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**AN EMPIRICAL STUDY ON ATTITUDE OF THAI
MERCHANT MARINE STUDENTS TOWARD
MARINER PROFESSIONS**

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By

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A dissertation submitted to the Graduate School of Korea
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Approval Page

This dissertation, which is an original work undertaken by Sarawut Luksanato in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Shipping Management, is in accordance with the regulations governing the preparation and presentation of dissertations at the Graduate School in the Korea Maritime University, Republic of Korea.

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초록

본 연구의 목적은 태국의 해사사관생도들의 태도변화를 교육기관, 거주지, 부모 직업, 부모의 월 소득, 동기 그리고 해사전문분야 정보습득 별로 각각 정서, 인지, 행동의 요인 측면에서 비교·분석하고 있다.

본 연구의 샘플은 태국의 해사관련 기관에서 교육받고 있는 867명의 학생들을 대상으로 수집하였다. 데이터 수집에 이용된 설문지는 총 30 문항이며, 5점 척도 질문으로 구성되어 있다. 데이터 분석에 사용된 통계방법은 평균, 표준편차, t-test, 일원분산분석(one-way ANOVA) 과 다중비교(fisher's LSD)이다.

본 연구의 결과로 태국 해사사관생도들의 직업교육에 대한 태도는 모든 측면에서 높게 나타났다. 특히 학생들의 교육기관별로 그 결과는 정서, 인지, 행동의 요인인 모든 측면에서 다르게 나타났다. 또한 학생들의 거주지에 따라서는 인지 요인에서 다른 영향을 보였으며, 정서와 행동의 요인에서 각각 비슷한 결과가 나타났다. 부모 직업 면에서는 3 가지 측면에서 비슷한 결과를 보였다. 부모 월수입면에서는 인지 요인과 정서 요인 측면에서는 다른 영향을 보였으며, 행동 요인 측면은 비슷한 태도를 보였다. 마지막으로 동기 면에서는 3 가지 모든 측면에서 비슷한 결과가 나타난 반면, 해사전문분야 정보습득 면에서는 3 가지 측면에서 모두 다른 결과가 나타났다.

Abstract

The objective of this study is to compare the attitudes of merchant marine students of Thailand in 3 aspects; cognitive, affective and behavioral which are classified by institutes, domiciles, parent's occupation, parent's income per month, motivation and information receiving concerning mariner profession. The samples are 867 students in maritime institutes of Thailand. The instrument implemented in collecting data is a set of 30 five rating scale questionnaires. The statistical methods applied in analyzing the data are mean, standard deviation, t-test, one way analysis of variance and fisher's LSD.

The results of this research show every aspect of attitude in vocational education of Thai merchant marine students is high level. Attitudes toward mariner profession of Thai merchant marine students in terms of different institutes are different in all aspects. In terms of different domiciles, it shows different attitudes in affection and similar attitudes in cognition and behavior. In terms of parent's occupation, it shows similarity in all aspects. In terms of parent's income per month, it shows different attitudes in cognition and affection, however, behavior is similar attitude. In terms of motivation, it shows similarity in all aspects. In terms of information receiving concerning mariner profession, it shows different attitudes in all aspects.

Dedication

My dissertation is dedicated to my beloved and thank for your love and willpower.



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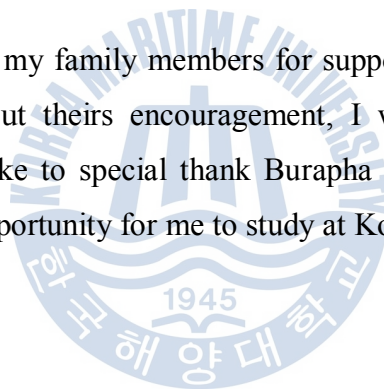


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Chapter 1 Introduction

1.1 Background

Thailand is the one of ASEAN member with growth rate of economic growth at the forefront of the group. Although there were some interruption from the global finance crisis in 2008, directional trends have always been better. In the first half of 2010, Thailand's imports of US\$ 94,975.2 million and exports of US\$100,644.3 million, totaling US\$ 195,619.5 million (Information Technology and Communication Center, Office of the Permanent Secretary Ministry of Commerce, 2010). Especially, the results of ASEAN Free Trade Area agreement among 10 ASEAN countries lead to the expand of Thailand's trade with 9 countries of ASEAN members in first quarter of 2010, over the same period last year representing 52.0 percent and 20.4 percent of Thailand's total trade with the world trade. Thailand's export to ASEAN increased 67.3 percent and Thailand's import from ASEAN increased 33.88 percent (Department of Trade Negotiations). Particularly, in the second half of the year 2010, the average growth rate of 10.6 percent year on year which is the highest rate in the last 15 years (Kasikorn research center, 2010).

From economic growth of Thailand continued previously bring about international trade became core of the Thai economy. The need to rely on ocean transportation as a major because the average cost per unit minimum, and ability to transport a lot at a time compared to other mode of transport. The import and export of Thailand more than 90 percent by volume and more than 80 percent by value depend on ocean transport as a major, but Thai merchant fleet has its share of the cargo by ocean only 10 percent of import and export volume of the country. Thailand has to pay foreign currency for freight cost to overseas fleet each year not less than US \$17,000 million (Marine Department, 2009). Thai merchant fleet is very small size compared to the world merchant fleet and was held in position 35th with a total of 343 fleets and percentage of world deadweight tonnage at 0.33% (Maritime review, 2010) which its size of merchant fleet is smaller than many ASEAN countries.

Thai government recognized the problem and defined 6 strategies for maritime development as follows; 1) Increasing proportion of ocean cargo transportation by nation fleet. 2) Coastal and river transport in country 3) Shipyard development for supporting the expansion of nation fleet size and strengthen national security 4) Seaport development to promote trade and multimodal transport appropriately and in line with demand. 5) Development and raising the standard of the Maritime personal 6) Strengthening international transport operator and developing an integrated network linkage of multimodal transport business (Marine Department, 2009).

It shows that maritime personal development is one of the main strategies. The fifth strategy intended to focus on creating the shortage of personnel and developing capabilities of maritime staff to meet international standards and adequate for market's demand. The guideline for short term operation is to exempt income tax for the Thai crew (treated as special labor) and cover other types of income besides salary paid. For long term operation is laying down measures in deregulation such as to standardize in shuffling officer from Thailand with officer who is working on the ship in foreign country. Mariner profession is a professional career in a major role in developing and enhancing the competitive of Thai merchant fleet.

The career has special character and working place is on remote area. Therefore, Thai people are very seldom having the knowledge and understanding the working on merchant ship because they are accustomed to working or living on mainland. Especially, Thai culture and society are related to family closely, including residential and community values will influence career choices (Raob, 2008). Frequent travel and long time travel may easily cause anxiety and loneliness. Thus, merchant marine personal who work on board in long period might have a high tolerance both physical and mental. Working on merchant ship has many obstacles such as wave and windy, routine work, language and cultural diversity of people on the ship. One of the important factors that causes Thailand a shortage of mariner profession is Thai's working period is shorter than many other countries, on average less than 10 years (Capt. Bundeck, 2009). When Thai officers work in a while, they will shift themselves to work in other professions that are close to the family. Therefore, government and maritime institutes seek for the direction to bring potential Thai youth to study and

carry out more mariner profession, and accelerate the development of qualified mariner profession increasingly, as well as to search for measures to extend working period as long as possible. For example, the government has assigned Royal Thai Naval Academy which has major responsibility in developing mariner profession to the Navy to join improving merchant mariner for working on merchant ship because the academy is ready and capable to operate.

The researcher offers an opinion that solving the problem might be considered at the beginning of the problem by starting at human resource which links to the personal's attitude toward mariner profession. Human resource is generally accepted as the most valuable resources which affect the development of the country. Beside the qualification and specialist to perform the duty, another important attribute of human resources which should be enhancing is the positive attitude toward working. Due to attitude is the motivation that direct the personal's behavior, if a person has a positive attitude towards their own work, it is likely that the operation will be successful in more efficiency. Having a positive attitude will enable the professional knowledge and skills that have been educated properly. Works done with love and a positive attitude towards the job are better than the work done without love and have a negative attitude to the profession (Pattear, 1996). There are also several other research suggest that key factor that cause university student must have to leave before graduation is having a bad attitude towards the faculty they are studying and their career have to do after graduation in studied field.

It is obviously that attitude is importation and affects the success in future profession. Therefore, the researcher is keenly interested to study the attitude of merchant marine student from 3 marine institutes in Thailand which developing mariner profession namely, 1) Merchant Marine Training Center, (Marine Department, Ministry of Transport), 2) Burapha University, (Logistics Faculty), 3) Kasetsart University (International Maritime College). The study results can be information for government and marine institutes which develop mariner profession in Thailand to utilize them in various fields for improving mariner profession and enhance increasing the competitiveness of Thai merchant fleet in future.

1.2 Purpose of the Study

To study attitude of Thai merchant marine students toward mariner profession in all aspects namely aspect of cognition, aspect of affection, and aspect of behavior. And also to compare attitude of Thai merchant marine students toward mariner profession in condition of different variables namely institutes, domicile, parent's occupation, parent's income per month, motivation to study in merchant maritime, and Mariner profession information acknowledgment.

1.3 Significance of the Study

In the past, there was no studying about attitude of Thai merchant marine students of all marine institutes in Thailand toward mariner profession. There were studied in limited scopes in some institutes only. Therefore, this study would be an advantage to the government to apply it to plan and determine strategy to develop merchant marine officer which would affect the potential development and raise competitiveness of Thai merchant fleet.

Marine institutes could adapt the results of studies to be development guideline in terms of attitude and honor toward mariner profession of Thai merchant marine students. These would influence and encourage potential development in terms of their profession in future. Furthermore, marine institutes could also apply the results of studies to set strategies to influence talented young people in different regions of Thailand into mariner professions to have qualified marine officer in future.

1.4 Scope of the Study

The scope of this study was to examine between July and December 2010. It was a study of attitude of Thai merchant marine students from 3 government institutes in Thailand that educate merchant marine officer. The samples were from Merchant marine student of Merchant Marine Training Center, Marine Department, Ministry of Transport 476 samples, Merchant marine student of Logistics Faculty, Burapha

University 64 samples and Merchant marine student of International Maritime College, Kasetsart University 327 samples, total of 867 samples.

1.5 Definition of Terms

Merchant marine students

This study refers to Thai students who are studying in merchant mariner in officer level.

Maritime institutes

This study refer to merchant marine institutes in Thailand namely 1) Merchant Marine Training Center, 2) Logistics Faculty, Burapha University, and 3) International Maritime College, Kasetsart University.

Attitude

It is a hypothetical construct that represents an individual's degree of like or dislike for something. It is generally positive or negative view of a person, place, thing, or event. Attitude on this study has three components namely cognitive, affective and behavioral and also focus on positive or negative views of Thai merchant mariner student toward their career.

Mariner profession

Who work on board ship at sea, for this study refers to in officer level.

Attitude in cognition

It implies thoughts, beliefs, and ideas about something. When a human being is the object of an attitude, the cognitive is frequently a stereotype.

Attitude in affection

It means feelings or emotions that something evokes such as fear, sympathy, and hate.

Attitude in behavior

It represents tendency or disposition to act in certain ways toward something. Emphasis is on the tendency to act, not the actual acting.

One way analysis of variance

It is the simplest form of a technique for analyzing the way in which the mean of a variable is affected by different types and combinations of factors.

Fisher's least significant difference

It is a statistical procedure that determines if the difference found between two treatments is due to the treatment or if the difference is simply due to random chance.

1.6 Structure of Dissertation

This dissertation is divided into six chapters. Chapter one is the introduction of this study. Chapter two presents Thailand maritime industrial and marine institutes. Chapter three theoretical review on attitude, vocational choice, vocational satisfaction and vocational development respectively. Chapter four presents the research methodology. Chapter five presents result of data analysis. Finally, chapter six concludes this dissertation and suggests the recommendations and further research.

Chapter 2 Thailand Maritime Industry and Maritime Institutes

2.1 Thai Merchant Fleet

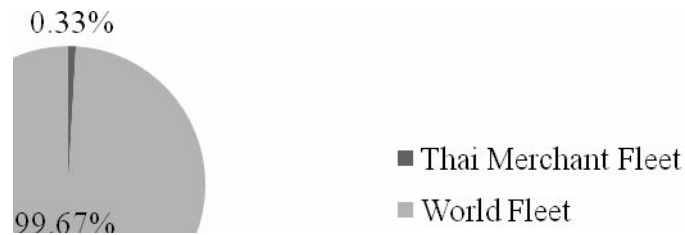
2.1.1 Current Situation

According to Maritime review 2010 at 1 January 2010, there were total of number vessels in the world 38,412 ships in service whereas merchant Thai fleet, there were total of number vessels 343 ships-298 national flag and 45 foreign flag or 0.89 percentage of world total. In the same way, total deadweight tonnage of the world are 1,165,720,163 dwt whereas total deadweight tonnage of merchant Thai fleet are 3,793,556 dwt or 0.33 percentage of world total.

Figure 2-1: Thai Merchant Fleet & World Total by Number of Vessels



Figure 2-2: Thai Merchant Fleet & World Total by Deadweight Tonnage



2.1.2 Thai Shipowners' Association

Thai Shipowners' Association (TSA) is the core private organization of sea transportation in Thailand. The seeds that would later bloom into the Thai Shipowners' Association were planted at a 1973 meeting of the Association of Southeast Asian Nations (ASEAN). At this point ASEAN has only five members - Indonesia, Malaysia, Philippines, Singapore and Thailand - all of them fledgling economies in the early 1970s. In order to improve their status and become major players on the world stage, they agreed that they needed to not only standardize their key industries but also enhance cooperation between their private sectors. Among the many collaborative efforts spawned that year, was the birth of the Federation of ASEAN Shipowners Association, which was charged with standardizing and strengthening the member nations' shipping and marine transportation industries. ASEAN astutely noted that some of its members weren't as advanced in shipping and needed assistance in developing marine logistics. Hence, it envisioned a federation in which the countries with the highest tonnage would assist and undertake marine logistics for their neighbors with lower export volumes. Since a strong shipping industry is a key component of export-driven economies like those in Southeast Asia, the association was convinced that all of its members would prosper if they worked hand in hand assisting on another.

At the time Thailand had only the Bangkok Shipowners and Agents Association (BSAA) operating as the representative body for shipper and freight forwarder. But a

new organization was needed, one that could partner with similar associations in ASEAN. After the ASEAN meeting in Kuala Lumpur the Thai government, intending to form a reciprocal shipowners' trade group, commissioned the Thai Maritime Navigation Co., Ltd. which would operate as state owned enterprise under the Transport and Communication Ministry. Thai Maritime was given the charge of creating the Thai Shipowners' Association within six months. Finally, TSA was registered as a bona fide trade association on October 7, 1975 and it located its offices on Bangkok's Rajdumnern Road on the third floor of the Office of Permanent-Secretary of the Transport and Communication Ministry. Appointed to the charter board of directors were Rear Admiral Bunpot Sudsawaeng, Mr.Yongkit Sotikul and Mr. Waree Weerungkul. Having proven himself to the membership and government as man of action and intelligence, Rear Admiral Bunpot Sudsawaeng was appointed chairman at the association's first meeting.

Nowadays, Thai Shipowners' Association (TSA) has total of number vessels 366 ships, total deadweight tonnage 3,576,092.07 dwt, 862,912.41 nrt, and 2,186,553.79 grt, respectively.

