Tracer Study of Maritime Graduates of one Private Academic Institution in the Philippines from 2012-2017

Asia Pacific Journal of Maritime Education
Vol. 5, 22-33
June 2019
P-ISSN: 2423-2033
E-ISSN: 2467-513X
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Abstract - *This study primarily determined the factors associated with the job placement of the graduates of Marine Transportation and Marine Engineering of one Maritime Academy in Batangas City, Philippines from 2012 to 2017. Descriptive type of research method was utilized in the study with 635 maritime graduates. Results revealed that majority of the respondents aged 23 – 25 years old, work in container vessel and whose monthly income range from Php 50,000-69,999. There is 80 percent employed among the surveyed graduates while 20 percent of them are previously employed which means that 100% of them had been employed on-board. Human relations and communication skills are the closest relevant skills acquired by the maritime graduates from the University. There is a high level of school related factors that contribute to present employment and relevant to the job placement of maritime graduates like the curriculum and acquired necessary skills and technical knowledge. They considered Navigation and ship board training as very relevant to job placement of Marine Transportation graduates while professional courses on Electro and Automation are very relevant to job placement of Marine Engineering graduates.*

Keywords: *marine engineering, marine transportation, human relations, communication skills, navigation, ship board training*

INTRODUCTION

Over the years, the Philippines has been recognized as the manning capital of the world, supplying over 25% of the world's maritime fleet. As introduced by Garcia et al. (2016), seafaring as a profession that is still very attractive and provides gainful employment to many Filipinos and no doubt immensely contributes to the economy. Maritime education provides a positive result for it makes its graduates readily acceptable for employment overseas. However, the graduates are expected to remain competitive considering the increasing demand for maritime across the globe. While employability revolves primarily around individual's characteristics, personal circumstances and external factors in the labor market, education plays a key role in the ability of graduates to gain and maintain employment.

The Philippines being a major provider of maritime experts contributed to over four hundred thousand seafarers to more than 30% of the global maritime workforce. Remittances alone have contributed five billion US dollars to the national economy. In addition, the crewing and manning sector creates various sub-industries which benefit from the maritime sector and likewise contribute to the economy by creating further jobs. The education and training of seafarers is a main factor of the maritime industry, as it maintains and develops the level of knowledge and skills in the maritime sector and guarantee maritime safety (Richter, 2016).

Higher Education Institutions (HEIs) aims for a high possibility of its graduates' employability through providing quality education. HEIs engage their graduates to a larger community of professionals who contribute to the development of their respective field of specializations and organizations and will enable them to fulfil their duties and responsibilities with utmost diligence to ethical standards and respect towards co-workers. Moreover, to create these things possible, academic institutions are expected to update their curriculum, modernize their facilities with efficient response to students' needs with relation to their professional education and society particularly in maritime and shipping industries. Effective teaching techniques and strategies are also expected on the instructors to ensure and widen the learning among students. Quality of employment given to its students is an indicator of the success of the education provided by the universities and colleges, it can also be measured through the attitude and work ethics by its graduates

(Orence & Laguador, 2013; Chavez et al., 2016; De Castro et al., 2017; Aguila et al., 2016; Laguador, 2013; Ungui et al., 2014; Celis et al., 2013; Refozar et al., 2017). Academic institutions provide an updated curriculum; modern facilities and equipment; efficient student services; responsive organization and administration; and educators must possess effective teaching techniques and strategies to ensure and maximize the learning of the students (Flores et al., 2015).

This tracer study determined the employment status of BS Marine Transportation and BS Marine Engineering Graduates of one private university in the Philippines from 2012 - 2017. Assessing the relevance of the educational services provided by the institution is a good way in measuring its significance to the industry and creating an impact to the industry. This study also assessed the relevance of the curricula, knowledge, skills and attitude acquired by the graduates deemed to be relevant for their employment; identify the personal and professional characteristics and job placement of Maritime Graduates and the school-related factors associated with their employment. The findings will serve as the basis for the college to improve, update or enhance the curricula of BSMT and BSMarE programs and services to make these more responsive to the needs of the community and shipping industries. The usefulness and relevance of the school program will be measured by the employment opportunities granted to the graduates, their present positions and the nature and the relevance of the jobs they obtained immediately after graduation.

