	34	34	34	34

[a]Correlation is significant at 0.05 level (two-tailed).

statistically significant, the total average score can, however, serve as an indicator that PMEs with higher EI score use effective leadership behavior more frequently than PMEs with lower EI score; thus indicating that higher levels of EI will enhance stronger leadership. Most effective leaders can use many styles regularly, switching to the most appropriate one in any given situation (Goleman 2001).

Correlational analysis, using Spearman's *rho*, was used to explain why EI affects PMEs' leadership behavior. This analysis attempted to discover the dimensions of EI that generate a particular leadership behavior. The correlations are presented in Table 4. Significant positive correlations were observed among (1) delegating with self awareness; (2) sharing and open communication with social awareness; and (3) proactive with self management.

As self-awareness is a key factor for realizing one's own strengths and weaknesses, people with good self-awareness are conscious of their abilities and limitations, seek feedback, and know when to work with others who have complementary strengths (Goleman 2001). Therefore, people with good self-awareness tend to delegate work to others in order to motivate and bring out the best in subordinates.

The relationship between proactive and self-management agrees with Goleman's (2001) statement that good self-management relates to proactive attitude, where a person can take anticipatory actions to avoid problems and utilize advantages from available opportunities.

The last relationship is between sharing and open communication with social awareness. TalentSmart (2004) stated that social awareness also means caring and hearing what other people are

actually saying. Caring and hearing indicates that the person is open to others. Therefore, it seems sensible that this style should relate to social awareness.

Conclusion

EI is gaining increasing acceptance as an important success factor in the workplace. In order to extend the usefulness of EI, the study focused on investigating the benefits of EI to project management in terms of leadership styles.

PMEs with higher EI scores tend to use more open communication and proactive leadership styles than PMEs with lower EI scores. Open communication is a key factor in organizational success as it opens up the possibility of getting the best from people. Proactivity is essential to tackle problems at the early stages. Therefore, a PME with high EI can stimulate team performance and innovation.

Positive correlations between leadership behaviors and EI dimensions were observed. These correlations show the dimensions of EI that generate particular leadership behavior. The study also found that EI generates delegating, open communication, and proactive behavior. These relationships support the theory of EI and these three leadership behaviors can bring positive outcomes for the organization if used properly (Goleman 2001; Goleman et al. 2002; TalentSmart 2004).

Acknowledgments

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