Table 2-1: Ships Detail of Thai Shipowners' Association

Vessel Type	Ship	D.W.T.	N.R.T.	G.R.T.
Asphalt Tanker	6	23,249.48	6,456.00	18,757.00
Barge	1	113.05	46.00	85.00
Bulk Carrier	36	1,205,189.00	388,942.00	739,609.00
Bunker Barge	6	813.00	774.70	1,251.00
Chemical	1	6,712.00	2,063.00	4,357.00
Chemical Tanker	2	14,327.00	4,074.00	11,362.00
Chemical Tanker (IMO 2)	2	14,249.74	4,064.00	11,366.00
Clean Petroleum Product Tanker	3	42,246.00	11,576.00	27,403.00
Clean Tanker	9	19,158.01	6,804.81	9,410.22
Clean Tanker,Barge	1	519.40	265.56	390.53
Coastal Container Feeder	1	1,600.00	481.00	1,516.00

Vessel Type	Ship	D.W.T.	N.R.T.	G.R.T.
Container	7	27,488.00	9,190.20	18,475.92
Container Barge	2	15,600.00	-	7,810.00
Crew Boat	12	-	754.00	2,430.00
Dirty Petroleum Product Tanker	1	95,951.00	24,933.00	52,603.00
Dock Cargo Barge	1	10,000.00	5,036.00	5,925.00
Double Hull/Oil Product	1	3,500.00	2,118.00	993.00
Ferry	18	2,656.60	6,722.08	22,512.50
FiFi/Anti-Pollution Work Boat	1	-	-	41.43
Flat Top Barge	2	17,400.00	1,858.00	6,196.00
Floating Crane Ship/120 Tons	1	926.74	427.00	772.00
Floating Crane Ship/300 Tons	1	-	550.00	1,012.00
Gas Carrier	6	8,578.38	3,768.00	12,423.00
General Cargo	48	381,367.72	142,521.02	263,953.20
Local Trade (Coastal)	1	3,303.79	904.00	1,598.00
LPG	1	1,005.00	343.00	1,063.00
LPG Carrier	5	3,158.93	848.00	4,646.00
LPG Tanker	2	2,247.39	906.40	1,908.60
Multi-Purpose	1	8,739.00	2,595.00	7,760.00
Multi-Purpose Cargo Ship	3	58,989.00	22,846.00	44,691.00
None	7	-	-	-
Oil & Chemical	3	4,336.00	1,103.00	2,881.00
Oil & Chemical Tanker	4	23,964.92	7,994.00	15,267.00
Oil and LPG Tanker	5	4,202.69	2,079.91	3,814.51
Oil Tanker	86	692,572.97	183,953.54	397,273.65
Oil Tanker and Chemical Tanker IMO II / III	3	11,440.71	3,160.00	6,865.00
Oil Tanker, Barge	3	840.50	430.67	632.31
Pilot Boat	4	-	19.20	119.97

Vessel Type	Ship	D.W.T.	N.R.T.	G.R.T.
Pilot/Launching Boat	4	-	-	131.81
Product Tanker	4	7,418.54	2,303.01	3,326.54
Rope Handing	2	-	-	18.26
Rope Handing/Utility Boat	3	-	-	34.66
Tanker	9	15,857.77	4,815.71	8,333.11
Tug	5	-	412.80	1,364.00
Tug Boat	7	-	158.80	983.58
Very Large Crude Oil Carrier	3	830,310.60	-	444,471.00
W	7	-	-	1,319.18
W/F/OT	4	-	-	131.30
W/FF/F/DCS/OST	6	-	-	1,434.84
W/FiFi	2	-	-	201.52
W/FiFi/F	2	-	-	460.68
W/FiFi/F/DRY	1	-	-	257.51
W/FiFi/OT	3	-	-	854.16
Work/Survey Boat	1	-	-	45.80
Coastal Ship	3	7,850.00	1,642.00	5,495.00
Restrictive Ship	3	8,209.14	2,973.00	8,517.00
Total	366	3,576,092.07	862,912.41	2,186,553.79

2.2 Thai Ship Officer

2.2.1 Current Situation

The health of the world economy, and the very functioning of the world as we know it, depends on merchant seafarers. About 90% of world trade is transported by sea (International Shipping Federation, 2010). The international merchant fleet employs some 1,250,000 seafarers at sea. A further 250,000 are estimated to be on

shore, in training, on leave or looking for work. It is believed that more than 60% of seafarers come from a catholic christian background. Modern ships have between 16-25 crews, often with four or more nationalities on board. English would be the common language, yet for most this would be their second or third language (Lane A D, Obando-Rojas B, Wu B, Tasiran A 2002).

In 2005 BIMCO and ISF, assessed the current shortfall of officers that the number of officers in the global commercial maritime fleet was 404,000 against a demand for 420,000-implying a deficit of 4%. By 2005, the situation had improved, according to the study, with 466,000 officers against a demand for 476,000-with a deficit of 2%. Ratings were in plentiful supply. In 2000, supply was 823,000 and demand 599,000. Nevertheless the perception of a major shortage ruled by 2008, and because of the industry's ordering binge, cries of an impending crisis emerged. And in 2009 Drewry Shipping Consultants, reported in 'Manning 2009', published in February of that year identified officer supply in 2009 at 517,000, a rise of 11% since 2005 and 28% since 1990. One third of the officers in 2009 were Asian-led by China, the Philippines and India-while eastern European officers represented one quarter of the total. Drewry estimated the shortfall to be numerically much higher than that reported by the ISF and BIMCO in 2005, at 33,000.

In 2010 the worldwide supply of seafarers is s estimated to be 624,000 officers and 747,000 ratings, while the current worldwide demand for seafarers is 637,000 officers and 747,000 ratings (Maritime Sun News, 2010). Some 20% of all merchant seafarers come from the Philippines making it the largest single supply nation to the world's merchant fleet. Despite perceived competition from other supply states, the numbers of Filipino seafarers onboard are increasing. According to government sources, in 2006 there were 260,084 Filipino seafarers deployed onboard. On the other hand, in 2005 the world supply of seafarer in officer level are 422,479 (M. Kimura, ESCAP Consultant) whereas supply of seafarer in officer level from Thailand is only 1,333 or 0.32 percentage of world supply. In case comparative with ASEAN countries, Thailand supply the seafarer in officer level around 1.53 percentage.

Figure 2-3: Thai Ship Officer Supply & World Supply

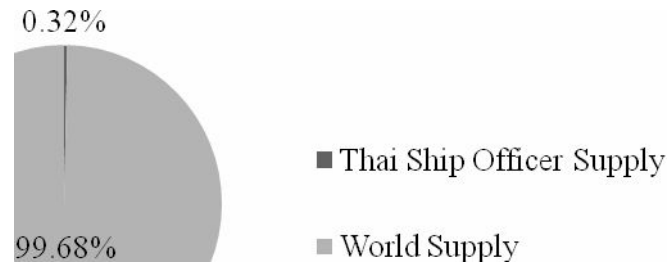


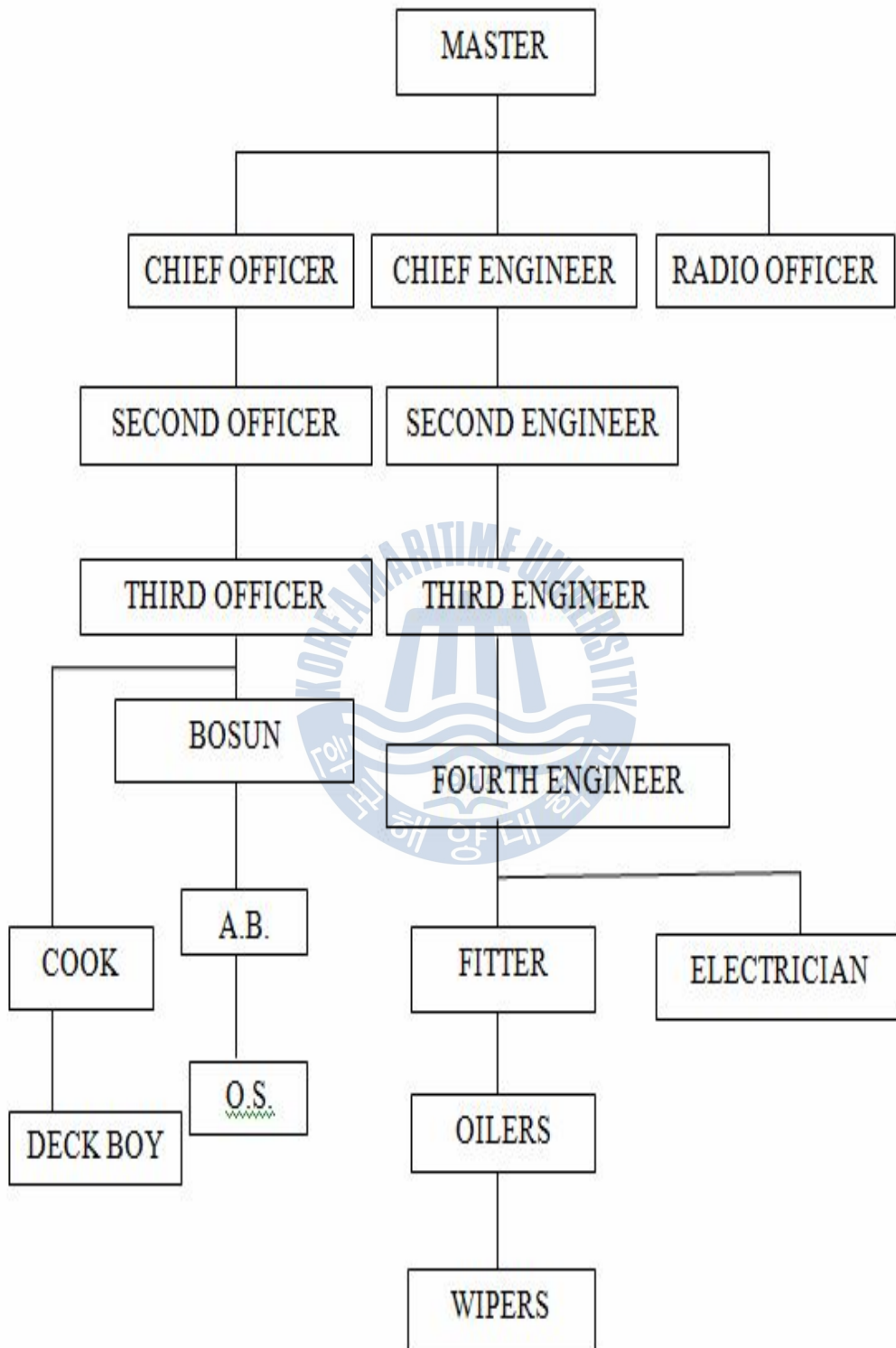
Figure 2-4: Number Person of Ship Officer Supply in ASEAN Countries



2.2.2 Ship Organization and Officer Duties

Staffing of Thai merchant ship is standard pattern similar to merchant fleets in other countries. Functions are divided into 2 levels; Officer and Crew. Scope of job and responsibility of officer level are separated into Deck officer and Engineer officer. Master or Captain is the highest superior on the ship and manage by hierarchy of command.

Figure 2-5: Chain of Command



Deck officer onboard a ship needs to function in the self-contained environment of a ship at sea and must also demonstrate additional skills such as fire fighting and damage control, boat handling and the ability to carry out rescue operations in an emergency. Further, ships are required to remain in operation 24 hour a day, 365 days a year. All this make the deck officer's job extremely challenging and demanding. They are responsible for the navigation of the ship, the loading/discharging of cargo, radio communication and the control/safety of the crew and the passengers. Due to the global nature of the shipping industry, to be eligible for employment on board ships, deck officers must be trained in conformity with the requirements of the International Maritime Organization and certified by a recognized authority with respect to competency level.

Master

The Master is in overall command of a Merchant ship and is responsible for the safety, efficiency and commercial feasibility of his ship. His duties are navigational at sea. While in ports he is responsible for cargo operations. He maintains orderliness and discipline in the ship. He ensures safety of passengers, crew and the cargo and assigns organizational duties for ship's operation, navigation and maintenance of the ship. He acts as the ship owner's representative with all outside parties. He implements the company's policies for operations and safety and the commercial instructions that may be given by the owners time to time. He is also the legal head of the ship.

Chief Officer

The Chief Officer comes after the Master in deck department; that is he is the second in command on the ship and the head of the deck department. He is the executive officer the deck department. He assists in navigation and is in charge of all maintenance, cargo loading and discharge. He keeps watch at sea from 0400 to 0800 hours and from 1600 to 2000 hours. The chief officer has three important functions. Firstly he is responsible for maintenance of hull, machinery and equipment coming under deck department. The chief officer may seek the assistance of the engine department if required. He is responsible to check whether the safe working practices are followed on board and fostering the safety culture trough drills, exercises, training

etc. and he is responsible for planning, loading, securing and discharging cargo carried by the ship. He is also given the duty as ship security officer in most of the ships.

Second Officer

The Second Officer comes after the Chief Officer. He keeps watch from 1200 to 1600 hours and from 0200 to 0400 hours. He also keeps a deck watch in ports. He is in charge of navigation and medical care and works under the order of Master and Chief Officer. He plans the voyage, ensures all navigational publications are in order, charts are corrected, navigational equipments such as Radars, Gyro compass, echo sounding devices are well maintained and are operational. He also acts as the radio communication Officer as required by the Master.

Third Officer

The Third Officer comes after the Second Officer. He keeps watch from 0800 to 1200 and from 2000 to 0000 hours. He is responsible for cargo supervision in ports. He acts as a signal Officer in charge of all signaling equipment. He looks after the maintenance of the life saving appliances and fire fighting equipments under the instructions of Chief Officer. He may also act as the radio communication Officer if required by the master.

In Engineer department on board ship, the engineer officers are responsible for the maintenance of ships systems by chief officer is the head commander of department.

Chief Engineer

Chief engineer officer is in over all charge of the ships engine room and plant. He is responsible to the ships master and the company technical superintendent for its upkeep and maintenance. He is responsible for record keeping, all ISM items, the effective and economical ordering of stores and spares. He is paramount responsible for keeping the ships master advised on the availability of ships engines and equipment in order that the ship may at all times be safely run.

Second Engineer

Second engineer officer is responsible to the chief engineer officer for the general running and over all maintenance of the engine room and all ships plant. He is in effect the "Working boss" of the engine room.

Third Engineer

Third engineer officer is primarily responsible for the ships auxiliary engines and power generation. If carried on board the ships electrical officer is responsible for the electrical power distribution. Similar to the fourth engineer officer the third engineer officer will have secondary duties which may include refrigeration and air compressors. Other duties will be as required by the second engineer officer and Chief engineer officer.

Fourth Engineer

Fourth engineer officer has primary responsibility for the fuel systems, which includes purifiers and bunkering of the ship under the supervision of the chief engineer officer. He will have several secondary duties which may include safety systems and other duties as required by the chief and second engineer officer.

Deck officer and engineer officer will be considered to work on Thai merchant marine fleet if they are able to pass the Certificate of Competency for Merchant Marine Officers of Marine Department, Ministry of Transport. In accordance with International Maritime Organization (IMO), graduated Thai merchant marine students needed to successfully attend all training courses by Marine Department to be qualified in applying for Certificate of Competency for Merchant Marine Officers. Each course is specified to be fit with each position as summarized on below table.

Table 2-2: Training Course for Officer Certification of Marine Department

DECK DEPARTMENT	ENGINEER DEPARTMENT
-----------------	---------------------

<p style="text-align: center;"><u>Master / Chief / Officer</u></p> <ol style="list-style-type: none"> 1. Personal Safety and Social Responsibility 2. Elementary First Aid 3. Personal Survival Techniques 4. Fire Prevention and Fire Fighting 5. First Aid Level 2 6. Advance Fire Prevention and Fire Fighting 7. Rescue Boat 8. RADAR & ARPA 	<p style="text-align: center;"><u>Chief Engineer / Second Engineer / Engineer Officer</u></p> <ol style="list-style-type: none"> 1. Personal Safety and Social Responsibility 2. Elementary First Aid 3. Personal Survival Techniques 4. Fire Prevention and Fire Fighting 5. First Aid Level 2 6. Advance Fire Prevention and Fire Fighting 7. Rescue Boat
<p style="text-align: center;"><u>Master / Chief</u></p> <ol style="list-style-type: none"> 10. Medical Care On Board Ship 11. Marine Radar 	

Source: Marine Department (2010)

2.3 Maritime Institutes

At present, there are 3 institutes in Thailand that develop the merchant marine personnel in level of mariner officer for government service, as follows:

2.3.1 Merchant Marine Training Centre (MMTC)

Maritime Training Center is affiliated with the Marine Department, Ministry of Transport. They educate mariner officer both navigation and mechanical engineer for merchant marine fleet. It is the first institute which develops mariner officer of Thailand. The institute was established in 1972 and named “Merchant Mariner School”. The project’s purpose is to develop temporary maritime personnel in level of mariner officer for the first state enterprise which is Thai Marine Navigation Company Limited. They use intensive course for 3 years and first graduated student group are 18 students, they were educated and trained the theoretical training by teacher from Marine Department and outsider as well as aquatic practical training on board of Marine Department’s ship. In 1975, the course was adjusted from 3 years to 5 years by cooperation of the Norway government to send their professional to instruct the

education plan, and then increase the amount of student. Finally, in 1978, there was a resolution from the council of ministry to officially establish “Maritime Training Center”.