OBJECTIVES OF THE STUDY

This study primarily determined the factors associated with the job placement of the graduates of Marine Transportation and Marine Engineering of one private academic institution in Batangas City, Philippines. Specifically, this study aimed to identify the profile of the respondents in terms of age, gender, type of shipping vessel and monthly income; determine the factors associated with the job placement of the BS Marine Transportation (BSMT) and BS Marine Engineering (BSMarE) Graduates from 2012 to 2017.

METHODS

This tracer study utilized the descriptive method in determining the job placement of BSMT and BSMarE graduates. The researchers also used quantitative analysis in order to obtain information and assess the answers of the respondents. The participants of the study are 635 maritime graduates from one maritime academy in the Philippines from 2012 to 2017. There are 346 out of 673 or 51.41 percent responded on the survey from BSMT while 42 out of 165 or 25.45 percent respondents from BS Marine Engineering. These participants are limited only to those graduates who responded from the survey questionnaire sent to them during the period of data gathering. Survey questionnaire was used as the main instrument of this study. The questionnaire consists of three parts: first, the demographic profile of the respondents in terms of age, gender, type of shipping vessel and monthly income, followed by the factors determining the factors associated with the job placement. Google form was used to gather data due to the difficulty of sending to and retrieving questionnaires from the BSMT graduates personally. The respondents were informed on the purpose of the study and were invited to participate. The researchers administered some of the questionnaires personally, others were sent through email and social networking sites. To observe highly confidential nature of the interviews, no particular names were mentioned in the report. The identity of the respondents was not revealed except they were college graduates of the university under study. No personal opinion was given by the researcher, only information and results based on the data gathered. Upon gathering the data, the results were interpreted using descriptive statistics in order to compute and analyze the data gathered from the questionnaire which include frequency count, weighted mean, percentage and rank.

RESULTS AND DISCUSSION

Table 1. Frequency Distribution of Maritime Graduates in terms of Personal Profile

Program Taken	f	%
BSMT	346	89.18
BSMarE	42	10.82
Sex		
Male	378	97.42
Female	10	2.58
Age		
23-25	141	36.3
26-28	139	35.8
29-31	92	23.7
32 and above	14	3.6

Table 1 shows that in the first profile variable, BS Marine Transportation outnumbered Marine Engineering with a frequency of 346 (89.18%) compared to the latter with 42 respondents (10.82%). It

P-ISSN: 2423-2033 | E-ISSN: 2467-513X

is very evident explanation of which is that there are more BSMT graduates compared to BSMarE. Much more respondents are exposed in the deck department rather than those working in the engine section of the ship. Most of our graduates took place BSMT primarily because of the higher salary of deck officers compared to engine officers. According

After taking up the degree Bachelor of Science in Marine Transportation, one should be well-trained in performing and fulfilling the duties and responsibilities of a marine deck officer including navigation, radio communication, and basic safety among other things. He has to exemplify remarkable navigation skills and technical expertise which are essential for marine career. Deck officers and cadets are expected to be knowledgeable on topics in international commerce, national defense, sea safety, terrestrial navigation, aquatic survival, tanker operations and sea law.

On the other hand, building and designing ships, boats, submarines, and other water vehicles are the primary focus of the marine engineering industry at present. The marine engineering jobs and the industry have been involved in building, designing, testing, repairing, and improving equipment used underwater and on water surfaces. Moreover, this field of work is also responsible for exploring underwater life and creating equipment to observe living creatures and changes inside the ocean.

Relative to this, employment of marine engineers and naval architects is projected to grow 12 percent from 2016 to 2026, encompassing all other occupations in terms of rapid growth. This anticipated increase in employment is associated with the need to design environmentally friendly ships and systems to transport energy products, such as liquefied natural gas all over the world.

Philippines continues to be an avenue for maritime human capital. With this, Filipinos are still eyeing for seafaring profession as their career path as it continues to be with 406,531 seafarers deployed in 2015 and the significant number of maritime students enrolled in maritime institutions in the country.

On the other hand, males (97.42%) dominated females (2.58%) in terms of sex. The small percentage of the women seafarers compared to the corresponding one of their male colleagues makes clear that access to employment onboard is not an easy task, especially with regard to the ship officer rank. The difficulty to get a job onboard varies between countries, but the existence of barriers is a fact.

