

CLASSIFICATION OF PERSONALITY AND EMOTIONAL INTELLIGENCE ON PROFESSIONALS WITHIN THE FIELD OF CONSTRUCTION IN BANDUNG

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Abstract: Construction project has unique characteristics. The success of the project can be measured by the effective target achievement. In construction, human resource is one of the important factors. By identifying and acknowledging the types of personality and emotional intelligence of a team of professionals within the construction field, it is expected to develop and maximize the expertise of the project team in order to achieve the success of the construction project. An interesting factor to research is the proportion type of personality and emotional intelligence of construction professionals based on the work experience and the position level within the contractor management team. This study was conducted by questionnaire to the respondents who are professionals in the construction field in the city of Bandung. Based on the result of the analysis, it seems that the level of experience and position have a considerable influence in shaping the type of personality and emotional intelligence. Professionals with experience under five years and beginner level positions tend to be ambitious, creative, always trying something new, and highly motivated in his work. As they gain experience and level positions, the mentioned characteristics changes to be someone with high leadership skills, good self-management skills, and also skillfull in managing relationship with others.

Keywords: *Personality type, emotional intelligence, level of expertise, level of position*

1.0 Introduction

Construction project has unique characteristics. The success of the project can be measured by the effective target achievement. Steers (1980) mentions that a job is effective if it can be completed on time, according to the plan that has been set. Human resources within a project has a very important role and it is a key element than any other element in an organization or company. Robbins and Timothy (2008) state that emotional intelligence is a person's ability to detect and manage information; and emotional formation is one of the factors that may affect the sustainability and effectiveness of a construction project achievement. People who knows of their own

emotions and able to properly read the emotions of other is more effective in doing a job. This also applies to the execution of construction projects, where it involves several teams are tailored to each of his field and consists of various characteristics for each individual.

Identifying and acknowledging the personality type and emotional intelligence of professionals in a construction team is one of the success of the project factor. From the summary above appears an interesting fact to be researched, is discovering the proportion of personality type and emotional intelligence of professionals within a construction project in Bandung based on work experiences and position level of the contractor management team.

2.0 Literature Review

2.1 Personality

Alvin (2010) explains the definition of personality according to what some experts believe as:

- a. M.A.W. Brower., personality is a pattern of social behavior that includes shades of strength, encouragement, desires, opinions, and attitudes of a person.
- b. Koentjaraningrat, personality is an arrangement of the elements of mind and soul that determines a person's behavior or actions.
- c. Theodore R. Newcomb, personality is an organization of attitudes that one has as a background on behavior.
- d. Yinger, personality is the overall behavior of an individual with a certain tendency system that interacts with a range of situations.
- e. Roucek dan Warren, personality is the organization of biological, psychological, and sociological factors that underlies a behavior.

Understanding the expressions from the experts above, we can conclude that the definition of personality is the traits and typical characteristics of the attitude or character representing a person, which includes the patterns of thoughts and feelings, self-concept, temperament, and mentality, which are generally in line with the general habit. Also mentioned the elements that influence a person's personality are: knowledge, feeling, and instinct..

According to Suryabrata (2006) personality development is influenced by five factors: biological heritage, natural environment, social heritage, a group of human experience, and unique experience. In addition, Robbins in Suryabrata (2006) suggests there are five basic personality factors which are basic characteristics, prenatal environment, individual differences, environment, and motivation. Lussier (2008) divides personality

into five types, which are: surgency, agreeableness, adjustment, conscientiousness, and openness to experience.

2.2 Emotional Intelligence

Goleman (2002) concluded that the achievement of performance is specified only 20 percent from IQ and 80 percent is determined by emotional intelligence. If intelligence is not accompanied good emotional processing, it does not produce success in one's life. Emotional intelligence requires feeling assessment, to learn to acknowledge, appreciate feelings in themselves and others and respond appropriately, and effectively apply emotional energy in everyday life. Emotional intelligence consists of five dimensions: self-awareness, empathy, self-management, relationship management, and self-motivation. It can be seen further in the framework of emotional intelligence on the following Table 1.