Curriculum

According to government’s policy to support nation maritime affair, Maritime Training Center obtains financial support from government in every year. The support purposes are to develop mariner officer and to be a training center in other courses for improving international standard academic standing of maritime personnel at all level to conform with International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, as amended in 1995: STCW 95 of International Maritime Organization: IMO. The Thai council of ministry had a resolution to develop and promote Maritime Training Center by educational administration as international standard. The present education and training of Maritime Training Center is Sandwich system which developed from European country. The student at all levels must be trained both theoretical and aquatic practical training. The current program is 3 curriculums, as follows:

Normal curriculum

The curriculums are navigation and mechanical ship engineer and duration of academic is 5 years. The graduated navigation student will obtain a certificate from Maritime Training Center, and a Bachelor of Science degree, Marine Science program from Burapha University (as affiliated institute) and have a right to be a candidate for a certificate from Marine Department, Certificate of Navigation marine officer of sea-going ship of 500 gross tonnages or more.

Mechanical ship engineer will obtain a certificate from Maritime Training Center, a Bachelor of Engineering degree, Mechanical Ship Engineer program from Burapha University (as affiliated institute) and have a right to be a candidate for a certificate from Marine Department, Certificate of Second engineer of sea-going ship of propulsion machinery between 750 - 3,000 kilowatt.

Special curriculum

The curriculum is ship engineering and duration of academic is 3 years. The graduated student will obtain a certificate of Merchant Mariner program from Maritime Training Center, and have a right to be a candidate for a certificate from Marine Department, Certificate of Second engineer of sea-going ship of propulsion machinery between 750 - 3,000 kilowatt.

Merchant mariner certificate, 2.5 years curriculum

The curriculums are navigation and mechanical ship engineer and duration of academic is 2.5 years. The graduated student will obtain a certificate of Merchant Mariner program from Maritime Training Center. The graduated navigation will have a right to be a candidate for a certificate from Marine Department, Certificate of Navigation marine officer of sea-going ship of 500 gross tonnages or more. The graduated mechanical ship engineers have a right to be a candidate for a certificate from Marine Department, Certificate of Engineer of sea-going ship of propulsion machinery of 750 kilowatt or more.

Training Ship

At present, Maritime Training center own 3 training ships, as follows:

Payuharak T/S

It is the first training ship of maritime student, former name is “Kittikajorn”, received on 9 April 1986 from Department of Fisheries, Ministry of Agriculture.

Table 2-3: Characteristic of Payuharak T/S

NAME	PAYUHARAK (HSUE)
STRUCTURE	STEEL
DESIGNER	NIIGATA ENGINE CO.LTD.
SHIPYARD	NIIGATA SHIPYARD JAPAN
GROSS TONNAGE	131.26 tons
DEADWEIGHT	32.64 tons

LENGTH	35.70 m.
BEAM	5.90 m.
DRAFT	2.20 m.
MAIN ENGINE	1 * NIIGATA 650 Hp
GENERATORS	2 * YANMAR 40 KW
FUEL BALLAST	31.10 tons
WATER BALLAST	16.31 tons
TEACHER & CREW	16 persons
CADET	16 persons

Source: Merchant Marine Training Center (2010)

Wisuthsakorn T/S

It is a new built training ship from Denmark with value amount 100 million baths. After finishing building, it was departed from Denmark on 8 April 1986 and arrived Thailand on 24 May 1986.

Table 2-4: Characteristic of Wisuthsakorn T/S

NAME	WISUTHSAKORN (HSUC)
STRUCTURE	STEEL
DESIGNER	DWINGER MARINE CONSULT CO.LTD.
SHIPYARD	NORTHSEA SHIPYARD DENMARK
GROSS TONNAGE	1,089 tons
DEADWEIGHT	326 tons
LENGTH	61 m.

BEAM	11 m.
DRAFT	3.51 m.
SPEED	12 Knots
MAIN ENGINE	1 * DIESEL M.A.N B&W GL 23/30 DKVXISET 110 Hp
GENERATORS	3 * DIESEL M.A.N D 2566 MLE
FUEL BALLAST	141.3 tons
WATER BALLAST	198.1 tons
TEACHER & CREW	26 persons
CADET	42 persons

Source: Merchant Marine Training Center (2010)

Figure 2-6: Wisuthsakorn T/S



Sakornvisai T/S

It is a latest training ship, total operation value is 1,135 million baths, including 6 storey building, simulator room and conference room size 2,250 sqm.

Table 2-5: Characteristic of Sakornvisai T/S

NAME	SAKORN WISAI
CLASS	Nippon Kaiji Kyokai
DESIGNER	DWINGER MARINE CONSULT CO.LTD.
SHIPYARD	ITALTHAI MARINE, CO.LTD., THAILAND
GROSS TONNAGE	4,200 tons
DEADWEIGHT	1,500 tons
LENGTH	82 m.
BEAM	16.8 m.
DEPTH	9.3 m.
DRAFT	5.2 m.
SPEED	15.5 Knots
MAIN ENGINE	1* DIESEL M.A.N B&W 7L32/40
GENERATORS	3* 480 Kw
TANK CAPCITIES-WATER BALLAST	1400 m3
TANK CAPCITIES -FRESH WATER	330 m3
COMPLEMENT	252 persons
CADET	200 persons
TEACHER	20 persons
CREW	32 persons
CARGO HOLD	24 TEUs
MACHINERIES	Anchor Windlass 2*10 t Anchors 2*high hold type Mooring Winch 2*6 t Crane 1*18 t
NAVIGATION EQUIPMENTS	Radar 3* Sam Electronics Autopilot 1*Raytheon NautoPilot2035 GMDSS 1*Furuno RC-1800T

Source: Merchant Marine Training Center (2010)

Figure 2-7: Sakornvisai T/S



2.3.2 Logistics Faculty, Burapha University

The Council of Ministers agreed on 23 June 1998 to define a policy for maritime personnel training. The main points of education institute are to support and promote education institute, to open course and training program, to provide scholarship and other related issue about maritime affair as well as to stipulate maritime filed be a professional shortage filed. Therefore, “Maritime Training Center” was established as a unit in Burapha university, follow as an agreement of Burapha university council on 29 July 2000 and opened for student in navigation science field which educate the first group of mariner officer in 2002. In 3 June 2005, “Maritime College” was renamed to be “Transportation and Logistics College” to comply with mission of the university and cover all transportation mode as well as logistics operation. In January 2008, Burapha university was reformed from a university under Ministry of Education to be a university autonomy. Then, “Transportation and Logistics College” was changed the name to “Logistics Faculty” in the same year.

Curriculum

Logistics faculty develops mariner officer in navigation program, 5 years curriculum. The graduated students are around 20-30 students annually.

Training Ship

Logistics Faculty, Burapha University does not own training ship, thus the physical training of navigation student will be trained on board of Maritime Training Center and Commercial ship of a vessel company. Burapha University signed on academic cooperation agreement with Maritime Training Center, Marine Department, Ministry of Transportation on 10 February 1997. The core of the agreement is Burapha University will confer a bachelor degree to graduate from Maritime Training Center in 2 fields are navigation and mechanical ship engineer.

2.3.3 International Maritime College, Kasetsart University

International Maritime College is a maritime education institute, which established to serve the demand and resolve the trouble of whole system in maritime affair. Moreover, it is to support the policy of sea power potential rising and maritime business within country, to develop maritime personnel to work within country and export to overseas which trend of maritime personnel demand is increase according to the expand of maritime trade. All are needed to work in partnership with various units both within and outside the university. Kasetsart University Council was approved to found an organization in university status on 20 May 2002, the first name was “International Maritime Institute”. The objective of establishment is to educate academic knowledge, scientific innovation and marine technology in maritime business. These will bring development to ocean transportation and related industry later on. International Maritime Institute manages personnel development in maritime from that time on, to response to the demand within country, regional, and global that growth rate is on increasing. On 27 November 2005, Maritime Institute was approved in Kasetsart University Council’s conference to change the name to “International Maritime Cellege” and belong to Kasetsart University, Si Racha Campus, open for first navigation students in 2006.

Curriculum

International Maritime College develops mariner officer in navigation program, 5 years curriculum. The graduated navigation students are about 80 students and mechanical ship engineer are around 80 students annually.

Training Ship

International Marine College, Kasetsart University does not own training ship, therefore the physical training of navigation student will be trained on board of Maritime Training Center and Commercial ship of a vessel company.



Chapter 3 Literature Review

3.1 Theoretical Review on Attitude

Meaning

After studying from textbook and researches, it was found that the word “attitude” was defined in many meaning by many experts. Researcher has collected the meanings which comply with objective of the research as shown on below table.

Table 3-1: Attitude Meaning

Author	Meaning
Hornby (2011) “Oxford Advanced Learner”s Dictionary of Current	The way that you think and feel about somebody/something; the way that you behave towards somebody/something that shows how you think and feel.
Koray (2010)	The term of attitude can be defined as what people think, feel, and do.
Bell (2006)	An opinion that one has about someone or something. It can reflect a favorable, unfavorable, or neutral judgment.
Zimbardo (1999)	Positive or negative evaluation of people, objects, event, activities, ideas, or just about anything in your environment.
Lamberton & Minor (1995)	The result of the beliefs and feelings peoples have about themselves, about other people and about the tasks they are faced with.
Eagly & Chaiken (1993)	A psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor.

Attitude Components

Vandaveer, Menefee, and Sinclair (2006) explained about attitude that it had three evaluative components. Firstly, cognitive component of an attitude is the opinion or belief segment of an attitude. Secondly, Affective component is the emotion or feeling segment of an attitude. Lastly, Behavioral component is the intention to behave in a certain way toward someone or something.

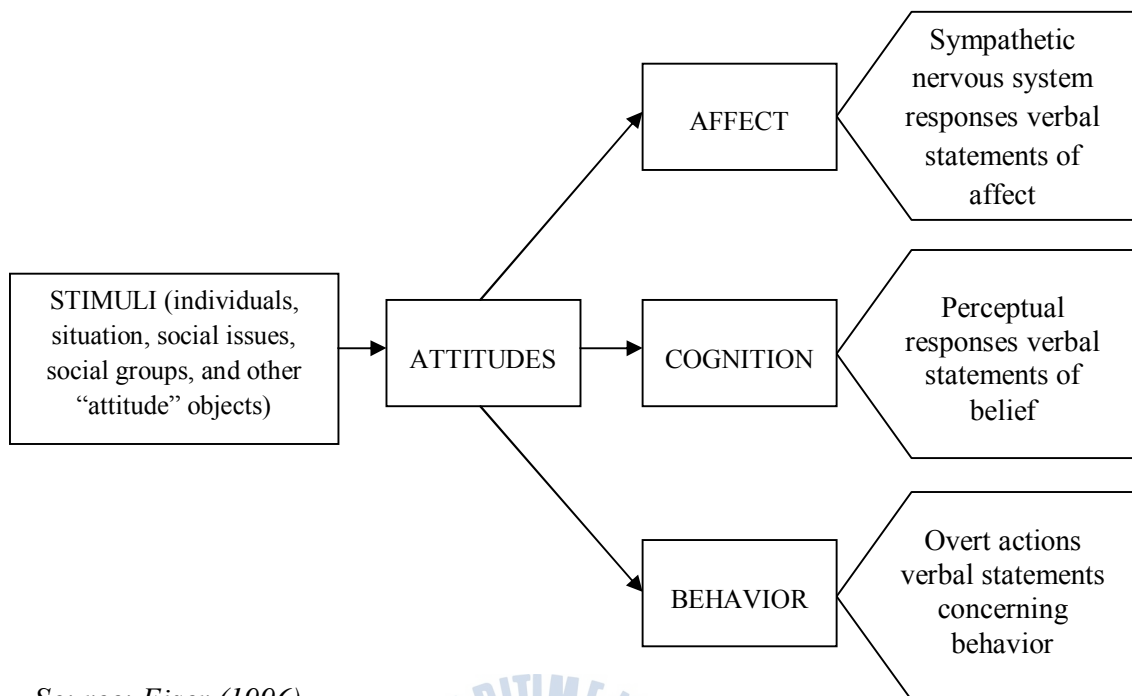
Willson (2005) has suggested that attitudes consist of three components (Triandis, 1971). They are identified as follows:

The cognitive component: it can best be described as opinions or beliefs and individual holds about a certain person, object or situation. These beliefs serve as and antecedent to specific attitudes. Beliefs are learnt through modeling, the association of cognitive cues, or reinforcement. It must be remembered, however, that even though an individual may have numerous beliefs, not all of them may be deemed important enough to lead to significant attitudes.

The affective component: it refers to an individual's feeling that result from the view which he/she holds about a certain person, object or situation. This is the emotional or feeling segment of an attitude. Gordon (1991) cites the following example: An individual might have a negative feeling about his or her job because of the beliefs held about promotion. A person may feel anger or frustration because he or she believes hard work deserves promotion, and the person has worked hard and not been promoted.

The behavioral component: it refers to an aspect of an individual's behavior that occurs as a result of his/her own feeling about the focal person, object or situation. The relationship between attitudes and behavior is stronger the more active the person's attitude is when he/she is behaving. It is the predisposition to an action. Thus, for example, the more often people express dissatisfaction with their job, the more likely those people are to demonstrate activities resulting in such negative consequences as lowered productivity, requests for transfer, or dysfunctional behavior (Gordon, 1991).

Figure 3-1: Schematic Conception of Attitudes in Terms of the Three Components



Source: Eiser (1996)

Attitude Formation and Attitude Change

Attitudes are expected to change as a function of experience and hereditary variables may affect attitudes - but believes that they may do so indirectly (Tesser, 1993). Attitudes can be changed through persuasion and we should understand attitude change as a response to communication.

Shardlow (2010) studied the psychological factors involved in attitude formation and attitude change as follows:

Direct instruction: involves being told what attitudes to have by parents, school, community organizations, friends, etc.

Operant conditioning: it is a simple form of learning. It is based on the “law of effect” and involves voluntary responses. Behaviors tend to be repeated if they are reinforced. Conversely, behaviors tend to be stopped when they are punished. Thus, if one expresses, or acts out, a negative attitude toward some group and this is reinforced by one’s peers the attitude is likely to be expressed again. The reinforcement can be as subtle as a smile or as obvious as a raise in salary. Operant conditioning is especially involved with the behavioral component of attitudes.

Classical conditioning: it is another simple form of learning. It involves involuntary responses and is acquired through the temporal association between two stimuli. Two events that repeatedly occur close together in time become fused and before long the person responds in the same way to both events. Classical condition is especially involved with the emotional, or affective, component of attitudes.

Social (observational) learning: it is based on modeling. We observe others. If they are getting reinforced for certain behaviors or the expression of certain attitudes, this serves as vicarious reinforcement and makes it more likely that we, to, will behave in this manner or express this attitude.

Cognitive dissonance: it exists when related cognitions, feelings or behaviors are inconsistent or contradictory. Cognitive dissonance creates an unpleasant state of tension that motivates people to reduce their dissonance by changing their cognitions, feelings, or behaviors. This process can be conscious, but often occurs without conscious awareness.

Unconscious motivation: some attitudes are held because they serve some unconscious function for an individual. For example, someone who feels inferior may feel somewhat better by putting down a group other than her own. Because it is unconscious, the person will not be aware of the unconscious motivation at the time it is operative, but may become aware of it at some later point in time.

Rational analysis: it involves the careful weighing of evidence for, and against, a particular attitude. For example, a person may listen carefully to presidential debates and read opinions of political experts in order to decide which candidate to vote for at election time.

Chaiparom, Raugkit, Chaikaew, Supnison, Niyomwong and Yomraka (2010) summarized the source of attitude as follows:

Specific experiences, when a person encounters with something or some events by himself, the specific experience cause impression into an attitude.

Models, identification a model can create an attitude, in other words, to observe and remember how other people act and follow them.

Communication from others, to communicate with others is an unavoidable event that happen in everyday life, this happening could make an attitude of communication from others.

Institutional factors, many of personal's attitude caused by personal's relationship with various institutions such as family, school, office unit, etc., these institutional factors have a role in creating personal's attitude.

After considering the origin of attitude, it is obviously that the important thing which connected creating an attitude is communication. The communication blended into specific experience, models, communication from others and institutional factors. It can be said that communication is a very important activity which lead to creating personal's attitude.

Makkeaw (2006) explained about attitude change as the idea of Herbert. It is believed that same attitude may be different creation in personal. There are 3 ways of attitude change from this idea.

Compliance: it will be occurred when person accept direct influence and expect satisfaction from particular influential group or person. Person accepts to do as influential does not mean he agree with it but he expect a reward or acceptance from others. Thus, satisfaction from being under influence resulted from social influence or influence of the things that lead to acceptance. Being under influence is a process of attitude change which has a power to drive person to follow it, whether much or less it depends on amount or degree of reward and punishment.