Very often it is reported that women cadets or women seafarers face difficulties when applying for a job or are discriminated against because of their gender at the selection stage. Actions from all stakeholders are needed to face this situation. After all, the performance of an industry as a whole. or the firms of which it consists in particular, is evidence of their approach of the notion of Corporate Social Responsibility (Theotokas, 2011). An example of the value and effect of this approach can be found when examining documents like the Tanker Management Self-Assessment OCIMF, (2004), where no explicit references to issues like “professional discrimination” or “equal opportunities for crew members” is made. The type of ship where seafarers work defines not only the crew composition with regard to gender but also the employees’ relationships. The intensity of discrimination varies and depends on the specific position and the environment where it occurs (Zhao, 2002).

Graduates whose age ranges from 23-25 garnered the number of respondents with a frequency of 141 (36.3 %) which outweighed ages 26-28 (35.8 %) by two. Following such is ages 29-31 (23.7%) with 92 respondents surpassing ages 32 and above with the least number of graduates (3.6%).

Table 2. Frequency Distribution of Maritime Graduates in terms of Types of Merchant Vessel

Types of Merchant Vessel	f	%
Bulk Carriers	83	26.9
Container	182	58.9
Cruise Line	1	0.3
Dry Cargo	2	0.6
General Cargo	45	14.6
Liquefied Natural Gas (LNG TANKER)	1	0.3
Oil and Chemical Tanker	61	19.7
Product Tanker	1	0.3
Pure Car Carrier (PCC)	1	0.3
Roro Passenger	10	3.2
Supply vessel, AHTS	1	0.3

Table 2 presents the frequency distribution of Maritime Graduates in terms of types of Merchant Vessel. Almost 58.9 percent of them are employed in container vessel followed by Bulk carriers (26.9%) and oil and chemical tanker with 19.7 percent.

Table 3 shows that in the first profile variable, respondents who are earning P50,000-69,999 topped the list of graduates’ gross monthly income with a frequency of 93 (30.1%). Seventy-nine (79) or

P-ISSN: 2423-2033 | E-ISSN: 2467-513X

25.6 percent of the BSMT and BSMarE alumni were already earning P70,000-89,999 during the time of conduct of the study making it placed second. Following such is 56 or 18.1 percent of the total respondents whose income ranges from 30,000-49,999. Moreover, nineteen graduates (6.1%) are receiving 90,000-199,999 as monthly total earning. Lastly, few of them stated that they make 200,000 and above and 10,000-29,999 which is comprised of 3 or only one percent and 1 or zero point three (0.3) percent on a monthly basis, respectively.

Table 3. Frequency Distribution of Maritime Graduates in terms of Monthly Income, Examination Taken and Reason for advanced studies

Monthly Income	**f**	**%**
10,000-29,999	1	0.3
30,000-49,999	56	18.1
50,000-69,999	93	30.1
70,000-89,999	79	25.6
90,000-199,999	19	6.1
200,000 and above	3	1.0
Name of Examination (n=260)		
OIC-NW	206	79.
OIC Engine Watchkeeping	54	21.8
Training Attended (n=56)	**53**	**94.6**
Mandatory STCW Trainings	3	5.4
Inhouse Training by Shipping Companies		
What made you pursue advance studies?		
For promotion	246	79.61
For professional development	254	82.2

The Philippines, being an archipelago, a massive part of travel and tourism in the Philippines is by sea. With this, maritime tourism plays a vital role on the competitiveness of the whole tourism industry. The tourism and travel sector is an essential pillar of the Philippine economy, as it makes a substantial contribution to the Gross Domestic Product.

For the past years, the seafaring industry has created employment for thousands of Filipino marine officers, ratings and service providers making the Philippines the leading provider of certificated seaboard personnel. A significant growth in the number of Filipino seafarers who are onboard internationally are clearly evident as they increased from 19 percent in 1995 to 28 percent in 2012.

Moreover, the country's deployment of Filipino seafarers rose from 266,553 in 2007 to 369,104 in 2011. Out of the figures stated in 2011, officers comprise 24.0 percent or 90,506 of which, 38 percent or 140,681 are ratings and non-marine employees compose 37 percent or 136,971 like those undertaking hotel activities onboard passengers or cruise ships such as chambermaids, cooks, waiters, casino personnel and entertainers while 2.0 percent or 946 fall under the category others.

In relation to this, it is without doubt that they remitted a total of US$ 4.4 billion representing about 22 percent of the total remittances of US$ 19.4 billion from overseas Filipino workers (OFW). In securing a job, a graduate must be equipped with most of the skills desired by the employer and the ability to participate and contribute to the knowledge economy by applying what they learned in higher education and also improve their social standing and the country's economy (Paadi, 2014).