Table 1: Framework of Emotional Intelligence

No	Dimensions of Emotional Intelligence	Supporting Factor
1	Self-Awareness	Emotional Self-Awareness
		Accurate Self-Assessment
		Confidence
2	Empathy	Sensitivity Towards Others
		Listening Others
		Receive Opinions of Others
		Understand Feelings of Others
3	Self-Management	Self-Control
		Seriousness
		Adjustment
		Trustworthy
4	Relationship Management	Initiative
		Communication
		Conflict Management
		Catalyst for Change
		Bond Building
5	Self-Motivation	Teamwork
		Achievement
		Appreciation
		Self-Work
		Responsibilities
		Development

3.0 Research Methodology

This study began with a curiosity of the proportions of personality type and emotional intelligence of professionals in the construction project in the city of Bandung, which is based on his work experience and position level in the contractor management team. Thus, a literature study is done to identify the types of personality and emotional intelligence on professionals of construction building.

Further actions include a structures questionnaire for respondents which consist of three parts, which are: bio data, 25 (twenty-five) statement of personality types consisting of five statements. These statements are divided by the proportion of the statement numbers of 1,6,11,16, and 21 for a surgency type; statement numbers of 2,7,12,17, and 22 for an agreeableness type; statement numbers of 3,8,13,18, and 23 for adjustment types; statement numbers of 4,9,14,19, and 24 for conscientiousness type; and statement numbers of 5,10,15,20, and 25 for the type of openness to experience. The last part is a 25 (twenty-five) statements regarding emotional intelligence, which consists of five dimensions as seen on Table 2.

Table 2: Emotional Intelligence Dimensions

No	Dimensions of Emotional Intelligence	Supporting Factor	Statement
1	Self-Awareness	Emotional Self-Awareness	1 and 6
		Accurate Self-Assessment	11 and 16
		Confidence	21
2	Empathy	Sensitivity Towards Others	2
		Listening Others	7 and 17
		Receive Opinions of Others	12
		Understand Feelings of Others	22
3	Self-Management	Self-Control	3
		Seriousness	8
		Adjustment	13
		Trustworthy	18
		Initiative	23
4	Relationship Management	Communication	4
		Conflict Management	9
		Catalyst for Change	14
		Bond Building	19
		Teamwork	24
5	Self-Motivation	Achievement	5
		Appreciation	10
		Self-Work	15
		Responsibilities	20
		Development	25

In response to statements of part two and three, values are given using a Likert scale, with provision of the weight value as follows:

Strongly agree/ very high	: value 5
Agree/ high	: value 4
Quite agree/ average	: value 3
Disagree/ low	: value 2
Strongly disagree/ ver low	: value 1

Having given the weight value and performing the statistical tests for each item statement then the grouping or classification of data based on the highest total score is analyzed and concluded.

4.0 Analysis and Discussion

Collected respondents consisted of 41 people with a profile that can be seen on Table 3 and 4.

Table 3: Work Experience Respondents

No	Level of Work Experience	Total	Percentage (%)
1	Experience < 5 years	23	56.10
2	Experience 5 – 10 years	10	24.39
3	Experience > 10 years	8	19.51
Total		41	100

Table 4: Position Level Respondents

No	Position	Total	Percentage (%)
1	<i>Project Manager</i>	5	12.20
2	<i>Site Manager</i>	7	17.07
3	<i>Site Engineer</i>	12	29.27
4	Others (<i>Surveyor, Supervisor, Drafter, dsb.</i>)	17	41.46
Total		41	100

Performed statistical test is the test of normality using the Kolmogorov-Smirnov (K-S) method. Acquired value is A-symptotic significance for an entire statement less than $\alpha=0.05$. Meaning that it is not a normal distribution data. Further test is the validity test of using values of Corrected Item-Total Correlation. Acquired value is Corrected Item-Total Correlation for an entire statement that is greater than 0.3. And reliability test uses the Cronbach's Alpha. Obtained value is 0.84 (greater than 0.7). Meaning the entire answer to the statement is valid and reliable.

