

Development of Personality Test to Be Used With Engineers Working On Construction Project Sites in Thailand

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Abstract— This study aims to create an appropriate personality test to be used to study personality types of practitioners working in construction careers in Thailand. The findings from the study showed that the MBTI test increasingly revealed the personality types of individuals working in construction careers including relationship between personality and work performance. However, restriction in the study was “the full test comprises 126 question items considered too many with only 2 selected response items. It is not appropriate since it takes much time for completing the test. This can lead to unintentional answers and the obtained data are probably not real.” Therefore, the researcher used the 94-item MBTI Form G, Thai version with Full Test with 2 response choices to improve and get a test in a form of short version survey with 32 question items and 5 multiple choices. The obtained test was measured reliability with Cronbach’s Alpha Coefficient. The reliability was 0.886 with 20% – 25% error, considered as acceptable reliability. The test is appropriate to be used for studying personality types of individuals working in construction careers in Thailand.

Index Terms— Carl G Jung, Personality Type. Personality Test

I. INTRODUCTION

Though the study on relationship between personality traits and performance of practitioners working in construction careers is interesting and challenging, nowadays it is found that not many research studies have been conducted on such matter. Therefore if anyone asks what types of personality practitioners working in construction careers have, whether or not they have any difference of personality types, and how the difference of personality types have effect on attitude in working, such questions are challenging and enable the researcher to explore more information to find answers. With regard to a construction industry, today technologies are developed and competitions increase substantially. Consequently, engineers who are the major personnel in the construction industry need to learn and develop themselves to keep pace with considerable changes. An interesting question for being answered arises that whether or not engineers today have appropriate personality to cope up with considerable

changes. As widely known, if there are mistakes or errors in the operations performed by engineers, they will have huge effect and damage that cannot be estimated and expressed as a loss definitely for oneself and public. [1], [2], [3], [4], [5]

II. OBJECTIVE AND RESEARCH DESIGN

This research aims to create an appropriate test to study personality traits of practitioners working in construction careers in Thailand. Qualitative research technique is used to conduct the research, analyze and synthesize data, and present study results including offering guidelines for future research that can be built on and applied in an appropriate manner.

III. THEORIES AND RELATED RESEARCH

Psychologists have proposed a considerable number of types of personality explaining. The researcher employed Carl G. Jung’s personality type theory as a core of the study. According to Carl G. Jung, two main types of character can be divided into [6], [7]

1. Introverts are persons who do not enjoy socializing and being with people. They stick with their own feelings. They do not like to make a lot of friends. Sometimes they feel lonely. They prefer to stay alone. They like reading books. They feel lonely and their minds are not stable. They are highly sensitive persons and easily get angry and do not like aggressiveness and violence.
2. Extroverts are persons who are obsessed by external influence. Their goals are set realistically. They like to experience things by themselves. They enjoy socializing and being with people. They make a lot of friends and prefer to talk than listen. They are talkative. Their minds are stable. They are lively and cheerful. They can adjust themselves quite well and express their aggressive or violent parts without controlling their emotions.

Later Isabel Briggs Myers and Katharine Cook Briggs adapted the personality theory of Carl G. Jung to sort out psychological types for studying behaviors and differences in each individual, which developed to be MBTI assessment with four preferences or dimensions of personality types. Each dimension has inclination of preference of 2 opposing poles for a total of eight as follow [6], [7]

1. Attitude towards the world; how a person focuses attention and like to spend time in the outer world of people and things (Extroverts –E) and how a person focuses more on internal thoughts, feelings, and moods rather than seeking out external stimulation (Introverts – I).

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2. Perception; how a person perceives information directly from five senses. He/she stays in a real world (Sensing – S) with perception of future events or past experiences that connect in a world of dream and imagination (Intuition – N).
3. Decision-making; giving value to principles and rationale (Thinking – T) and giving value to feeling (Feeling – F).
4. Way of life; the action of having plans and rules with preference of advance preparation (Judgment – J) and flexibility that can be adjusted by situations, being open-minded to receive information and preference of not to be controlled (Perception – P).

