

The Personality and Professional Practice Attitude of Civil Engineers in Construction Project in Thailand

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Abstract- This research presents to study the personality and attitude in the professional practice of civil engineers who have been licensed from the Council of Engineers Thailand (COE Thailand) and work in construction projects by using the personality test and the developed attitude test with a sample of 307 people. The Results of the study found that personality type of civil engineers in the construction project is the most ESTJ personality (Extraversion, Sensing, Thinking, and Judgment) at 14.4%, discovered that Civil engineers in the construction project Thailand without the SP personality group. This reflects that the work of civil engineers in the construction project has characteristics that like to use too much work expertise, cutting various steps. The Pearson Correlation relationship between gender differences and personality types differ significantly with significance in personality, sensing, and Judgment which explains that different-sex of civil engineers in construction projects. There will be differences in the issues of skills, summary issues, and discretion. Including responsibility for duty. The different importance of attitudes in the engineering law profession and professional ethics, such as construction safety law and physical health.

Keywords—*Personality Theory, Personality Test, Aptitude Test*

I. INTRODUCTION

Civil engineer careers to be successful it must have the perseverance and love for the profession, which is particularly incumbent must have the skills, technical knowledge, ethics upheld. And must have interpersonal communication with individuals and other entities. The study of personality, professional engineers working in construction projects. Be aware of defects to bring improvement to develop into something even better in the future. The study can be adapted to the individual's right to comply with professional engineers who need to develop

themselves. And keep up with changes in the current situation. [1], [2], [3], [4].

II. THE OBJECTIVES AND THE INSTRUMENTS

This research aims to study. The relationship between Personality type theories of personality Carl G Jung attitude in the practice of engineering in Civil Engineering. The civil engineer who has been licensed by the Council of Engineers Thailand (COE Thailand), control engineers and workers in the construction project. The instruments used in the study a personality test according to personality theories of Carl G. Jung developed a new condensed form (Short Version Survey) questionnaire of 32 questions and using multiple choice answers 5 Options and attitude in practice. Civil Engineering 4 in the questionnaire consists of 36 questions on attitudes engineering standards (ES) attitudes, legal, engineering, and other related laws (LAW) attitude, professional ethics (ETHIC) and attitude. The other side (OTHERS) [5], [6].

III. PERSONALITY THEORIES

Personality theories of Carl G. Jung classification (Type Theories) personality are 8: 1) a global dimension. With a focus on the world outside their own (Extraverts-E), 2) dimension of looking at the world with a focus on the inner self (Introverts-I), 3) dimensional perception. Directly from the senses (Sensing-S), 4) recognition that forecasts the future. Or from past experience (Intuition-N), 5) dimension of the decision. The main rationale (Thinking-T), 6) The decision by the feeling (Feeling-F), 7) dimension of life. A pattern rules (Judgment-J), and 8) lifestyle. Flexibly adapted to the situation. (Perception-P) would be a mix of personality in a different dimension to the personality

types, 16 models (16 Types), which is the difference of the attitudes, perceptions, decisions, and way of life is ISTJ. / ISTP / ESTP / ESTJ / ISFJ / ISFP / ESFP / ESFJ / INFJ / INFP / ENFP / ENFJ / INTJ / INTP / ENTP / ENTJ. [7], [8], [9], [10], [11], [12].

IV. SAMPLING

The samples are 380 engineers have engineer license from the Council of Engineers Thailand (COE Thailand) who working in construction project sites following the show in Table 1.

Table 1 Number of samples

Field of Engineering	Sample		
Civil Eng.	305	-	-
Electrical Eng.	-	33	-
Mechanical Eng.	-	22	-
Environmental Eng.	-	17	-
Industrial Eng.	-	2	-
N/A	-	-	1
Total	305	74	1
	380		

Table 2 Field of civil engineering work in Professional Engineering and Controlled Professional Engineering B.E.2550 (2007)

A field in Professional Engineering and Controlled Professional Engineering B.E.2550 (2007)	N	%	Personality Types
Design and Calculation	147	38.7	INFJ
Construction Supervision	100	26.3	ESTJ
Project Management	58	15.3	ESTJ

Table 3 Type of civil engineering work in Professional Engineering and Controlled Professional Engineering B.E.2550 (2007)

Type of Civil Engineering work in Professional Engineering and Controlled Professional Engineering B.E.2550 (2007)	N	%	Personality Types
Buildings	234	61.6	ESTJ
Highway and Railway	33	8.7	INTJ
Water resource and Irrigation	14	3.7	ESTJ

Table 4 Business type in construction project

Business type	N	%
Contractor	316	83
Consultants	45	12
Government Agencies	19	5

V. RESULTS

1) Results showed that the sample of 380 engineers who work on construction project sites comprised 305 civil engineers, 33 electrical engineers, 17 environmental engineers. 78.2% of them were male and most of them aged 26 – 30 years (26.1%). They graduated with a

bachelor's degree (68.7%) and most likely possessed an active license for controlled professional engineering, the associate engineer level (82.4%). They performed their tasks in accordance with Ministerial Regulation on a Determination of Field in Professional Engineering and Controlled Professional Engineering B.E.2550 (2007) on design and calculation (38.7%), construction supervision or manufacturing (26.3%), and project management (15.3%).