Having given the weight and performed statistical tests for each statement answered, a grouping data is done based on the five types of personality and emotional intelligence as in Table 5 and adjust the competency based on the expert of *Standar Kompetensi Kerja Nasional Indonesia* (SKKNI, 2005; SKKNI, 2006; SKKNI, 2007a; SKKNI, 2007b and SKKNI, 2007c) as on Table 6.

Table 5: Grouping Data Code

No.	Personality Type	Data Type Code	Emotional Intelligence	Data Type Code
1	Surgency	I	Self-Awareness	A
2	Agreeableness	II	Empathy	B
3	Adjustment	III	Self-Management	C
4	Conscientiousness	IV	Relation Management	D
5	Openness to Experience	V	Motivation	E

Table 6: Data Classification

No	Classification	Personality Type	Emotional Intelligence	Work Competency
1	IA	Surgency	Self-Awareness	PM, SM
2	IB	Surgency	Empathy	PM, SM
3	IC	Surgency	Self-Management	PM, SM
4	ID	Surgency	Relation Management	PM, SM
5	IE	Surgency	Motivation	PM, SM
6	IIA	Agreeableness	Self-Awareness	PM, SM, SE
7	IIB	Agreeableness	Empathy	PM, SM
8	IIC	Agreeableness	Self-Management	SE
9	IID	Agreeableness	Relation Management	PM, SM
10	IIE	Agreeableness	Motivation	PM, SM, SE
11	IIIA	Adjustment	Self-Awareness	SE
12	IIIB	Adjustment	Empathy	PM, SM
13	IIIC	Adjustment	Self-Management	SE
14	IIID	Adjustment	Relation Management	PM, SM
15	IIIE	Adjustment	Motivation	SE
16	IVA	Conscientiousness	Self-Awareness	PM, SM, SE
17	IVB	Conscientiousness	Empathy	PM, SM, SE
18	IVC	Conscientiousness	Self-Management	SE
19	IVD	Conscientiousness	Relation Management	PM, SM, SE
20	IVE	Conscientiousness	Motivation	SE
21	VA	Openness to Experience	Self-Awareness	PM, SM, SE
22	VB	Openness to Experience	Empathy	PM, SM, SE
23	VC	Openness to Experience	Self-Management	SE
24	VD	Openness to Experience	Relation Management	PM, SM, SE
25	VE	Openness to Experience	Motivation	SE

Calculation results of total numbers and percentages from the appropriate classification can be seen on Table 7.

Table 7: Total and Percentage of Data Classification

Classification	Total	Percentage (%)	Classification	Total	Percentage (%)
IA	1	2.44	IIID	3	7.32
IB	1	2.44	IIIE	2	4.88
IC	3	7.32	IVA	0	0
ID	1	2.44	IVB	0	0
IE	4	9.76	IVC	3	7.32
IIA	0	0	IVD	4	9.76
IIB	1	2.44	IVE	6	14.63
IIC	0	0	VA	0	0
IID	0	0	VB	2	4.88
IIE	0	0	VC	0	0
IIIA	0	0	VD	1	2.44
IIIB	1	2.44	VE	8	19.51
IIIC	0	0	Total	41	100

On Table 7, it can be seen that a person with VE has a type of openness to experience personality and has high self-motivation and in the form of emotional intelligence has the highest percentage of 19.51%, and types IIA, IIC, IID, IIE, IIIA, IIIC, IVA, IVB, and VA have a percentage of 0%. The results of the analysis of personality type and emotional intelligence without any grouping of data can be seen on Table 8 and Table 9.