Identification: it is occurred when person accept motivation or stimulant. This acceptance is a result from person who wants to make a good relationship or satisfaction between himself and other or other group. As from the identification, attitude change will be much or less depends on motivation of identification. In the other hand, identification is a process of attitude change, the impulsion to change attitude will be much or less depends on motivation to that person. Therefore, identification is subject to power of messenger. Person will adapt the role of other as his own or exchange role to each other. Person will believe in the thing that he imitates but does not include the main idea and detail in identification. Person's attitude will be changed much or less relies on motivation of change.

Internalization: it is a process when person accept influential things which meet the need in his value. Behavior change will be consistent with his existing value. The

satisfaction depends on detail of particular behavior. If cognitive, feeling and behavior are impacted in any level, it can affect change of attitude.

Furthermore, communication components are a qualification of messenger and receiver, a kind of information and communication channel, these can affect attitude change. Even personal's attitude seems to be stable but it could be changed by person, situation, information, persuasion, and other things that make the acceptance.

Attitude Types

Vijitsakol (2009) classified attitude types follow as idea by Walter (1978) into five types as follows: First beliefs, acceptable bias because it is the truth and supported by reality or much certain information. Most beliefs are permanent reason whether they are significant or not. Second opinions, propensity which does not base on the certainty. Opinions are often associated with current question and easy to be changed. Third feeling, propensity so base on nature emotion. Fourth inclination, part of attitude that they can not to decide. Fifth bias, inclination to present or hold a partial perspective at the expense of alternatives.

Daranee (1999) explained the attitude types was classified into three types namely positive attitude: it means that she/he has positive emotional toward the subject, negative attitude: mean that she/he has negative emotional toward the subject and neutral attitude: it mean that she/he doesn't has positive or negative emotional toward the subject. It is moderate emotion. The three types of attitude, she/he may be has only one or more of it so it depending on the stability of cognition, belief, popularity toward someone, something or situation or attitude mechanism.

Attitude Measurement

It is the act of ascertaining the way in which a person views something by assigning scores to various factors.

Rungnapa (1993) defined attitude measurement is a measurement bias condition not performance but it is the feeling which is subjective. Person may be afraid to answer the truth because it is considered to be a personal affair. Performance both by verbal or writing will be expressed carefully because person always consider about

appropriate social conditions that are normality, value, belief and disbelief, agree or disagree by people in society. Thus, there is no one can search for a method to measure attitude or straight feeling of person which will be an accurate indicator for comparison. To measure attitude by interview record, and study for relationship between person's speech and attitude, the researcher will see and estimate attitude of person only. There are many of attitude measurements in a present day. First, observation personal behavior is a difficult method and gives uncertain result because personal behavior cannot reflect or imply the real attitude of person. Second, verbal report by using questionnaire and/or interview with objective style. Third, interpretive method is an attitude studying method in subjective style. The respondent may not know the objective of the researcher, and no doubt or afraid to answer the question or express the feeling and the answer has no limit both time and scope of detail. This is an accurate attitude measurement but the limitation is it needs a skill researcher who is psychological expert and also consume a lot of time, so this method is suitable for studying with small sampling.

Weerapon & Chaleaw (1995) summarized the attitude measurement as follows:
Thurstone's Scale: Louis L. Thurstone (1929) study of attitudes toward the Church developed an interval scale by using the method of equal-appearing intervals. To construct the Thurstone scale, a large number of statements are collected which express various possible opinions about the issue or object of study. These statements, after an editing for relevance and clarity, are given to judges, who are to independently sort them into eleven sets along a continuum that ranges from most "unfavorable", through "neutral", to most "favorable". The eleven sets of statements are to occupy positions in the continuum in such a way that the positions are at equal intervals: that is, the difference between any two adjacent positions is the same as the one between any other two adjacent positions. For the final form of the scale, only those items are retained that have high interjudge agreement and fall at equal intervals. The judges are to assign the statements to appropriate positions on the scale only on the logical basis of how favorable or unfavorable an opinion every statement expresses by itself and not how far the judges personally agree or disagree with the statements. The average judged position of a statement on the eleven-point continuum is the scale value for that statement. Thus, when a Thurstone scale is ready, every

statement in it (there are usually about twenty statements) has a numerical value already determined. When administered, the respondent just checks the items she/he agrees with and her/his attitude score is the mean value of the items she/he checked.

Likert Scale: various opinion statements are collected, edited and then given to a group of subjects to rate the statements on a five-point continuum: 1= strongly agree, 2 = agree, 3 = undecided, 4 = disagree, and 5 = strongly disagree. The subjects express the degree (one to five) of their personal agreement or disagreement with each of the statements. Only those items which in the analysis best differentiate the high scorers and the low scorers of the sample subjects are retained and the scale is ready for use. To measure the attitude of a given group of respondents, this scale is given to them and every respondent indicates whether she/he “strongly agrees”, “agrees”, is “undecided”, “disagrees”, or “strongly disagrees” with each statement. The respondent's attitude score is the sum of her/his ratings of all the statements. For this reason, the Likert scale is also known as the scale of summated ratings.

Guttman Guttman Scale: he developed a more refined Scalogram to measure unidimensional attitudes. The scalogram consists of a set of statements related to the attitude in question and arranged in increasing order of difficulty of acceptance. It is based on the same logic as the one in the Stanford-Binet test of intelligence: if a person solves a difficult item, she/he should be able to solve all simpler items. The same way, if a person agrees with a statement that expresses a higher degree of a given attitude, she/he must be agreeable to all other statements which express lower degrees of the same attitude. Obviously, this logic holds good only if all the items in the scale are from one and the same universe, that is, the scale measures the same aspect of a particular attitude. To construct the scalogram, opinion statements are collected and arranged in such a way that most people would accept the first statement and, going down the list, fewer and fewer persons would accept the subsequent statements. The list of statements, thus arranged, is given to sample subjects in order to test the increasing degree of acceptance. Based on the "accept" responses of respondents, the items are accordingly modified, arranged, and tested again on sample subjects. This process continues till a scalable set of items is developed. The final set of statements with their particular order is the scalogram. When this instrument is used

for measuring a person's attitude, the person checks all the items she/he accepts. The person's score is the total number of successive or nearly successive items she/he has checked.

Osgood's Scale: widely used semantic differential technique developed by Osgood et al. (Method and Theory in Experimental Psychology, 1952). It is much simpler to construct than many other scales, for example, Thurstone's Scale, Likert Scale or Guttman Scale, and yet yields a very high measure of agreement with these more elaborate measures. The method consists of a series of bipolar adjectives (strong-weak, good-bad etc.) separated usually by between five to nine points. The respondent is asked to checkmark the point which best indicates their attitude. Scale positions are sometimes qualified, for example: extremely good, very good, fairly good, neither good nor bad, fairly bad, extremely bad. However, such qualification tends to discourage selection of the extreme positions.

Diddao (1997) summarized the attitude measurement which is widely used in the present are methods of Thurstone and Likert. He concluded the idea of Thurstone that it is unable to measure attitude directly but better to measure from expression through idea or spoken language even they are not accurate. An opponent said that to measure attitude from expression would be incorrect because personal behavior may be distorted by existing attitude. Attitude measurement by answering "agree" or "disagree" with the statements on questionnaire should be not judged that the particular respondent will behave according to the agreed items. Likert created an attitude measurement model, he assign all items measure the attitude is sum of total score in questionnaire. He assumes that person who has attitude match with any statement will answer "agree" on it and there is less chance to answer "agree" on the statement which against his attitude, likewise, person who has negative attitude with particular issue will have less chance to agree with statement that support the particular issue and have more chance to agree with statement that against the particular issue. Total score of every item will be an indicator of respondent's attitude from questionnaire. Likert created first attitude measurement model by collecting most subjects related to his study and apply to his studied sampling. Respondent give one answer from each subject, by selecting alternative choices; strongly agree, agree,

undecided, disagree, and strongly disagree. Respondent has to give answer straight from his feeling, do not neutralize mind. To measure attitude use rating in each subject that support the answer, strongly agree is scale 5 and decrease respectively to strongly disagree is scale 1. For opposite statement if answer is strongly disagree, give 5 scale and decrease respectively to 1 scale for strongly agree.

Attitude Toward Profession

Tokuda Nursing School (2007) studied attitudes of the students in high school towards nursing profession found that most of the student themselves choose their nursing profession, and because of their economic reasons which finally convinced students to choose the nursing profession with a strong belief that it was permanent job. Secondly, it had good income. Moreover their first social reasons were the belief that it was important profession in the society and requires a lot of sacrifices. The second was their education was their helpful personality as the most popular one. Secondly, nursing profession was able to help their parents and other fellow being during their illness. All attitudes were categorized into social value, characteristic of profession, practical works, and relationship with co-workers, patients, and relatives and also considered at “good level”.

Sahgatham (2006) studied the attitudes of seafarers on ship security measures in 3 aspects: policy and administration, ship security plan, and implementation and recommendation as classified by age, education, sea services and experiences, and positions. The samples are 59 seafarers from May 2004-June 2005. The results of this research are as follows: 1. The overall attitude the seafarers on ship security measures is uncertain in every part. In policy and administrative part, in ship security plan and implementation and recommendation, the attitude is agreement. 2. The seafarers with different backgrounds in terms of age, education, and positions, have similar attitudes on ship security as a whole and in each aspect. However, the seafarers with different sea services and experiences have different attitudes at 0.05 level both as a whole and in each aspect.

Udomsuk (2005) studied 120 merchant marine cadets of merchant marine training centre were studying in the second semester academic year 2004 about

attitude toward profession found that the attitude of them was of the high level in every aspect. In cognition part, the attitude was found of being high affection and behavior part, it was found being very high. Mariner cadet of merchant marine training center who had difference background in term of years of study, domiciles, parent occupation and information of profession had similar attitude for profession in all aspects. The cadets had the similar attitude for profession in term of parent's income but difference in cognitive part.

3.2 Theoretical Review on Vocational Choice

Vocational choice is importance because the result could change person's life. When person finally selected an occupation, he should learn and practice to gain knowledge and skill. The length of learning and training period depends on character of particular profession. If anyone made a wrong vocational choice, this would bring bad effect to his time and asset including society and country. (Pornprasongsuk, 2008) Planning a profession decision is important to make it carefully. The starting is to select a learning field which fit with him. He should realize and accept about his own fact by analyzing and going through himself as well as considering his character in whole aspects until he is conscious his advantage or disadvantage truly (Raob, 2008).

Ohiwerei and Nwosu (2009) defined vocational choices are a developmental process and spans almost through person's lifetime. Vocational choices development leads to choice, which processes starts from primary school. Vocational choices could also be defined as a sequence of positions, jobs or occupation, which a person engages in during his working life. Vocational takes a reasonable amount of years within a particular occupation, for example ten, fifteen and twenty year's duration. Vocational choices preparation focuses specifically on issues related to the world of work. Experience gained in a variety of work place situations will help you to prepare for transition to a work environment, or to post secondary education or training. Intaratat (1998) said that vocational choice is an intention of the one who would like to work in a particular career. He should make a right vocational choice which fit his interest, skill, ability, and character. Vocational choice is for process's lifetime, not

only one time decision but it is a respective process. Every step of procedure relates to person's age development that these times will not rewind. Thus, it is impossible to turn back again after making decision and it will be ended up with compromise between person's interest, need and the reality.

Jindasak (1992) said that vocational choice means person express intention to select a career by considering to interest, ability, skill, and character. Vocational choice value is an development process and person in beginning work life will select career which is far from reality and the reality level will be increased when person is getting older.

Brows and Brooks (1990) described as being foremost people a lifelong process of getting ready to choose, choosing, and typically continuing to make choices from among the many occupations available in our society.

Paorohit (1989) explained about the right vocational choice is to decide to work match with person's need, skill and interest. When person make the right vocational choice, he should be happy on his career and successful in career path. It is not accidentally happened for person to make a right vocational choice; future career decision should be done cautiously. Since his decision relates to mental condition in his future career, it is needed help from specialist to recommend him to understand himself and profession world for his vocational choice analysis.

Trait and Factors Theory

Frank Parsons, known as the father of the vocational guidance movement, initiated the trait and factor theory in 1908. The theory holds that the better the fit between the individual and the occupation, the better the satisfaction and success (Hugh P. Gunz, 2007). He developed a framework to help individuals decide on a career. He observed that vocational choice consists of self-understanding, knowledge of occupations, and "true reasoning," or discernment. His idea was to help people create a good match between self and occupation. Parsons' "matching" approach has permeated the career development profession since its inception.

Zunker (2002) he summarized three part of Parsons formulation. Firstly, a clear understanding of yourself, aptitudes, abilities, interests, resources, limitations, and other qualities. Secondly, a knowledge of the requirements and conditions of success, advantages and disadvantages, compensations, opportunities, and prospects in different lines of work. Lastly, true reasoning of the relations of these two groups of facts.

Thanyawan (1996) studied about aspects and essential elements of person which are influential in vocational choice, as follows:

Skill and wisdom: they are influential in vocational choice and also be a one of essential element which is influential in success and career progression.

Interest: it is an essential element which is influential in vocational choice. It affects how much of his endeavor in profession.

Value: Person's value is influential in vocational choice, for examples, person who like to help other people, he may choose to be social worker, doctor and nurse, person who adhere in social justice may be a lawyer.

People, parent, relative, teacher and adviser: all are influential in vocational choice, for examples, some kids want to be teacher because of admiring their teacher, some kids may choose to be as their successful senior, some kids may follow their friend's vocational choice.

Achievement in study: a person who is good at a particular subject may work in that field and a person who achieve in study tend to work in professional level.

Family: Parent's occupation and financial status will be influential in vocational choice of the kids. Laurance Lipsett referred in Orn-a-nong on the research she found that the kids from middle level family will choose higher level career than their parent. The middle level people, most support their kids to choose an honorable profession and higher salary than they are having because they can afford their kids. Kids from low income family will choose skillful or professional work which is not complicated. It is showed that the kids from low income family do not have high expectation on their profession.

Personality and adjustment; personality and adjustment are influential in vocational choice. People in different personalities such as leadership, follower, introvert, society, tend to choose different career which match their personality.

Furthermore, adjustment is influential in vocational choice of person. Children who have trouble in adjustment will choose career slower than well-adjusted children.

Location and value of community; location and value of community are influential in vocational choice. It is obviously that Thai people in countryside most support their children to be teacher, soldier, nurse because of they are honorable career. Some people want their children to follow their working track such as farming and living in the same community.

Vocational choice theory both aspect analysis and personnel element have idea that vocational choice influenced by several factors. Each person will be influenced by a factor in different level or get impact from many factors (Raob, 2008). Therefore, it is essential to understand these factors and influences which impact to person. Hence, there should be a record of children's qualification such as capability, intelligence, skill, personality and social element of children for example, parent's career, income, education, expectation on their children, family value. These will help person to understand all factors and be helpful for suitable vocational choice in future.

Holland Theory

John Holland's theory of vocational choice maintains that in choosing a vocation, people prefer jobs where they can be around others who are like them. They search for environments that will let them use their skills and abilities, and express their attitudes and values, while taking on enjoyable problems and roles. Behavior is determined by an interaction between personality and environment. Holland's theory is centred on the notion that most people fit into one of six personality types: realistic, investigative, artistic, social, enterprising and conventional (Holland, 1997). Holland suggested that most persons have a "personal career theory" about careers or work, which can range from weak and invalid to strong and valid. A personal career theory is the collection of beliefs, ideas, assumptions, and knowledge that guides individuals as they choose occupations or fields of study, explains why they persist in them, and is used by people as they go about making careers decisions. Holland noted that career choice problems may stem from any one or more of three components of the personal career theory: personal characteristics, occupational knowledge, or translation units. For example, persons having a personal career theory with a weak translation unit (i.e., poor decision-making skills) or pervasive weaknesses (many negative career thoughts

or low vocational identity) require more intensive career assistance (Robert C. Reardon and Janet G. Lenz , 1999).

Suraksa (2005) summarized a good idea of the suitability of specific persons for specific vocational. One way of understanding the relationship between personality characteristics and vocational is to consider 6 vocational types of Holland's theory. Realistic; persons of this type are energetic and physically strong. They have good motor coordination skills but lack verbal and interpersonal skills. They are, therefore, somewhat uncomfortable in social settings. They perceive themselves as mechanically inclined, and are direct, stable, natural and persistent. They prefer concrete to abstract problems and see themselves as aggressive. Such persons prefer occupations of following types: mechanic, engineer, electrician, crane operator, tool designer etc. Investigative; this category includes people who have a scientific bent-of-mind. They are usually task-oriented, prone to thinking and are not comfortable with people. They have a great need to understand the physical world and prefer to work independently. They do not like leadership positions, but are confident of their intellectual abilities. These persons choose vocations such as scientist, researcher, zoologist and psychologist.