2) The analysis of data Found that personality traits of the sample by professional engineering concluded that civil engineering, Electronic Engineering, Environmental Engineering Most of personality, personality and decision logic (T: Thinking) were found to have an average rate of 81.5, 71.67 and 82.06 respectively, Mechanical engineering percent majority 95.68 personality types work using Plan (J: Judgment) The analysis of data Found that personality types of the civil and electrical engineers in construction projects that are most ESTJ 14.4% and 26.7% for mechanical engineers. The analysis of data Personality of Mechanical Engineering and environmental construction projects that are most ENFJ 40 and 50%, respectively.

■ Civil Eng. ■ Electrical Eng. ■ Mechanical Eng. ■ Environmental Eng.

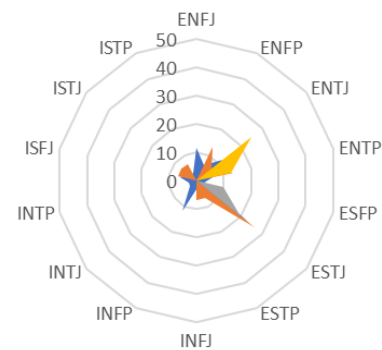


Fig. 1. Personality Types of Engineers in Construction Project

3) Data analysis results in types of personality types of civil engineers working on construction projects from the sample of 305 persons revealed that they most likely had an ESTJ personality (14.4%), followed by INFJ and ISTJ personalities by 12.8% and 10.5%.

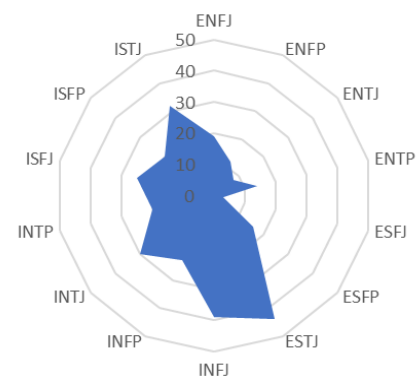


Fig. 2. Personality Types of Civil Engineers in Construction Project

Table 5 Personality Types classify by Engineers License

Engineers License from COE Thailand	Personality Types
Associate Engineer	ESTJ
Professional Engineer	ISFP
Senior Professional Engineer	ESFP

- 4) Personality Type of civil engineer on construction projects that are ESTJ (Extraversion, Sensing, Thinking, and Judgment) looks like a reasonable man. Analytical decision to organize facts well. Planned actions as well as to advance an operating no personal relationships, too. When looking at the overall personality are 2 types that are not found in the personality of a civil engineer in construction projects is ISTP and ESTP, which belongs to the SP, which is typical behavior of a personality SP is a free spirit and action. Like dealing with the true flexibility so generous, so bargaining behavior that is missing from a civil engineer on the project construction is the lack of a decision. And cannot work in an environment with strict regulations as well. The less important disclosures to others excessive use of Savvy Make the cut at various stages of the decision should be guided and not be harsh to the feelings of others.
- 5) Materialism attaches to test the relationship between attitudes in the civil engineering professional branch engineer found that the trends in construction projects that cater to. Legal engineering will greatly tend to focus on the moral level, in contrast to.
- 6) Test the relationship between attitudes in the engineering profession Civil finds a trend those civil engineers in construction projects that cater to the standards. Engineering greatly usually people prefer more highbrow.

Table 6 Descriptive Statistics between Personality Types and Professional Practice Attitude of Civil Engineers

	Mean	Std. Deviation	N
ES	3.5007	.47765	255
LAW	3.3917	.60464	254
ETHIC	3.6448	.70021	252
OTHERS	3.6472	.61551	255
E	3.6615	.79132	305
I	3.7680	1.25872	305
T	3.9738	.54309	305
F	3.8180	.98513	305
S	3.9803	.54375	305
N	3.8025	.61682	305
J	4.0279	.50941	305
P	3.5713	.49921	305

- 7) Analyzes the relationship. The difference between sex with a personality (Traits) of Civil Engineers found that gender differences in civil construction projects. To pay attention to recognizing the uniqueness of each event. A summary of the procedure and the fact carefully studied. Including the responsibility to plan, including the organizing of things. The preparations live desk appliances.

Table 7 Group Statistics between sex and Professional Practice Attitude of Civil Engineers

	SEX	N	Mean	Std. Deviation	Std. Error Mean
ES	M	206	3.5218	.47848	.03334
	W	40	3.3844	.49710	.07860
LAW	M	204	3.4603	.49683	.03479
	W	40	3.0000	.91175	.14416
ETHIC	M	202	3.7535	.58803	.04137
	W	40	3.0425	.91003	.14389
OTHERS	M	206	3.7015	.54765	.03816
	W	40	3.3062	.85623	.13538

- 8) Analysis of different relationships. The difference between sexual attitudes of Civil Engineers. The engineer found a gender difference. The civil engineer on construction projects to care about Engineering law and other related laws such as Act, regulations requiring professional engineers, professional engineering, and control engineering. The regulations of the Council of Engineers for the ethics of professional engineering health safety in construction project and tolerance indifferent.

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