Table 8: Proportion of Personality Type

Personality Type	Data Type	Total	%
Surgency	I	10	24.39
Agreeeeableness	II	1	2.44
Adjustment	III	6	14.63
Conscientiousness	IV	13	31.71
Openness to Experience	V	11	26.83
Total		41	100

The results of the analysis on Table 8 shows the percentage of personality type of surgency, conscientiousness, and openness to experience, which ranges from 24-32 % of the total amount of data. This may imply that personality types of professionals within the construction project in Bandung is divided fairly even between types I, IV, and V.

Table 9: Proportion of Emotional Intelligence

Dimensions of Emotional Intelligence	Data Type	Total	%
Self-Awareness	A	1	2.44
Empathy	B	5	12.20
Self-Management	C	6	14.63
Relation Management	D	9	21.95
Motivation	E	20	48.78
Total		41	100

Table 9 shows that motivation within the emotional intelligence dimension is the most prominent which shows a great value of 48.78%. This may imply that construction professionals in Bandung tend to have high motivation to work.

The analysis continues with classification of personality types and emotional intelligence based on respondents' work experience in the construction field. The results of the data classification based on the level of work experience can be seen on Table 10, Table 11, and Table 12.

Table 10: Proportion of Classification Data Based on Work Experience

Classification	Level of Experience					
	< 5 years		5-10 years		> 10 years	
	Total	%	Total	%	Total	%
I A	0	0	0	0	1	12.5
I B	1	4.35	0	0	0	0
I C	1	4.35	0	0	2	25
I D	0	0	0	0	1	12.5
I E	2	8.70	2	20	0	0
II B	1	4.35	0	0	0	0
III B	1	4.35	0	0	0	0
III D	1	4.35	2	20	0	0
III E	1	4.35	1	10	0	0
IV C	2	8.70	0	0	1	12.5
IV D	1	4.35	2	20	1	12.5
IV E	5	21.73	1	10	0	0
V B	1	4.35	0	0	1	12.5
V D	0	0	0	0	1	12.5
V E	6	26.07	2	20	0	0
TOTAL	23	100	10	100	8	100

The analysis shows that professionals within the field of construction working under five years are more likely to have high motivation and a personality type of adjustment and openness to experience. Field construction professionals who have over 10 years of

experience tendency have a personality type of surgency. However, in terms of emotional intelligence, it does not indicate a major trend over one another and it is more evenly spread. While worker of 5-10 years of experience have no special tendency in any personality type, the emotional intelligence spreads evenly in the classification.

Table 11: Proportion of Personality Type Based on Work Experience

Group	Level of Experience					
	< 5 years		5-10 years		> 10 years	
	Total	%	Total	%	Total	%
I	4	17.40	2	20	4	50
II	1	4.35	0	0	0	0
III	3	13.04	3	30	0	0
IV	8	34.78	3	30	2	25
V	7	30.43	2	20	2	25
Total	23	100	10	100	8	100

Professionals with experience of under five years have a personality type of conscientiousness and openness to experience of 34.78% and 30.43%, respectively. Professionals with experiences of 5-10 years have a 30% personality type of adjustment and conscientiousness. While professionals with over ten years of experience have a 50% of the surgency personality type. It can be interpreted that young professionals who have just entered the world of construction tend to be ambitious, disciplined, perfectionist, creative, and excited to try something new. However, with increasing work experience, personality type can change into surgency as with someone who has high leadership qualities and excellent at dealing with other people.

Table 12: Proportion of Emotional Intelligence Based on Work Experience

Group	Level of Experience					
	< 5 years		5-10 years		> 10 years	
	Total	%	Total	%	Total	%
A	0	0.00	0	0	1	12.5
B	4	17.39	0	0	1	12.5
C	3	13.04	0	0	3	37.5
D	2	8.70	4	40	3	37.5
E	14	60.87	6	60	0	0
Total	23	100	10	100	8	100

Table 12 shows that young professionals who are new to the world of construction tend to have high motivation to work. The increasing experience of work affects the dimension of emotional intelligence that is dominant, which turns a person into someone

who has good self-management skills and well versed in managing good relationships with other.

The analysis continues with the characteristics of personality types and emotional intelligence based on position level. The results of data classification based on the respondents' level of position can be seen on Table 13, Table 14, and Table 15.