Artistic: persons who are artistic prefer unstructured situations with maximum opportunity for self-expression. They are very creative especially in the area of art and music. They avoid problems which are highly structured and prefer living in situations which require self-expression related to art. Such persons prefer occupations of artist, writer, musician etc.

Social: such persons like to be involved with people and to work in groups and occupy central positions in groups. They are often religious and have good language and interpersonal skills. They enjoy activities that involve informing, training, curing, helping etc. Vocational preferences of such persons include social work, school teacher, religious teacher, etc.

Enterprising: persons of this type have verbal skills which are very effective for selling, dominating, leading etc. They have a strong desire to achieve organizational goals and economic gains and tend to avoid situations which require intellectual effort for long periods of time. They see themselves as aggressive, popular, self confident,

cheerful, social and have high energy level. Vocational preferences include business executive, politician, property dealer, stock broker, business man, etc.

Conventional: such people prefer well-ordered environment and like systematic activities involving verbal communication or dealing with numbers. They avoid situations involving social dealing or physical skills. They enjoy power and material possessions. Vocational preferences include banking, clerical jobs, traffic policemen, shop salesman etc.

Ann Roe Theory

Hansob at (1999) summarized Ann Roe's theory of occupation choice (1956) that early childhood experiences are strongly related to occupational choices. This theory is based on Maslow's hierarchy of needs. Needs that are not fully satisfied can be important motivators in our occupational choices. A person aware of a need for security, for example, is likely to search for work providing a safe environment. Roe notes early child-parent relationships in terms of needs being met or not (satisfaction or frustration). She believes there exists three basic attitudes children experience with their parents. Following is a breakdown of the attitudes with implications.

Emotional Concentration: on the child ranges from overprotection to over demanding, both putting conditions on a parent's love and approval. While physical needs are met psychological needs may be withheld; over protection and over demanding.

Avoidance: according to Roe, ranges from neglect_to rejection. Within limits both physical and psychological needs of the child are ignored.

Acceptance of the Child: whereby physical and psychological needs are met. Independence and self-reliance are encouraged in either an unconcerned, noninvolved way or an active, supportive one

Roe believed that a person chooses a career based on the psychological climate of the home in which one was raised. Research on Roe's theory did not support the clear-cut categories of parent-child interaction. It was found that there typically exists a mixture of attention, acceptance, and avoidance by parents or authority figures. Roe's model was one of the first to suggest that such things as childhood events, personality, parental influences, and psychological needs influenced career choice.

Schaffer Theory

R.H. Schaffer studied people from various occupations; he got an idea that person makes vocational choice to meet his needs and if the chosen career conforms to the needs, it will tend to be successful in working life.

Tanyawan (1999) concluded Schaffer's idea that person makes vocational choice to meet his needs and if the chosen career conforms to the needs, it will tend to be successful in working life. And how much person will be successful and happy in career depends on how much particular work meets his needs. From the main idea of Schaffer's theory judge that person has need in various aspects as follows.

Needs for acceptance from others which create self-esteem, needs for love and social relationship and want to be a part of society to receive love and cordiality from others, needs to be successful on the job, needs to control and have power over others, needs for help from others, needs to express one's own self, needs for financial status, needs to perform as belief value, need to follow others without taking any responsibility, needs to show creativity in running business, needs financial stability or consistent income, needs to be self-confident and to work independently.

Hoppock Theory

Saadsud (2002) concluded Hoppock's theory regarding vocational choice theories cannot explain vocational choice behavior of everyone. Therefore, she collected main point of various theories and evaluated to following principles.

Vocational choice is an action to meet person's needs that each person will have various needs. Person makes vocational choice because he believed that chosen career will meet his needs most. Person's needs impact vocational choice because person will choose career which has environment meet his needs most. Career development, is very important to person, career brings essentials of living and honor. Person is interesting in seeking many career information which is a starting of vocational choice development and making a living. Person's career development and vocational choice process will be progressive depends on when person realize that his expected career is going to meet his needs. Personal's information is influent vocational choice because it supports person to realize what he needs from his career and what qualification he

has that fit with particular career. Career information makes person to understand particular career regarding how personality is need and how it meet his needs. Career satisfaction depends on how particular career be able to meet person's needs. Degree of career satisfaction is comparison between what we received from profession and what we need from profession. Career satisfaction may be a result from that career can satisfy person today. Vocational choice could be change when person believe in the new career can meet his needs more than the former career.

3.3 Theoretical Review on Vocational Satisfaction

Borkar (2010) studied the factors that lead to feeling of vocation satisfaction and summarized as follows:

Satisfactory salary: this one would be the most basic factor that leads to taking up a vocation because it is the means to an end theory. The employee satisfaction surveys say the pay that one gets and the growth pattern of that pay periodic intervals for an appraisal or employee performance based appraisal will influence the vocation satisfaction to a great level. If the employee is happy with his pay, it will show in his work by increasing his productivity.

Personal development: a vocation that has a good evaluation system whereby the employee's work is duly recognized and he is therefore encouraged and motivated to continue contributing to the firm is one of the major vocation satisfaction factors as well. An employee who knows that his efforts will be duly recognized with praise or by providing better opportunities for the future will find his vocation much more satisfying than someone who has lost interest in work or finds it a task because no matter what the amount of effort he puts in, no one even takes cognizance of the same. Thus proper recognition and encouragement are important factors to look into.

Meeting of goals: there are certain goals that every person has formulated for himself. These goals have to do with professional growth. A vocation that provides for opportunities such that there is a scope for his goals to be met will naturally provide greater vocation satisfaction than one which forces him to be stuck in a rut.

Working conditions: the ergonomics in the workplace which includes the working conditions like lighting, space and other such and such as well as

interpersonal and intra-personal relations with fellow colleagues, management and other authority figures also plays a major role in determining the degree of vocation satisfaction. If there is mutual respect and regard among employees and management as well as among employees themselves, it will show in the work. A person will want to go to work if he enjoys being with the others there and they provide for an encouraging environment. In short if there is good workplace communication as opposed to negativity and vocation stress due to miscommunication or other problems in the workplace.

Salmond (2006) used a sample of 437 nurses drawn from 20 different states in the United States. The Karasek's vocation demand-control-support model was used to predict vocation satisfaction in the analysis included personal factors of educational level, certification level, continuing education credits, years of experience, and perceived competence (self-efficacy) and organizational factors of social support, professional practice environment, type of hospital, and type of unit. The organizational environment or professional practice Environment Score(PES) was identified as the main determinant of job satisfaction among nursing staff in then 20 states.

Tutuncu and Kozak (2006) measured job satisfaction in the Turkish Hotel industry using a job satisfaction index. Attributes such as the work itself, supervision, and promotion were noted as the determinants of the level of overall job satisfaction among Turkish hotel workers.

Onu (2005) examined the factors affecting vocation satisfaction of field extension workers in Enungu State Agricultural Development Programme in Nigeria using a sample of forty-two extension staff randomly selected across three agricultural zones. The field extension workers indicated low level of satisfaction with their vocation content, conditions of service and working environment, which were subsequently identified as key factors that could enhance vocation satisfaction among extension personnel in Nigeria.

DeVaney and Chen (2003) conducted a survey of job satisfaction among 211 graduates in financial services in the US using Ordinary Least Squares (OLS) as the

analytical tool. The aspects of job satisfaction measured in the study were attitude to the job, relations with fellow workers, supervision, company policy and support, pay, promotion and advancement, and customers. Realization of expectation, company support, attitude, relations with fellow workers, pay, and gender were significant determinants of job satisfaction. Four factors in the regression analysis were not significantly related to job satisfaction namely job security, opportunity for promotion, age of the graduate, and stress. The study however, did not indicate why the four aforementioned factors were not statistically insignificant.

Silla (2002) described job satisfaction is a positive emotional state that occurs when a person's job seems to fulfill his/her needs. It is not always related with the money factor-because some people also work to satisfy their urge to work. Dissatisfaction in a job occurs due to many factors. There are a number of factors which influence one's satisfaction in the job situation. They can be categorized under two broad headings.

Organizational factors: a major amount of our time is spent at the workplace. The place where we spend a lot of time should fulfill our needs to some extent. Some of the important factors related to the work place are as follows. Reward-includes all incentives like raise in pay, perks, facilities and promotion. The promotion is a major factor in job satisfaction. An employee can only achieve job satisfaction and work better when he knows that he will get his dues and raise in salary in time. Physical working conditions-the physical working conditions like availability of necessary furniture, lighting facilities, and work hazards also play a major role in job satisfaction. Cooperation-cooperation and attitude of the staff members is also an important factor in the job satisfaction of the person.

Personal factors: whether the nature of the work is of interest to the employee-is a question, the answer of which tells about the level of job satisfaction of that person. The second category of major factors are personal factors. These are as follows. Personality traits-some jobs are suitable only to a certain type of personalities. For example, a doctor or a sales person's job is such that they require regular contact with the general public. If they are shy in nature or cannot talk much, they will not be successful in their work setting which will cause dissatisfaction. While choosing for a job, one should see that he or she has those personality traits which are necessary for

that job because matching of the personality traits with the job is very necessary. Status and seniority-it has been found that higher a person's position within the organization, the higher the job satisfaction level is reported. Life satisfaction-a person wants to establish or reach a goal in his life and it can be accomplished through the work which one is doing. It is other than the monetary part. For example, taking out publications or conducting researches etc.

Furnham (1992) categorizes factors that can have an influence on vocation satisfaction into three groups namely. First, organizational policies and procedures that have to do with the nature of the remuneration package, supervision and decision-making practices, and the perception of the quality of supervision. Second, aspects of the total workload, the variety of skills applied, autonomy, feedback and the physical nature of the working environment. Third, personal aspects such as self image, ability to deal with stress and general satisfaction with life.

3.4 Theoretical Review on Vocational Development

Alutu (2001) described career development and choice should be initiated as early as the nursery school years through the primary, secondary and to the tertiary school levels A person's vocational choice plays an important role in his entire life. A vocational choice is a profession, occupation employment by which one earns his living especially one for which he has a period of training in an institution or through apprenticeship.

Okon (2001) stated that vocational development of youths and the preparation and guidance they receive for the world of work should be of interest to all of us. We are convinced that a better job of career guidance in our schools will help to solve some of the problems of alienation and relevance which face the school today.

Ginzberg Theory

It was developed in 1951 this theory proposes that vocational choice is influenced by four facts. Firstly, reality factor, Secondly, the influence of the educational process. Thirdly, the emotional factor. Lastly individual values. This theory proposes that it is a development path that leads to career choice. Starting in preteen and ending in young adulthood, individuals pass through three stages namely fantasy, tentative and realistic. In the fantasy stage, the child is free to pursue any occupational choice. Through this process the child's preferred activities are identified and related to future career choices. Beginning in the preteen years and continuing through high school, the young person further defines their interests in, capacity for and values of an occupational choice. The cumulative effect of the process is the transition process in which the adolescent begins the career choice process, recognizes the consequences and responsibility of that choice. The realistic stage, spanning from mid-adolescence through young adulthood, has three sub-stages: exploration, crystallization and specification. In the exploration stage the adolescent begins to restrict choice based on personal likes, skills and abilities. In the crystallization stage an occupational choice is made. Followed by the specification stage where the individual pursues the educational experiences required achieving his career goal.

Super Theory

Cristina M. Giannantonio & Amy E. Hurley-Hanson (2006) in "Apply imagine norms across Super's career development stages" they described that Super's most recent formulation of his theory proposes that individuals progress through five stages of career development stages the life span (Super, 1996; Zunker, 1998). The stages are growth, exploration, establishment, maintenance, and disengagement.

Stage growth: age birth-14, development of self-concept, attitudes, needs and general world of work. An individual begins to develop his or her self concept (Super, 1957). The growth stage involves an individual's first introduction to the world of occupations (Super, 1990). Research suggests that children hold broad stereotypes about jobs that allow them to differentiate between occupations (Gottfredson, 1996; Martin & Gentry, 1997). Gender differences reflecting societal norms and expectations also manifest themselves as occupational stereotypes in this early stage of career development. Occupational stereotypes about the importance of image and physical attractiveness for career success in certain occupations may become the basis

for image norms. Adolescents may believe that individuals must possess a specific image to work in certain occupations, industries, and companies. Occupational image norms that are formed in the growth stage likely arise from one's own experiences, messages from family and friends in the social network, and messages from the media.

Stage exploration: age 15-24, "trying out" through classes, work hobbies. Tentative choice and skill development. Individuals in the exploration stage gather more specific information about themselves and the world of work. The stereotypes learned in the growth stage are refined as adolescents and young adults learn more about the world of work and more accurate information is obtained about specific occupations. Individuals then act on this information by matching their interests and capabilities to occupations in an attempt to implement their self-concept at work and in other life roles (Super, 1957).

The occupational images formulated in this stage are likely to arise from contact with individuals in specific jobs, part-time work experiences, and media materials published by organizations (Gibson, 2004). Similar to what occurs in the growth stage, visual images of employees engaging in different jobs within specific companies may serve to reinforce the occupational stereotypes held by young adults. Such images may be particularly salient for first-time entrants to the labor market, who typically possess limited information about job and company attributes. These images help shape perceptions about the role of image and physical attractiveness in specific occupations and organizations and become the basis for a young adult's image norms.

Stage establishment: age 25-44, entry-level skill building and stabilization through work experience. During the establishment stage, individuals are concerned with career advancement in their chosen occupation. They are trying to establish a stable work environment with the potential for growth and the opportunity for promotions. In the establishment stage, the influence of image norms shifts from "How do image norms affect one's ability to enter an occupation and an organization?" to "How do image norms affect one's ability to advance in the chosen occupation and organization?" The belief that it is necessary to present a specific image for advancement in a company has important consequences for individuals and organizations. Job incumbents may engage in impression management techniques to alter their professional appearance in the hopes of increasing their chances of promotions and advancement. Such tactics may vary from the subtle to the dramatic. It

is recognized that the role of image norms in the establishment stage is likely to be highly industry specific. Individual actions that would be considered extreme in one profession may be commonplace, or even expected, in other industries.

Stage maintenance: age 45-64, continual adjustment process to improve position. During the maintenance stage, individuals are concerned with maintaining their self-concept and their present job status. In the maintenance stage, individuals are faced with career choices, such as whether to remain in their chosen occupation and whether to continue working for their present company. Image norms may influence these decisions as individuals consider whether the choices they made in earlier career stages continue to match their evolving self-concept. During the maintenance stage, it is important to recognize that image norms may intersect with age norms (Lawrence, 1988) as people assess whether their occupation is age appropriate. In this stage, image norms may include societal norms regarding age and occupations. In addition to occupational change, individuals may change organizations in the maintenance stage (Davis, 2003). As people age, they may feel that they no longer fit the image of the majority of employees who work for their company. Working with significantly younger colleagues, recruiting significantly younger applicants, or being supervised by someone a generation younger than oneself may be difficult issues for some older workers (Brewington & Nassar-McMillan, 2000). Individuals in the maintenance stage may question whether they are too old to work for their company or whether they will be able to compete in the market against younger applicants.

Stage decline: age over 65, reduced output, prepare for retirement. During the disengagement stage, individuals are focused on developing a self-image and a self-concept that are independent of and separate from work. Advances in health care, the aging of the workforce, and the desire to remain active in the workplace throughout one's 60s and 70s suggest that people today may spend a longer time in the maintenance stage and delay disengaging from work than was true of their parents and grandparents (Brewington & Nassar-McMillan, 2000). Although the age norm issues discussed in the Maintenance section could manifest themselves in the disengagement stage, it should be noted that image norms in the disengagement stage may arise from perceptions of being too young rather than too old. Discussions of retirement planning may seem premature for individuals who expect to work throughout their 60s and into

their 70s (Brewington & Nassar-McMillan, 2000). Volunteering, extensive travel, and time with the grandchildren may be perceived as activities for "old people" or things they will do later in life.

Whiston & Brecheisen (2002) they said that theory of career development has long been of interest to careers researchers. One of Donald Super's greatest contributions to career development has been his emphasis on the importance of the development of self-concept. According to Super, self-concept changes over time, and develops as a result of experience. As such, career development is life long. He developed the theories and work of colleague Eli Ginzberg, he thought that Ginzberg's work had weaknesses, which he wanted to address. He extended Ginzberg's life and career development stages from three to five, and included different substages. He argues that occupational preferences and competencies, along with an individual's life situations, all change with time and experience. He developed the concept of vocational maturity, which may or may not correspond to chronological age: people cycle through each of these stages when they go through career transitions. Super states that in making a vocational choice individuals are expressing their self-concept, or understanding of self, which evolves over time. People seek career satisfaction through work roles in which they can express themselves and further implement and develop their self-concept.