All personalities are blended in various dimensions to create 16 types of personality, the difference of individuals in terms of attitude, perception, decision-making, and way of life as ISTJ/ ISTP/ ESTP/ ESTJ/ ISFJ/ ISFP/ ESFP/ ESFJ/ INFJ/INFP/ ENFP/ ENFJ/ INTJ/ INTP/ ENTP/ ENTJ [6], [7]

M.Scott Devin and Amarjit Sing [8] proposed to use a short version of personality test with 20 questions and 2 selected response options from the 120- full test of personality to make a test in United States Armed Forces and presented a research study on MBTI Personality and Hemisphericity of a U.S. Air Force Group.

Suthep Pongsriwat [9] developed a personality test for leadership by using the 32 questions MBIT test from the 100-Full Test. It concluded that the short version of personality test used to sort out personality types had 20% – 30% error which was acceptable

IV. RESULTS

The MBTI Form G, Thai version [10], is a full test of personality with 2 selected response options and 94 questions. In this research, the researcher modified the Thai version personality test to be a short version survey with 32 questions and 5 answer options (Multiple Choices test). The modified personality test was tried out and its outcome was measured reliability with Cronbach’s Alpha Coefficient. The reliability was 0.886 with 20% - 25% error, which was acceptable [8],[9]. Results of the reliability test and patterns of the test are as follow:

TERBLE 1 RELIBILITY STATISTICS

Reliability Statistics

Cronbach's Alpha	N of Items
0.886	42

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
149.8571	190.810	13.81338	42

TABLE 2 Personality Test

Instructions: Please mark X into the box based on your honest opinion.

- 1= strongly disagree
- 2. Disagree
- 3. Uncertain
- 4. Agree
- 5. Strongly agree

No.	Items	Level of agreement				
		1	2	3	4	5
1	I spend my leisure time talking and sharing opinion with other people.	1	2	3	4	5
2	I usually do before thinking.	1	2	3	4	5
3	I like to interact with other people.	1	2	3	4	5
4	I am a person whom other people can easily understand.	1	2	3	4	5
5	I like to express my opinion by writing.	1	2	3	4	5

CONCLUSIONS

The personality test based on the personality theory of Carl G. Jung encompasses the conceptual framework that each individual has his/her preference in each dimension. When preferences in each dimension are combined, personality traits of each individual will be obtained. The combination of personalities in various dimensions brings about 16 types of personality that are differences of individuals in terms of attitude, perception, decision-making, and way of life. All 16 types of personality are not either good or bad. Therefore, there is none of assessment for rightness and wrongness and the respondents of the test do not feel frustrated, embarrassed or worried at all.

This personality test can be applied to seek types of personality of engineers working on construction project sites for getting to know personality traits that will have effect on work performance and career selection. Thus, a study and development of a personality test to be appropriate for specifically testing with Thai samples is necessary and essential. A study on personality traits by using a short version survey personality test, a newly developed one, enables people to know four pairs of opposing preferences, i.e. how a person focuses attention and like to spend time in the outer world of people and things or how a person focuses more on internal thoughts, feelings and moods rather than seeking out external stimulation (Extraverts-E/Introverts-I), how a person receive and process new information either by using five senses or in more abstract ways (Sensing-S/Intuition-N), criteria that meet individuals’ preferences for decision-making by using thought or how individuals feel towards things(Thinking-T/Feeling-F), living a life with advance preparation or being flexible with changing situations (Judgment-J/Perception-P). Moreover, the personality test enables people to know about types of personality that can be used to summarize overall characters of persons and predict a tendency on differences of other aspects with chances of success in work. Furthermore, it can be used as a measurement to sort out types and describe of individual personality so that people can know themselves better and select right jobs that meets their own abilities and preferences. The personality test can also be applied to use

with samples working in private organizations, educational institutes, government agencies or other organizations as well.

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