Table 13: Proportion of Data Classification Based on Position Level

Classification	Position Level							
	PM		SM		SE		Others	
	Total	%	Total	%	Total	%	Total	%
I A	0	0	1	14.29	0	0	0	0
I B	0	0	0	0	1	8.33	1	5.88
I C	0	0	0	0	0	0	1	5.88
I D	1	20	0	0	0	0	0	0
I E	1	20	0	0	2	16.67	1	5.88
II C	1	20	1	14.29	0	0	0	0
III B	0	0	0	0	1	8.33	0	0
III D	0	0	0	0	1	8.33	2	11.76
III E	0	0	1	14.29	0	0	1	5.88
IV C	0	0	1	14.29	0	0	2	11.76
IV D	1	20	0	0	1	8.33	2	11.76
IV E	0	0	1	14.29	3	25	2	11.76
V B	0	0	1	14.29	0	0	1	5.88
V D	1	20	0	0	0	0	0	0
V E	0	0	1	14.29	3	25	4	23.56
TOTAL	5	100	7	100	12	100	17	100

Note for Table 13 :Position Level : PM = Project Manager, SM = Site Manager, SE = Site Engineer, Others = Drafter, Supervisor, Quantity Surveyor, etc.

Table 14: Proportion of Personality Type Based on Position Level

Category	Position Level							
	PM		SM		SE		Others	
	Total	%	Total	%	Total	%	Total	%
I	2	40	1	14	3	25	3	17.65
II	1	20	1	14	0	0	0	0
III	0	0	1	14	2	17	3	17.65
IV	1	20	2	29	4	33	6	35.30
V	1	20	2	29	3	25	5	29.40
Total	5	100	7	100	12	100	17	100

Professionals with a position level of site manager, site engineer, drafter, supervisor, quantity surveyor, etc., have the largest proportion of the personality types on conscientiousness and openness to experience. It can be interpreted that new professionals of the construction world tend to be ambitious, disciplined, perfectionist, creative, and excited to try something new. However, with the increasing level of position, personality types can change into surgency with high leadership qualities and good at dealing with people.

Table 15: Proportion of Emotional Intelligence Based on Position Level

Category	Position Level							
	PM		SM		SE		Others	
	Total	%	Total	%	Total	%	Total	%
A	0	0	1	14.29	0	0	0	0
B	0	0	1	14.29	2	16.67	2	11.76
C	1	20	2	28.57	0	0	3	17.64
D	3	60	0	0	2	16.67	4	23.54
E	1	20	3	42.85	8	66.66	8	47.06
Total	5	100	7	100	12	100	17	100

The analysis shows that construction professionals with a position level of site manager, site engineer, drafter, supervisor, quantity surveyor, etc., tend to be highly motivated in his work. The higher the level of position such as project manager then the dominant dimension of emotional intelligence can change a person to someone who has good self-management and well versed in managing good relationships with other.

In accordance with *Standar Kompetensi Kerja Nasional Indonesia* (SKKNI, 2005), a Project Manager is required to be a leader who can organize and manage the construction team. Therefore, a Project Manager should be someone who has a high leadership skills and good relationship management skills. The result shows that Project Manager of construction building in Bandung has a 40% tendency of surgency personality type, which is someone who has the leadership skills and proficient in dealing with others; and has 60% of emotional intelligence that is dominantly having good relationship management capability.

In accordance with *Standar Kompetensi Kerja Nasional Indonesia* (SKKNI, 2006), a Site Manager is required to be able to organize and manage all existing work in the construction field. Site Manager is responsible for the quality and timeliness of the completion of the construction projects. Besides that a Site Manager must be able to work with all colleagues and social environment around the project. Therefore, it takes a person with high leadership skills and good relationship management skills. The analysis shows that building construction professionals in Bandung with position level of Site Manager has a 29% personality type of conscientiousness and openness to

experience that could be described as a person who is persistent in achieving a task and very disciplined, as well as, someone who likes something new. Site Manager of a construction project in the city of Bandung has a tendency of 42.85% of high motivation in emotional intelligence. This result is not in accordance with the competencies expected of a Site Manager, where it needs a person with high leadership skills. The analysis shows only 14% Site Manager has a personality type of surgency and no Site Manager has a dimension of emotional intelligence of good relationship management skills.