Elvira (2001) in paper "Following Super's Heritage: Evaluation of a Career Development Program in Spain" he explained regarding central role of Super's career development that Parsons was the first to write about matching people with jobs at a time he was working with young people moving from school to work. The method of matching people featuring certain characteristics to occupations was put into a simple, easy-to-use, well validated procedure by Holland in 1959 and was updated in 1985. But client readiness for decision-making (career maturity) is not considered in the matching models.

In contrast to the prevailing structural models of the time, Super (1957) focused his attention on the evolution of vocational behaviour, adapting Buehler's (1933) framework of life stage to organize vocational behavior throughout the life cycle. That

is, whereas occupational choices might otherwise be considered isolated, Super's work suggested that such choices must be considered with reference to the past and the future. Career development is the process of growth and learning that results in increases and modification of a person's repertoire for vocational behaviour. His particular perspective was that each life stage – growth, exploration, establishment, maintenance and decline – imposes certain tasks that must be addressed in response to some developmental prerequisites, and that there is good objective evidence of great individual differences in career maturity. His concept of development prerequisites is reflected in the construct of vocational maturity as “readiness to cope with the developmental tasks of one's life stage” According to the theoretical framework for the career pattern study the years after high school are directed to exploration for career maturity pointing to the eventual establishment of adult career patterns.

Tiedeman and O' Hara Theory

Agba, Ogaboh, Festus and Ushie (2010) in American Journal of Scientifics and Industrial Research they summarized that David Tiedeman and Robert O'hara (1963) examined the process of career development as a part of a continuing process of differentiating ego identity. They contend that variables such as a person's early childhood experiences within his family, the psychological crises encountered at various developmental stages, the equilibrium between vocational goals, the individual needs and those of the society and the personality characteristics of an individual all have great impact on career development. Tiedeman and O'hara emphasized that there is an intervention relationship between career and personality in organization, the former exerting significant influence on the later. In their view, career development is a process of modeling a career identity through differentiation and personality integration as one come across a work related problem. It is their conception that differentiation relates to the uniqueness which exists in the individuality and how he expresses his individuality. They conceive integration on the other hand as the ways in which the individual adjusts himself to accommodate others around him in order to become an integral part and an acceptable member of the society. In their opinion, the decision the individual makes in relations to his work, daily activities, form the basis and framework of his career development. Their theory

places emphasis on the progressive developmental stages of career development with career decision being significant in the process.



Chapter 4 Research Methodology

4.1 Research Design

The research design of this study was carried out by research process to respond to the objective of study. The target population for study was Thai maritime students from three maritime institutes in Thailand. Principle of statistical sampling was conducted by comparison between population and sample referring to Krejcie and Morgan Table. Stratified random sampling was used for random sampling. There were study variables set up, the questionnaire was created to applied with the trial samples. That questionnaire was returned to improve quality for applying with the real samples, and research process was implemented to achieve objective of the research.

Table 4-1: Population Size and Sample Size

Institute	Population Size	Sample Size
Merchant Marine Training Center Marine Department, Ministry of Transport	1,212	476
Logistics Faculty Burapha University	75	64
International Maritime College Kasetsart University	353	327
Total	1,640	867

Table 4-2: Determining Sample Size for Research Activities by Krejcie & Morgan

Population Size	Sample Size	Population Size	Sample Size	Population Size	Sample Size
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377

Population Size	Sample Size	Population Size	Sample Size	Population Size	Sample Size
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

4.1.1 Research Variables

There are two variables on this study. First, independent variables namely institute, domicile, parent's occupation, parent's income per month, motivation to study in merchant maritime, and mariner profession information acknowledgement. Second, dependent variable namely attitude of Thai merchant marine student toward mariner profession.

4.1.2 Research Model

From a number of research and study found many interesting research results and information. The researcher was interested in those information and selected 6 variables to be independent variables for studying attitude of Thai merchant marine student toward mariner profession in accordance to concept of Triadis as follows:

There are three maritime institutes in Thailand. The administrative management is different in each institute. Merchant Marine Training Center is an institute under the Marine Department, Ministry of Transport. Logistics Faculty, Burapha University is Public Autonomous University and International Maritime College, Kasetsart University is a university under the Ministry of Education.

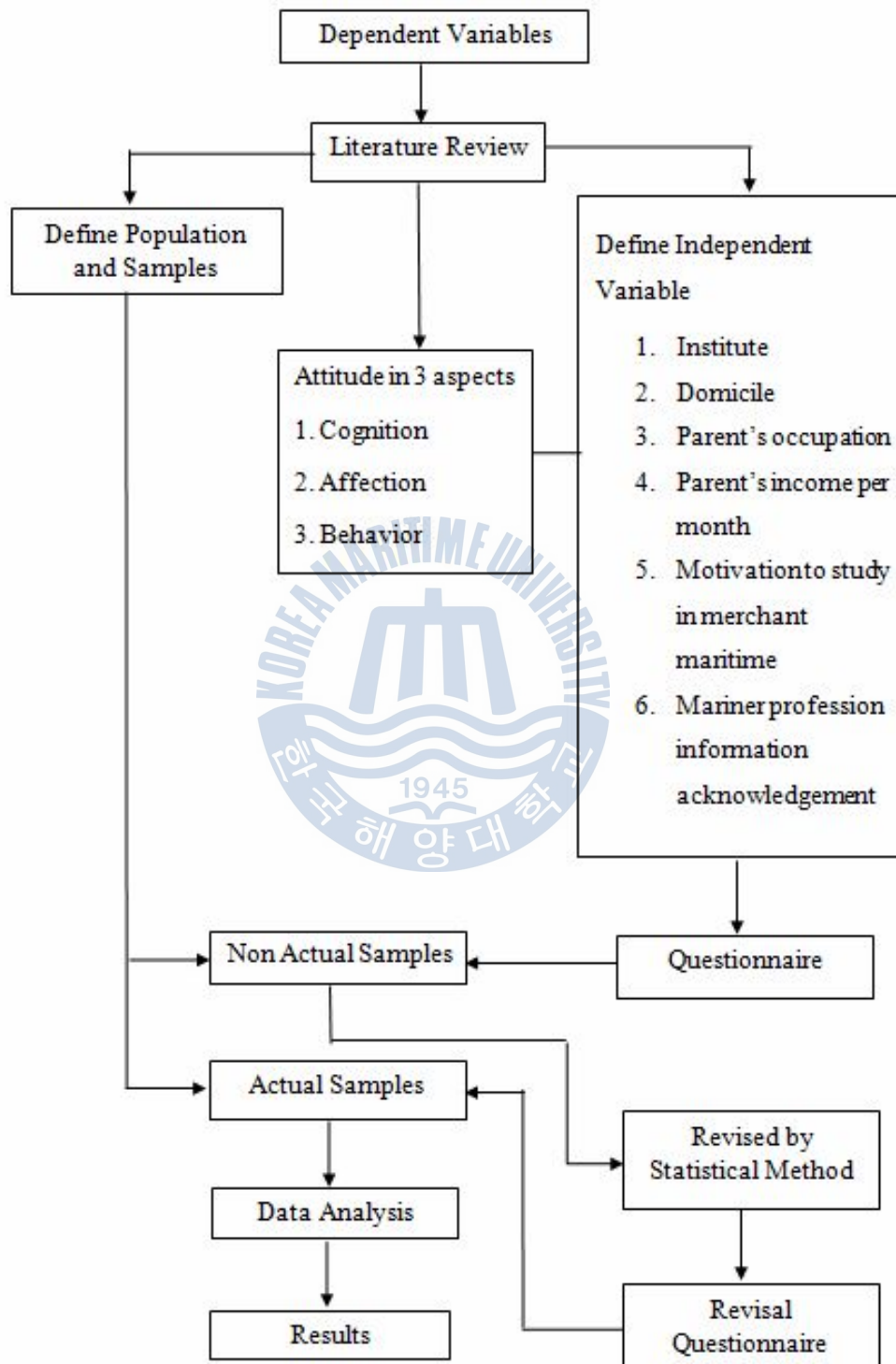
There was a study about students who studied at Bangkok in 2009 to pursue a teacher profession. It was found that domicile factor and parent's occupation factor

were direct determinant in teacher career choice. The researcher was interesting in variable of domicile and parent's occupation that whether they affect to attitude of Thai merchant marine students toward mariner profession or not.

Furthermore, from study the previous researches and the theory of career choice, it was found that student from middle-class family chose career level higher than their parent's career. Since middle-class support their children to have honorable profession and earn higher income, they can afford their children to carry on study in upper level. According to the theory of career choice, to choose a career needs an attractive point. And due to the current rate of growth of internet usage in Thailand is increasing steadily. The majority of users is between the ages of 15-24 years and grouped in Bangkok (Kasikorn Research Center). Thus, the variable in the media is another variable that the researcher has paid attention.



Figure 4-1: Research Model



4.2 Research Hypotheses

This study is composed of seven hypotheses as follow:

H1: Thai merchant marine students have attitude toward mariner profession at medium level.

H2: Thai merchant marine students in terms of different institutes have different attitude toward mariner profession.

H3: Thai merchant marine students in terms of different domicile have different attitude toward mariner profession.

H4: Thai merchant marine students in terms of different parent's occupation have different attitude toward mariner profession.

H5: Thai merchant marine students in terms of different parent's income per month have different attitude toward mariner profession.

H6: Thai merchant marine students in terms of different motivation to study in merchant maritime have different attitude toward mariner profession.

H7: Thai merchant marine students in terms of different mariner profession information acknowledgment have different attitude toward mariner profession.

4.3 Instrument Making

First step, study from journal and documentary research regarding attitude toward profession and study on the principle of measuring attitudes. Likert scale which is used to allow the individual to express how much they agree or disagree with a particular statement. The format of a typical five-level Likert item is strongly

disagree, disagree, neither agree nor disagree, agree and strongly agree and also define the variables meaning of this study.

Second step, design and set up the questionnaire in order to response the purpose of this study concerning attitude of Thai merchant marine students toward mariner profession according to the components of attitude of Triandis, rating scale 5 levels Likert, 60 questions.

Third step, take the questionnaires to try out of non-actual samples of 30 Thai marine students. Regarding discrimination and reliability of questionnaire, evaluates discrimination value of questionnaire in each item by applying t-test to select question which has discrimination higher than 1.734. They are selected 30 questions for the questionnaires and Evaluates reliability value of questionnaire by α -coefficient evaluation. Final step, take the questionnaires to survey the samples.

4.4 Questionnaire Feature

Questionnaire is divided into two parts as follow:

Part 1: This part of questionnaire is checklist type by surveys the status of respondents namely institutes, domicile, parent's occupation, parent's income per month, motivation to study in merchant maritime and mariner profession information acknowledgment.

Part 2: This part of questionnaire is the format of typical 5 levels Likert by survey the attitude toward mariner profession. It consist of 3 aspects of attitude questions namely aspect of cognition 10 questions, aspect of affection 10 questions and aspect of behavior 10 questions. Total is 30 questions.

4.5 Data Collecting

Process of data collecting for this study started from submitting a requesting letter to chief executive of all three Thai marine institutes which are Merchant Marine Training Center (Marine Department, Ministry of Transport), Logistics Faculty

(Burapaha University) and International Maritime College (Kasetsart University). After receiving approval, then the researcher distributed questionnaires and collected the completed questionnaire back by himself. The completed questionnaires were on basis of proportion between population and sample conformed to Krejcie and Morgan table.

4.6 Data Processing

Data processing started from checking error on completed questionnaires which returned from all three maritime institutes. After checking, total perfect questionnaires were saved to computer. And then, entered mentioned data into a software Statistics Package for Social Science on Window (SPSS) for evaluating data and analyzing result to discover answer that conform to research objective afterwards.

4.7 Data Analysis

In order to response the first purpose of study that to study attitude of Thai merchant marine student toward mariner profession in all aspects. It used basic statistical analysis to analyze by evaluate on Mean and Standard Deviation. In the same way, to response the second purpose of study that to compare attitude of Thai merchant marine student toward mariner profession in condition of different variables namely institutes, domicile, parent's occupation, parent's income per month, motivation to study in merchant maritime and mariner profession information acknowledgment. It used statistics applied to analyze by One Way Analysis of Variance, when One Way Analysis of Variance gave a significant result or case of the differences were significant statistically. This indicated that at least one group differed from the other groups, therefore the test method of Fisher's Least Significant Difference (LSD) is examined.

4.8 Statistics for Data Analysis

There are three statistics for data analysis on this study. Firstly, Mean and Standard Deviation for basic statistic. Secondly, t-test in order to evaluate the discrimination and α - coefficient in order to analyze reliability, these statistic applied for quality methodology. Lastly, One Way Analysis of Variance and Fisher's Least Significant Difference, these statistic applied for hypothesis testing.



Chapter 5 Results of Data Analysis

The purpose of this study is to study attitude of Thai merchant marine student toward mariner profession in all aspects namely cognition, affection and behavior and also to compare attitude of Thai merchant marine student toward mariner profession in condition of different variables namely institutes, domicile, parent's occupation, parent's income per month, motivation to study in merchant maritime and mariner profession information acknowledgment.

For this study, the results of data analysis is consisted of five parts as follows:

5.1 Basic Statistic Analysis of Samples

Percentage is used to present the result of data in parts of institutes, domicile, parent's occupation, parent's income per month, motivation to study in merchant maritime and mariner profession information acknowledgment.

From Table 5-2 most student samples are from Merchant Marine Training Center represented 54.90% secondly, International Maritime College of Kasetsart University 37.72% and lastly, Logistics Faculty of Burapha University 7.38%.

Most student samples are from resident in east region represented 22.72% secondly, central region and west region 22.03% thirdly, Bangkok 17.07% fourthly, northeast region 16.03% fifth, southern region 11.19% and lastly, north region 10.96%.

Most student samples are from Parent's occupations are government official, state enterprise employee, government employee represented 46.02% secondly, merchant and private business 21.00% thirdly, agriculturist 19.95% fourthly, establishment employee 8.30% and lastly, others 4.73%.

Most student samples are parent's income per month between 10,001 - 20,000 baht represented 30.91% secondly, parent's income per month between 20,001 - 30,000 baht 28.26% thirdly, parent's income per month over 30,000 baht 27.10% and lastly parent's income per month not over 10,000 baht 13.73%.

Most student samples are motivation to study from earned income represented 62.28% secondly, expectation and favorite profession 14.07% thirdly, private reason 13.26% fourthly, support by others 8.54% and lastly, others 1.85%.

Most student samples are mariner profession information acknowledgement from internet represented 47.06% secondly, hearsay experiences of others 41.98% thirdly, various printing media 4.96% fourthly, radio and television 3.58% and lastly, others 2.42%.

Table 5-1: Basic Statistic Analysis of Samples

Researched variables		Amount	Percentage
1. Institute	Merchant Marine Training Center	476	54.90
	Logistics Faculty, Burapha University	64	7.38
	International Maritime College, Kasetsart University.	327	37.72
	Total	867	100.00
2.Domicile	Bangkok	148	17.07
	Central region and West region	191	22.03
	East region	197	22.72
	North region	95	10.96
	Northeast region	139	16.03
	Southern region	97	11.19
	Total	867	100.00

Researched variables		Amount	Percentage
3.Parent's occupation	Government official, State enterprise employee, Government employee	399	46.02
	Agriculturist	173	19.95
	Establishment employee	72	8.30
	Merchant / Private business	182	21.00
	Others	41	4.73
	Total	867	100.00
4. Parent's income per month	Not over 10,000 baht	119	13.73
	10,001 - 20,000 baht	268	30.91
	20,001 - 30,000 baht	245	28.26
	Over 30,000 baht	235	27.10
	Total	867	100.00
5. Motivation to study in merchant maritime	Earned Income	540	62.28
	Expectation and favorite profession	122	14.07
	Support by others	74	8.54
	Private reason	115	13.26
	Others	16	1.85
	Total	867	100.00
6.Mariner profession information acknowledgment	Internet	408	47.06
	Radio and television	31	3.58
	Various printing media	43	4.96
	Hearsay experiences of others	364	41.98
	Others	21	2.42
	Total	867	100.00

5.2 Attitude Toward Mariner Profession

Mean and Standard Deviation are used to present the attitude of Thai merchant marine student toward mariner profession in overall and aspects of cognition, affection and behavior.