In relation to this, as stated in the Seafarers' Training, Certification and Watchkeeping (STCW) code and its amendments, seafarers are required to receive standard training to be a qualified crew. However, competency of seafarers refers to not only the possession of knowledge and certificates but also the skills and experience which can only be accumulated year by year. Accordingly, management ashore and on board should not only ensure that the formal skills are in place but also ensure, encourage and inspire the necessary attitudes to achieve the safety objectives (Berg, 2013). In terms of seafarers' education and training, there are 95 accredited maritime education institutions and 95 maritime training centers in the country.

As shown in Table 3, the marine graduates' main reason for pursuing advanced studies is for professional development as it accumulated 254 responses or 82.2 percent of the responses. However, with not much difference, 246 of the seafarers (79.61%) took up additional studies for the purpose of promotion. It is essential in the maritime industry to be involved in other studies in order to cope up with the changing time and processes.

Moreover, Ampong (2016) further elaborated that maritime institutions play a vital role of facing the task of upgrading the training programs and educational system in order to cope up with the rapid technological changes in this era of automation with complex

P-ISSN: 2423-2033 | E-ISSN: 2467-513X

sophisticated equipment on board ship so that the competitiveness of the Filipino seamen in the world market will still be exhibited.

Table 4. Frequency Distribution of Maritime Graduates in terms of Employment Data

Present Employment	**f**	**%**
Yes	309	79.6
Previously employed	79	20.4
Not employed at all	-	-
Reasons of Unemployment		
Health-Related	14	17.7
Advance or further study	64	81.01
Present Employment Status		
Contractual	268	86.73
Temporary	2	0.65
Regular or Permanent	39	12.62
Nature of Employment		
Gainfully employed (regular or full time job; job held is related to your field of specialization)	307	99.35
Self-employed (working for oneself maybe from one's own profession or business; not working for another firm and drawing a salary)	2	0.65
Place of work		
Abroad	271	87.7
Sea-Based	38	12.3
Is this your *first job* after college?		
Yes	238	77.02
No	71	22.98

Table 4 reveals the frequency distribution of maritime graduates in terms of employment data. During the time of the conduct of study, out of 388 surveyed graduates, 309 of them are currently employed covering 79.6 percent during the period of data gathering. On the other hand, only 79 (20.4%) are previously employed while nobody answered that they were not employed at all. This signifies that all of them have on-board experience as gainfully employed. However, 64 of them claimed that they are pushing their advanced study that is why they are temporarily unemployed (81.01%). Apparently, health-related matter is the foreseen reason for their unemployment.

The recent financial crises have affected everyone in the maritime industry. Jobs are scarce, though some top-notch company acquired new ships or increased its pool of employees, the fact remains that unemployment is still not completely off the marine market place. As argued by Orence and Laguador (2013), looking for employment opportunities would somehow be very difficult on the part of the fresh graduates especially when they do not know how the world of work be discovered without any assistance from people around them. The reason why the university offers different programs and activities that would make job seeking easier for its graduates. According to Oldeburg et al., (2010), seafaring is still an occupation with specific work-related risks. Thus, a further reduction of occupational hazards aboard ships is needed and poses a challenge for maritime health specialists and stakeholders. Nowadays, maritime medicine encompasses a broad field of workplaces with different job-related challenges.

As to present employment status, majority of the maritime graduates worked on a contractual basis representing 86.73 percent of the total respondents or 268 individuals followed by 39 and 2 respondents for regular and temporary employments comprising 12.62 percent and 0.65 percent of the responses, respectively.

Based on the explanation of Raunek (2017), he made mentioned that there are reasons why deck cadets and junior engineers find it hard to get a job. The main explanation of which is the lack of equilibrium between the supply and demand of fresh professionals in the marine industry thus, leading to dearth of jobs, especially for new graduates. Regulations regarding employment and the upkeep of standards of institutes and its students are a first to ensure that the cadets graduate with the right skill set and do not go on a ship without the adequate knowledge. Lack of reference or no job offer is also something that provides burden to the applicants not mentioning the unjust and unfair condition that are sometimes encountered.

Moreover, the fourth variable explains the nature of employment wherein a significant difference between the two components was shown. Respondents who are gainfully employed cover almost 100 percent accounting to 307 or 99.35 percent of the totality compared to those who are self-employed which only gathered 2 responses or less than one percent of the whole (0.65%) which primarily includes those involved in business or firm.