In accordance with *Standar Kompetensi Kerja Nasional Indonesia* (SKKNI, 2007a), young construction professionals who is often called Site Engineer is someone who have just entered the world of construction. Professionals with this position has a duty to be able to learn a whole world of construction from start to finish so that he would subsequently be promoted to Site Manager or even Project Manager. Therefore, Site Engineer should be someone who is highly motivated and excited to try something new. In accordance with the results of the analysis that the Site Engineer of a construction project in Bandung has 33% tendency of conscientiousness personality type of someone who is disciplined and ambitious, and 25% of openness to experience personality type, which is described as someone who likes to try something new and have 66.67% of his motivation within the emotional intelligence

5.0 Conclusions

From the analysis and discussion of case studies, it can be concluded:

- a. Professionals within the construction building in the city of Bandung has a personality type of surgency, conscientiousness, and openness to experience that ranges from 24-32% of the total amount of data. This may imply that personality types of construction professionals in Bandung are divided fairly evenly to the three personality types.
- b. Motivation is a dimension of emotional intelligences that is the most prominent with 48.78%. This may imply that the construction professionals in Bandung tend to have high motivation to work.
- c. The level of experiences has a considerable influence in the formation of personality types and emotional intelligence for a construction worker. The analysis suggests that construction professionals in the city of Bandung who has zero to five years of experience, in which young professionals have just entered the world of construction tend to be ambitious, disciplined, perfectionist, creative, and excited to try something new. However, with increasing work experience, a personality type can change into surgency with high leadership qualities and proficient at dealing

with other people. Young professionals who are new to the world of construction also tend to have high motivation to work. The increasing experience of working changes the dimension of emotional intelligence into a good self-management skills and well versed in managing good relationships with other.

- d. Personality type and emotional intelligence have a considerable influence in the improvement of office construction professionals. To occupy a higher position, a worker would need to have competence in accordance with the position. Professionals with position of site manager, site engineer, drafter, supervisor, quantity surveyor, etc. have the largest proportion of the personality type conscientiousness and openness to experience. It can be interpreted that the construction of the new professionals into the world of construction tends to be ambitious, disciplined perfectionist, creative, and excited to try something new. However, with the increasing level of office, he would occupy the position of a Site Manager or Project Manager, in which a worker is required to be able to have the type of personality of surgency where someone has a high leadership qualities and good at dealing with other people. Similarly with emotional intelligence, the position of a site manager, site engineer, drafter, supervisor, quantity surveyor, etc. has a high motivation to work. The higher the position of such as a Site Manager and Project Manager then the dimensions of emotional intelligence should be good self-management skill and well versed in managing good relationships with others.
- e. Project Manager of a building construction project in the city of Bandung is sufficient to meet the Indonesian National Occupational Competency Standards that it needs someone who has high leadership skills and good relationship management skills. Although not all Project Manager meet the competency but the proportion of 40% has a surgency personality type and 60% with good relationship management skills are considered to have qualified the Indonesian National Competence.
- f. Site Manager of a construction project in Bandung has not met the standards of the Indonesian National Competence, which needs to be someone who has a high leadership skill and a good relationship management skill. The results show only 14% of Site Manager has the personality type of surgency where there is a high leadership skills and ability to establish a good relationship with others.
- g. Site Engineer of a construction project in Bandung is sufficient enough to meet the Indonesian National Competence, as in someone who is ambitious, disciplined, eager to try something new, and highly motivated in his work. The results of the analysis shows that Site Engineer or young construction professionals have a personality type of 33% and 25% in conscientiousness and openness to experience, respectively, and a 66.67% of high motivation.

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