From Table 5-2, it represents to Thai merchant marine students have attitude toward mariner profession at high level in all aspects ($\bar{X} = 4.01$, S.D. = 0.10). Considering each aspect it was found that cognition are at high level ($\bar{X} = 4.00$, S.D. = 0.37) followed by affection at high level ($\bar{X} = 3.92$, S.D. = 0.26), and behavior at high level ($\bar{X} = 4.12$, S.D. = 0.11)

Table 5-2: Attitude Toward Mariner Profession

Mariner profession attitude	N = 867		Level
	\bar{X}	S.D.	
Cognitive	4.00	0.37	High
Affective	3.92	0.26	High
Behavioral	4.12	0.11	High
Total	4.01	0.10	High

5.2.1 Attitude in Aspect of Cognition

Thai merchant marine students have attitude toward mariner profession in aspects of cognition at high level ($\bar{X} = 4.00$, S.D. = 0.37). Considering in each item it was found that medium level was item 3, well-known profession ($\bar{X} = 3.15$, S.D. = 0.78).

Table 5-3: Attitude in Aspect of Cognition

Item	Mariner profession attitude	N = 867		Level
		\bar{x}	S.D.	
1	High income profession	4.37	0.58	High
2	Stable profession	3.52	0.75	High
3	Well-known profession	3.15	0.78	Medium
4	Progressive career path as others	3.95	0.55	High
5	Admirable profession	3.73	0.67	High
6	Driving force profession in nation economic development	4.30	0.62	High
7	Fundamental and useful knowledge in a higher level study.	3.77	0.67	High
8	Require discipline and high responsibility	4.4	0.61	High
9	Must endure the pressure in various aspects.	4.47	0.60	High
10	A profession that travel in foreign countries	4.34	0.62	High
	Average	4.00	0.37	High

5.2.2 Attitude in Aspect of Affection

Thai merchant marine students have attitude toward mariner profession in aspects of overall affection at high level ($\bar{X} = 3.92$, S.D. = 0.26). Considering in each item it was found that medium level was item 5, a boring profession to work on ship ($\bar{X} = 3.47$, S.D. = 0.81)

Table 5-4: Attitude in Aspect of Affection

Item	Mariner profession attitude	N = 867		Level
		\bar{X}	S.D.	
1	To be proud in mariner profession	4.21	0.57	High
2	A profession with honor and dignity	4.11	0.54	High
3	Glad to decide to be mariner	3.99	0.56	High
4	A challenge profession for gentleman	4.16	0.60	High
5	A boring profession to work on ship	3.47	0.81	Medium
6	To be lonely and must be separated from family for a long time	3.74	0.78	High
7	A lack of independent profession, must comply with the order of the company or shipowner.	3.68	0.73	High
8	You still choose to study in mariner field even you can change your mind.	3.67	0.85	High
9	All subjects of mariner professions are difficult content.	3.75	0.70	High
10	To have English language skill are in career advancement than others.	4.41	0.66	High
	Average	3.92	0.26	High

5.2.3 Attitude in Aspect of Behavior

Thai merchant marine students have attitude toward mariner profession in aspects of overall behavior at high level ($\bar{X} = 4.12$, S.D. = 0.11). Considering each

item it was found that students have attitude toward mariner profession in terms of behavior are at high level.

Table 5-5: Attitude in Aspect of Behavior

Item	Mariner profession attitude	N = 867		Level
		\bar{x}	S.D.	
1	To be a mariner who seek for knowledge to develop own potential	3.92	0.56	High
2	To be a mariner who is a role model for younger mariner	4.03	0.52	High
3	To be a mariner who has vision and creative thinking	4.02	0.53	High
4	To be a mariner who has good personality	4.04	0.50	High
5	To be a mariner who has leadership	4.04	0.51	High
6	To be a mariner who has discipline	4.14	0.53	High
7	To be a mariner who work with integrity	4.32	0.57	High
8	To be a mariner who has decisive thinking and determination	4.22	0.59	High
9	To be a mariner who is on time	4.25	0.58	High
10	To be a mariner who support and give advice to subordinate	4.26	0.60	High
	Average	4.12	0.11	High

5.3 Attitude Comparison

One Way Analysis of Variance is used to present the comparison of attitude in difference of variables namely institutes, domicile, parent's occupation, parent's income per month, motivation to study in merchant maritime and mariner profession information acknowledgment. In case of the differences are significant statistically, Fisher's Least significant difference (LSD) is examined.

5.3.1 Attitude Comparison Classified by Institutes

Thai merchant marine students from different institutes have different attitude toward mariner profession in aspects of cognition, affection and behavior. The difference is statistically significant at the 0.05 level, therefore the method of Fisher's Least Significant Difference (LSD) was used to test in aspects of cognition, affection and behavior.

Table 5-6: Attitude Comparison Classified by Institutes

Variable	Sources of variance	SS	df	MS	F	Sig.
Cognitive	Between Groups	16.613	2	8.306	44.052	.000*
	Within Groups	162.917	864	.189		
	Total	179.530	866			
Affective	Between Groups	27.542	2	13.771	70.237	.000*
	Within Groups	169.399	864	.196		
	Total	196.941	866			
Behavioral	Between Groups	11.776	2	5.888	24.043	.000*
	Within Groups	211.581	864	.245		
	Total	223.357	866			

Note: Level of Statistical Significance at the 0.05 level

5.3.1.1 Fisher's LSD Test of Cognition

The attitude of students at Merchant Marine Training Center toward mariner profession in terms of cognition is different from students at Logistics Faculty, Burapha University statistically significant at the 0.05 level. The attitude of student at Merchant Marine Training Center toward mariner profession in aspects of cognition is different from students at International Maritime College, Kasetsart University statistically significant at the 0.05 level. In the other comparisons are not different.

Table 5-7: Fisher's LSD Test of Cognition

Dependent Variable	(I) Institute		Merchant Marine Training Center	Logistics Faculty, Burapha University	International Maritime College, Kasetsart University
		\bar{x}	3.8761	4.0703	4.1657
Cognitive	Merchant Marine Training Center	3.8761		*	*
	Logistics Faculty, Burapha University	4.0703			
	International Maritime College, Kasetsart University	4.1657			

5.3.1.2 Fisher's LSD Test of Affection

It showed that the attitude of students at Merchant Marine Training Center toward mariner profession in aspects of affection is different from students at International Maritime College, Kasetsart University statistically significant at the 0.05 level. The attitude of students at Logistics Faculty, Burapha University toward mariner profession in terms of affection is different from students at International Maritime College, Kasetsart University statistically significant at the 0.05 level. In the other comparisons are not different.

Table 5-8: Fisher's LSD Test of Affection

Dependent Variable	(I) Institute		Merchant Marine Training Center	Logistics Faculty, Burapha University	International Maritime College, Kasetsart University
		\bar{x}	3.7704	3.8703	4.1462
Affective	Merchant Marine Training Center	3.7704			*
	Logistics Faculty, Burapha University	3.8703			*
	International Maritime College, Kasetsart University	4.1462			

5.3.1.3 Fisher's LSD Test of Behavior

It showed that the attitude of students at Merchant Marine Training Center toward mariner profession in aspects of behavior is different from students at Logistics Faculty, Burapha University statistically significant at the 0.05 level. The attitude of students at Merchant Marine Training Center toward mariner profession in aspects of behavior is different from students at International Maritime College, Kasetsart University statistically significant at the 0.05 level. In the other comparisons are not different.

Table 5-9: Fisher's LSD Test of Behavior

Dependent Variable	(I) Institute		Merchant Marine Training Center	Logistics Faculty, Burapha University	International Maritime College, Kasetsart University
		\bar{x}	4.0202	4.1984	4.2627
Behavioral	Merchant Marine Training Center	4.0202		*	*
	Logistics Faculty, Burapha University	4.1984			
	International Maritime College, Kasetsart University	4.2627			

5.3.2 Attitude Comparison Classified by Domicile

Thai merchant marine students from different domiciles have attitude toward mariner profession in aspects of cognition and behavior in the same way. Thai merchant marine students from different domiciles have different attitude toward mariner profession in aspects of affection statistically significant at the 0.05 level, therefore the method of Fisher's Least Significant Difference (LSD) are used to test in aspects of affection.

Table 5-10: Attitude Comparison Classified by Domicile

Variable	Sources of variance	SS	df	MS	F	Sig.
Cognitive	Between Groups	1.813	5	.363	1.756	.119
	Within Groups	177.717	861	.206		
	Total	179.530	866			
Affective	Between Groups	3.003	5	.601	2.667	.021*
	Within Groups	193.937	861	.225		
	Total	196.941	866			
Behavioral	Between Groups	2.798	5	.560	2.184	.054
	Within Groups	220.559	861	.256		
	Total	223.357	866			

5.3.2.1 Fisher's LSD Test of Affection

The attitude of merchant marine students domiciled in Bangkok is different from merchant marine students domiciled in the North region toward mariner profession in aspects of affection statistically significant at the 0.05 level. Attitude of merchant marine students domiciled in Central and West region toward mariner profession in aspects of affection is difference from merchant marine students domiciled in the North region and Northeast region statistically significant at the 0.05 level. The attitude of merchant marine students domiciled in the Southern region toward mariner profession in aspects of affection is different from merchant marine students domiciled in the North region and merchant marine students domiciled in the Northeast region statistically significant at the 0.05 level.

Table 5-11: Fisher's LSD Test of Affection

Dependent Variable	Domicile		Bangkok	Central region and West region	East region	North region	Northeast region	Southern region
		\bar{X}	3.8899	3.8660	3.9381	4.0337	3.9748	3.8412
Affective	Bangkok	3.8899				*		
	Central region and West region	3.8660				*	*	
	East region	3.9381						
	North region	4.0337						
	Northeast region	3.9748						
	Southern region	3.8412				*	*	

5.3.3 Attitude Comparison Classified by Parent's Occupation

The attitude toward mariner profession of the merchant marine students whose parents have different occupation have similar attitude toward mariner profession, therefore Fisher's Least Significant Difference (LSD) wasn't used to test it.

Table 5-12: Attitude Comparison Classified by Parent's Occupation

Variable	Source of variance	SS	df	MS	F	Sig.
Cognitive	Between Groups	.916	4	.229	1.105	.353
	Within Groups	178.614	862	.207		
	Total	179.530	866			
Affective	Between Groups	.351	4	.088	.384	.820
	Within Groups	196.590	862	.228		
	Total	196.941	866			
Behavioral	Between Groups	.461	4	.115	.445	.776
	Within Groups	222.896	862	.259		
	Total	223.357	866			

5.3.4 Attitude Comparison Classified by Parent's Income per Month

Thai merchant marine students whose parent's income per month are different have different attitudes toward mariner profession in aspects of cognition and affection. It is statistically significant at the 0.05 level.

Table 5-13: Attitude Comparison Classified by Parent's Income per Month

Variable	Sources of variance	SS	df	MS	F	Sig.
Cognitive	Between Groups	2.003	3	.668	3.245	.021*
	Within Groups	177.527	863	.206		
	Total	179.530	866			
Affective	Between Groups	2.548	3	.849	3.770	.010*
	Within Groups	194.393	863	.225		
	Total	196.941	866			
Behavioral	Between Groups	.396	3	.132	.511	.675
	Within Groups	222.961	863	.258		
	Total	223.357	866			

Note: Level of Statistical Significance at the 0.05 level

5.3.4.1 Fisher's LSD Test of Cognition

Thai merchant marine students whose total parent's income per month 10,001 – 20,000 baht have attitudes toward mariner profession in aspects of cognition different from merchant marine students whose total parent's income per month 20,001 – 30,000 baht. It is statistically significant at the 0.05 level.

Table 5-14: Fisher's LSD Test of Cognition

Dependent Variable	Total family income per month		Not over 10,000 baht	10,001 - 20,000 baht	20,001 - 30,000 baht	Over 30,000 baht
		\bar{x}	3.9731	3.9429	4.0645	4.0102
Cognitive	Not over 10,000 baht	3.9731				
	10,001 - 20,000 baht	3.9429			*	
	20,001 - 30,000 baht	4.0645				
	Over 30,000 baht	4.0102				

5.3.4.2 Fisher's LSD Test of Affection

Thai merchant marine students whose total parent's income per month not over 10,000 baht have attitudes toward mariner profession in aspects of affection different from merchant marine students whose total parent's income per month 20,001-30,000 baht. It is statistically significant at the 0.05 level.

Thai merchant marine students whose total parent's income per month 10,001-20,000 baht have attitudes toward mariner profession in aspects of affection different from merchant marine students whose total parent's income per month 20,001-30,000 baht. It is statistically significant at the 0.05 level.

Thai merchant marine students whose total parent's income per month 20,001-30,000 baht have attitudes toward mariner profession in aspects of affection different

from merchant marine students whose total parent's income per month over 30,000 baht. It is statistically significant at the 0.05 level.

Table 5-15: Fisher's LSD Test of Affection

Dependent Variable	Total family income per month		Not over 10,000 baht	10,001 - 20,000 baht	20,001 - 30,000 baht	Over 30,000 baht
		\bar{x}	3.8664	3.8892	4.0049	3.8919
Affective	Not over 10,000 baht	3.8664			*	
	10,001 - 20,000 baht	3.8892			*	
	20,001 - 30,000 baht	4.0049				*
	Over 30,000 baht	3.8919				

5.3.5 Attitude Comparison Classified by Motivation to Study in Merchant Marine

Thai merchant marine students who have various motivations to study in merchant marine have similar attitude toward mariner profession, therefore Fisher's Least Significant Difference (LSD) wasn't used to test it.

Table 5-16: Attitude Comparison Classified by Motivation to Study in Merchant Marine

Variable	Sources of variance	SS	df	MS	F	Sig.
Cognitive	Between Groups	1.076	5	.215	1.038	.394
	Within Groups	178.454	861	.207		
	Total	179.530	866			
Affective	Between Groups	1.528	5	.306	1.347	.242
	Within Groups	195.413	861	.227		
	Total	196.941	866			
Behavioral	Between Groups	1.055	5	.211	.817	.538
	Within Groups	222.302	861	.258		
	Total	223.357	866			

Note: Level of Statistical Significance at the 0.05 level

5.3.6 Attitude Comparison Classified by Mariner Profession Information Acknowledgment

Thai merchant marine students whose acknowledgment of mariner profession information is different have various attitudes toward mariner profession in aspects of cognition, affection and behavior. It is statistically significant at the 0.05 level.

Table 5-17: Attitude comparison Classified by Mariner Profession Information Acknowledgment

Variable	Sources of variance	SS	df	MS	F	Sig.
Cognitive	Between Groups	6.201	4	1.550	7.710	.000*
	Within Groups	173.328	862	.201		
	Total	179.530	866			
Affective	Between Groups	6.603	4	1.651	7.476	.000*
	Within Groups	190.338	862	.221		
	Total	196.941	866			
Behavioral	Between Groups	4.580	4	1.145	4.512	.001*
	Within Groups	218.777	862	.254		
	Total	223.357	866			

Note: Level of Statistical Significance at the 0.05 level

5.3.6.1 Fisher's LSD Test of Cognition

Thai merchant marine students who acknowledged mariner profession information from internet have attitudes toward mariner profession in aspects of cognition different from merchant marine students who acknowledged mariner profession information from hearsay experiences of others.

Table 5-18: Fisher's LSD Test of Cognition

Dependent Variable	Mariner profession information acknowledgment		Internet	Radio and television	Various printing media	Hearsay experiences of others	Others
		\bar{X}	4.0801	4.0710	4.0163	3.9099	3.8524
Cognitive	Internet	4.0801				*	
	Radio and television	4.0710					
	Various printing media	4.0163					
	Hearsay experiences of others	3.9099					
	Others	3.8524					

5.3.6.2 Fisher's LSD Test of Affection

Thai merchant marine students who acknowledged mariner profession information from internet have attitudes toward mariner profession in aspects of affection different from merchant marine students who acknowledged mariner profession information from hearsay experiences of others.

Thai merchant marine students who acknowledged mariner profession information from various printing media have attitudes toward mariner profession in aspects of affection different from merchant marine students who acknowledged mariner profession information from hearsay experiences of others.

Table 5-19: Fisher's LSD Test of Affection

Dependent Variable	Mariner profession information acknowledgment		Internet	Radio and television	Various printing media	Hearsay experiences of others	Others
		\bar{X}	3.9907	3.9645	4.0674	3.8225	3.8476
Affective	Internet	3.9907				*	
	Radio and television	3.9645					
	Various printing media	4.0674				*	
	Hearsay experiences of others	3.8225					
	Others	3.8476					

5.3.6.3 Fisher's LSD Test of Behavior

Thai merchant marine students who acknowledged mariner profession information from internet have attitudes toward mariner profession in aspects of behavior different from merchant marine students who acknowledged mariner profession information from hearsay experiences of others.

Table 5-20. Fisher's LSD Test of Behavior

Dependent Variable	Mariner profession information acknowledgment		Internet	Radio and television	Various printing media	Hearsay experiences of others	Others
		\bar{X}	4.1885	4.1258	4.2209	4.0415	4.1333
Cognitive	Internet	4.1885				*	
	Radio and television	4.1258					
	Various printing media	4.2209					
	Hearsay experiences of others	4.0415					
	Others	4.1333					

5.4 The Test of Hypotheses

It compares the hypothesis and the results of this study as follow:

H1: Thai merchant marine students have attitude toward mariner profession at medium level. Refer to the result of this study, Thai merchant marine students have attitude toward mariner profession at high level both in overall and each aspects which are cognition, affection and behavior ($\bar{X} = 4.01$, S.D. = 0.10) then reject of this hypothesis.

H2: Thai merchant marine students in aspects of different institutes have different attitude toward mariner profession. Refer to the result of this study, Thai merchant marine students from different institutes have different attitude toward mariner profession in aspects of cognition, affection and behavior then accept of this hypothesis.

H3: Thai merchant marine students in terms of different domicile have different attitude toward mariner profession. Refer to the result of this study, Thai merchant marine students from different domiciles have attitude toward mariner profession in aspects of cognition and behavior in the same way. Thai merchant marine students from different domiciles have different attitude toward mariner profession in aspects of affection then accept of this hypothesis.

H4: Thai merchant marine students in aspects of different parent's occupation have different attitude toward mariner profession. Refer to the result of this study, Thai merchant marine students whose parents have different occupation have similar attitude in all aspects toward mariner profession then reject of this hypothesis.

H5: Thai merchant marine students in aspects of different parent's income per month have different attitude toward mariner profession. Refer to the result of this study, Thai merchant marine students whose parent's income per month are different have similar attitudes toward mariner profession in aspect of behavior. Thai merchant marine students whose parent's income per month are different have different attitudes toward mariner profession in aspects of cognition and affection then accept of this hypothesis.

H6: Thai merchant marine students in terms of different motivation to study in merchant maritime have different attitude toward mariner profession. Refer to the result of this study, Thai merchant marine students who have various motivations to study in merchant marine have similar attitude in all aspects toward mariner profession then reject of this hypothesis.

H7: Thai merchant marine students in aspects of different mariner profession information acknowledgment have different attitude toward mariner profession. Refer to the result of this study, Thai merchant marine students whose acknowledgment of mariner profession information are different have various attitudes toward mariner profession in aspects of cognition, affection and behavior then accept of this hypothesis.

5.5 Implications

From the conference workshop to brainstorm in a topic of “Sustainable development of Thai maritime” on 17 September 2010, the conclusion from the experts attending the seminar about 6 strategies for maritime development of Thailand was government policy must be identified process framework and target, government sector must have a clear policy with comprehensive information on all relevant issues, there must be consultation between government and private sectors in each target to acknowledge and exchange information.

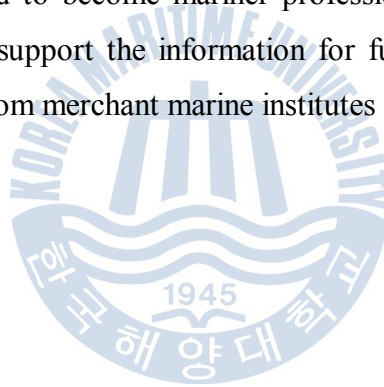
Therefore, this research can be applied and a part in giving the useful information for supporting strategy no. 5 of the government is “Development and Raising the Standard of the Maritime Personal” (Marine Department, 2009)” from total 6 Strategies for Maritime Development of Thailand. The objective of strategy no. 5 is to concentrate on development of personnel shortage and strengthen capabilities of maritime personnel, especially raise marine officer standard to international standard with sufficient quantity on demand of the market. Thus, the study of attitude toward mariner profession is important and helpful to the development.

The result from study which should be considered in improvement and development of strategy no. 5, in a part of marine officer development, that is the study shown the attitude of Thai merchant marine student toward mariner profession still be at high level, main variable influence to approach in vocation is high income variable after graduating from marine institute, conform with the result of this study to show that the background of them come from low and middle of parent’s income respectively. Therefore, high-income factor of this profession would be able to attract young people with potential to step in more this profession.

As for attitude in aspect of cognitive, though is high level in all but item of well-know of profession is only medium level. Furthermore, this study gives to confirm that the information technology affect to the behavior of new generation of Thai youth because mariner profession information acknowledgement item, approximately half

from internet. From mentioned above, imply Thai government should realize the matter of fact especially the new policy regarding seafarer development needs to perform base on the result of this study such as to utilize IT system in network development.

In part of marine institute's policy, this study shown two core variables are different in institutes and mariner profession information acknowledgement which affect directly to attitude of Thai merchant marine student in all aspects. On the contrary, parent's occupation and motivation to study in merchant maritime do not affect to attitude. This result imply to have the differences in each marine institutes in Thailand. In addition, mariner profession information acknowledgement is the critically issue for consideration in order to attract high potential young people from every region in Thailand to become mariner profession for marine institutes as well. This study was aim to support the information for future development and needs to integrate perspectives from merchant marine institutes and also government.



Chapter 6 Conclusions

6.1 Conclusions

The purpose of this study is to study attitude of Thai merchant marine students toward mariner profession in aspects of cognition, affection and behavior correspond to three attitude components identified by Triandis (1971). And to compare attitude of Thai merchant marine students toward mariner profession in condition of different factors namely institutes, domicile, parent's occupation, parent's income per month, motivation to study in merchant maritime and mariner profession information acknowledgment.

The significance of this study, government and marine institute in Thailand can apply result of this study to develop maritime personnel in officer level for supporting and enhance capacity in the competitive of the Thai merchant fleet, seek for the policy to bring potential Thai youth to study and carry out more mariner profession and more strengthen attitudes of merchant marine students at present toward mariner profession.

The population and samples are considered and correspond to table of Krejcie & Morgan. The population are Thai merchant marine students. The total samples size are 867 students by 476 students from Merchant Marine Training Center, 64 students from Logistics Faculty, Burapha University and 327 students from International Maritime College, Kasetsart University respectively.

Collecting research data, questionnaire created by attitude components presented 5 levels of Likert rating scale of 60 items. It tries out the test to non-actual samples of 30 persons and evaluates discrimination value of questionnaire in each item by applying t-test to select item which has discrimination higher than 1.734 and then they are selected 30 questions for the final questionnaires. It also evaluates reliability value of questionnaire by α -coefficient evaluation.

Statistic applied for data analysis, it used basic statistical analysis namely mean and standard deviation. And then statistics applied for quality determination included discrimination evaluation by using t-test and reliability analysis by α -coefficient evaluation. Difference of mean test of two more samples is applied by One Way Analysis of Variance. When One Way Analysis of Variance gave a significant result or case of the differences are significant statistically. This indicated that at least one group differed from the other groups, therefore the test method of Fisher's Least significant difference (LSD) is examined.

Concerning the test of research hypotheses, accept unconditionally four hypotheses are H2, H3, H5 and H7. These are Thai merchant marine students in terms of different institutes, different domicile, different parent's income per month, and different mariner profession information acknowledgment, have different attitude toward mariner profession.

On the contrary, the test of research hypotheses reject three hypotheses are H1, H4 and H6. These are Thai merchant marine students have attitude toward mariner profession at medium level. Thai merchant marine students in terms of different parent's occupation and different motivation to study in merchant maritime have different attitude toward mariner profession. Because of Thai merchant marine students have attitude toward mariner profession at high level and Thai merchant marine students in terms of different parent's occupation and different motivation to study in merchant maritime have similarity in all aspects of attitude.

In implications part, from the conference workshop of maritime experts in Thailand, they have agreed that to succeed total 6 strategies for maritime development of Thailand need to have a clear policy from the government, and availability of information and exchange of information between government and private sectors. The strategy no. 5 mention about concentrating on development of personnel shortage and strengthen capabilities of maritime personnel, especially marine officer, This study implies to Thai government and marine institutes in Thailand that they need to consider that high-income profession is a factor to select mariner profession and the most common way to acknowledge information is through internet, and the students

from different institutes variable and mariner profession information acknowledgement variable which affect directly to attitude of Thai merchant marine student in all aspects. This implication will support the achievement of new policy regarding seafarer development and attraction the high potential youth become the mariner profession.

The result from the study shows that attitude average toward mariner profession of the merchant marine students is at high level but does not reach to the highest level. Government and marine institutes in Thailand should seek for the method to increase average of attitude toward mariner profession by the effort of many factors to create positive attitude toward this profession. This will result to bring potential Thai youth to study and carry out more mariner profession which affect to development and enhance capacity in the competitive of the Thai merchant fleet. The average year of services of Thai mariner officer is not more than 10 years as it is shown in the recorded statistic, so the short year of service affect to shortage of mariner officer inevitably. By the research study about information acknowledgement of mariner profession, the secondary factor from internet is to percept hearsay from other people. Absolutely, the hearsay about short year of service may impact to making decision in this career. Therefore, the government needs to support the development activities of national maritime seriously. And implement six strategic development of maritime substantially to ensure maritime business growth in Thailand. It is considered to have a positive impact both directly and indirectly to the mariner profession by increasing the channels of profession for maritime student. These graduated maritime student may work as maritime officer for a period of time and come back to study more to work on mainland which supported by maritime business. This at least is to create an option and motivation for adolescence who start working with maritime by beginning from mariner profession as first career.

This is a world of globalization which full with data and information and is an era of internet communication. The communication technology is advanced, progressive and connected with the whole world without any obstacle of time and distance. Since the advanced technology doing business, education, research and development and even entertainment. Mostly appliances around us are obviously

controlled by electronic and computer. This is consistency with the result of this research that 47.06% of information acknowledgement of mariner profession is from internet. It is suggested how government and maritime institute will publicize mariner profession to be more widely known in Thailand and affect to attract adolescence from all regions in country to study in this program, to utilize online media or internet as a tool to be channels to reach as many adolescence as possible. Moreover, it is economical budget in promotion operating more than other media. They should apply major strength of income to attract teenager into this career as it is higher than other fields at the same level of 3 – 4 times. It is one of major issue in public relation and be consistent with the study which shown 62.28% of student agreed that motivation in remuneration is what makes the decision to be maritime student to step into being marine officer.

There are 3 maritime institutes in Thailand which educate marine officer for government service. It is found from research, the attitudes toward mariner profession of students from different institute are various even every student studies the same subjects which according to same standard of IMO (International Maritime Organization) and for marine practical training of grade 1 and grade 2 also use the same training ship and training teachers. It is the fact that each institute are different from each other because of many factors such as administration management of each institute; Merchant Marine Training Center is a unit under Marine Department, Ministry of Transport, on the other hand, Logistics Faculty, Burapha University is autonomous university and International Maritime College, Kasetsart University is under Ministry of Education. Environment on campus at Merchant Marine Training Center are likely closed society because most students are boarder and maritime students study in the same class only while maritime students of Logistics Faculty of Burapha University and International Maritime College, Kasetsart University are staying in University' s dormitory or outside dormitory which facilitate open society life.

As the similarity and dissimilarity of particular institutes including existing strength and weakness of each place such as university is the availability of academic personnel and Merchant Marine Training Center the availability of specific

professional personnel, training equipment and training ship, therefore, each institute should cooperate to develop qualified marine officers to the market by sharing resources and maximizing benefit. Furthermore, there should be policy development and promoting a positive attitude toward mariner profession in a consistent manner for having positive attitude toward mariner profession in maritime student whether chosen at any institute.

6.2 Further Research

This is the first study that collects data from all maritime public institutes in Thailand which open regular curriculum. Maritime students in Thailand will study in 5 years program. Therefore, the further research should be studying attitude of marine officers toward their profession, by studying maritime students in special program or experienced people on the ship who take additional courses for elevating to be marine officer, and then to analysis different or similar result from the study.

Marine officer is an international profession because the qualification of person who wants to be marine officer must be under IMO standard. Even though the basic qualifications are not different, it is renowned in some countries. As there are many people interesting in this profession, those countries can develop marine officer and export them to work on leading merchant shipping companies around the world. Hence, there should be study of comparison the attitude of the maritime student in foreign countries, in terms of difference and similarity with Thai merchant marine student, especially, study the countries that are able to export a lot of marine officers.

In addition, Thailand is facing with insufficient marine officer problem, the year of service of Thai marine officer is also shorter than many other countries. There should be a study about whether the attitude toward the profession of graduated marine officer after working on ship in a period of time is changed or not.

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Appendix I Questionnaire

An Empirical Study on Attitude of Thai Merchant Marine Student Towards Mariner Profession

Explanation

Questionnaire consists of 2 parts:

Part 1: Question for personal data namely institute, domicile, parent's occupation, parent's income per month, motivation to study in merchant maritime and Mariner profession information acknowledgement.

Part 2: Question for study attitude toward mariner profession in aspect of cognition, affection and behavior.

Highly appreciate in your assistance.

Yours sincerely,
Sarawut Luksanato

Part 1 Question for personal data

Please mark ✓ on the blank which match with your personal data.

1. Institute

- Merchant Marine Training Center
- Logistics Faculty, Burapha University
- International Maritime College, Kasetsart University

2. Domicile

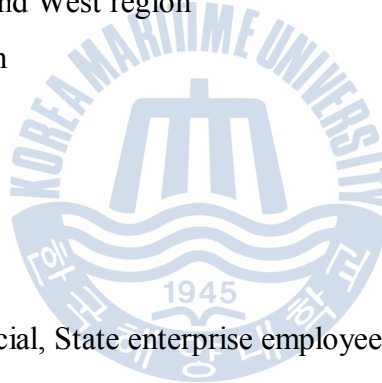
- Bangkok
- North region
- Central region and West region
- Northeast region
- East region
- Southern region

3. Parent's occupation

- Government official, State enterprise employee, Government employee
- Agriculturist
- Establishment employee
- Merchant / Private business
- Others

4. Parent's income per month

- Not over 10,000 baht
- 10,001 - 20,000 baht
- 20,001 - 30,000 baht
- Over 30,000 baht



5. Motivation to study in merchant maritime

- Earned Income
- Expectation and favorite profession
- Support by others
- Private reason
- Others

6. Mariner profession information acknowledgement

- Internet
- Radio and television
- Various printing media
- Hearsay experiences of others
- Others



Part 2 Question for study attitude toward mariner profession in aspect of cognition, affection and behavior.

Please mark ✓ on the blank which math with your comments

Item	Mariner profession attitude	Level				
		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1.	<u>Cognition</u> High income profession					
2.	Stable profession					
3.	Well-known profession					
4.	Progressive career path as others					
5.	Admirable profession					
6.	Driving force profession in nation economic development					
7.	Fundamental and useful knowledge in a higher level study.					
8.	Require discipline and high responsibility					
9.	Must endure the pressure in various aspects.					
10.	A profession that travel in foreign countries					

Item	Mariner profession attitude	Level				
		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Item	Mariner profession attitude	Level				
		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1.	<u>Affection</u> To be proud in mariner profession					
2.	A profession with honor and dignity					
3.	Glad to decide to be mariner					
4.	A challenge profession for gentleman					
5.	A boring profession to work on ship					
6.	To be lonely and must be separated from family for a long time					
7.	A lack of independent profession, must comply with the order of the company or shipowner.					
8.	You still choose to study in mariner field even you can change your mind.					
9.	All subjects of mariner professions are difficult content.					

Item	Mariner profession attitude	Level				
		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
10.	To have English language skill are in career advancement than others.					

Item	Mariner profession attitude	Level				
		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1.	<u>Behavior</u> To be a mariner who seek for knowledge to develop own potential					
2.	To be a mariner who is a role model for younger mariner					
3.	To be a mariner who has vision and creative thinking					
4.	To be a mariner who has good personality					
5.	To be a mariner who has leadership					
6.	To be a mariner who has discipline					
7.	To be a mariner who work with integrity					

Item	Mariner profession attitude	Level				
		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
8.	To be a mariner who has decisive thinking and determination					
9.	To be a mariner who is on time					
10.	To be a mariner who support and give advice to subordinate					

Appendix II Chief Executive of Maritime Institutes in Thailand

1. Cdr.Worakit Nititanan

Director

Merchant Marine Training Center

2. Dr. Mana Chaowarat

Dean

Faculty of Logistics, Burapha University

3. Adm. Supit Umnouy

Dean

Internatinal Maritime College, Kasetsart University