With this, ship owners do not only focus on the maintenance and upkeep of their facilities and equipment as they should also give consideration on their workforce. They are responsible for providing safe and secure working conditions, decent working and living conditions and reasonable employment terms for the satisfaction of other needs of seafarers. Also, Saks (2006) indicated that employees perceived organizational support predicts both job and organization engagement.

P-ISSN: 2423-2033 | E-ISSN: 2467-513X

On the other hand, in terms of place of work, respondents who are employed abroad outnumbered those working locally with a frequency of 271 or 87.7 percent and 38 or 12.3 percent, respectively.

As per United Nations Conference on Trade and Development, maritime transport serves as the backbone of international trade and a key engine driving globalization and competitiveness. Around 80 percent of global trade by volume and over 70 percent by value is carried by sea.

The Philippines counts on the maritime industry as a vital component in attaining inclusive growth and socio-economic progress. Shipping remains the major infrastructure by which islands are linked, as well as, connects the country to international commerce and trade ("The Philippine Maritime Industry", n.d.).

For the last variable in table 4, around 80 percent of the marine graduates (77.02%) or 238 acquired jobs related with the seafaring industry and only 71 of which are either underemployed or unemployed, that is 22.98 percent of the total respondents. With this, few shipping company hire fresh graduates with the sole intention and hope to retain them as third officers or fourth engineers once the necessary certifications are achieved. As argued by Pimentel (2017), educational credentials will never be a problem because competence and expertise are developed through experiences gained at work.

From Table 5, it has been observed that salaries and benefits served as the maritime graduates' primary reason for staying on their job because 301 of them (97.4%) considered it as basis for company retention and loyalty. More often than not, it is one of the frequently asked questions during job interviews because majority of the applicants have the custom of weighing the gains and advantages of shipping companies without compromising their safety and security before engaging in certain jobs onboard.

Moreover, with not much difference with the first component, the respondents also included relevance to course or program of study as an important factor in staying longer on jobs with a frequency of 296 or 95.8 percent. Placing third is the family influence wherein 158 (51.1%) of the respondents take this into consideration before rendering years of service and commitment to the company. As part of the Filipino traditions, it has been perceived that majority of our seafarers have family members or relatives who also ventured the same profession.

Table 5. Frequency Distribution of Maritime Graduates in terms of Reasons for Staying on the Job and Job Search

What are your reason(s) for staying on the job?	**f**	**%**
Salaries and benefits	301	97.4
Career challenge	151	48.9
Related to special skill	144	46.6
Related to course or program of study	296	95.8
Proximity to residence	-	
Peer influence	-	
Family influence	158	51.1
Is your first job related to BSMT/BSMarE?		
Yes	290	93.85
No	96	6.15
Length of Job Search for the First Job		
Less than a month	1	0.3
1 to 6 months	100	26.4
7 to 11 months	145	38.3
1 year to less than 2 years	129	34.0
2 years to less than 3 years	4	1.1
3 years to less than 4 years	-	-
Reasons for accepting the job?		
Salaries & benefits	263	85.1
Career challenge	263	85.1
Related to special skills	194	62.8
Proximity to residence	-	
How did you find your first job		
Response to an advertisement	1	0.3
As walk-in applicant	39	12.6
Family business	-	
Recommended by someone	215	69.6
Information from friends	1	0.3
Shipboard Training arranged by school's job placement officer	50	16.2
Job Fair or Public Employment Service Office (PESO)	-	
How long did you stay in your first job?		
Less than a month	-	
1 to 6 months	75	19.8
7 to 11 months	124	32.7
1 year to less than 2 years	95	25.1
2 years to less than 3 years	40	10.6
3 years to less than 4 years	3	0.8
How long did you find your current / present job?		
Less than a month	3	1.0
1 to 6 months	127	41.1
7 to 11 months	103	33.3
1 year to less than 2 years	122	39.5
2 years to less than 3 years	1	0.3
3 years to less than 4 years	2	0.6

On the other hand, with a seven-point deficit from the previous, career challenge is the fourth chosen reason of the maritime graduates covering a frequency

P-ISSN: 2423-2033 | E-ISSN: 2467-513X

of 151 (48.9%) and relevance to special skill being last in the list comprising 46.6 percent or a frequency of 144. In relation to this, Branham (2005) found that 88 percent of employees leave their jobs for reasons other than pay. Therefore, it is not only the salary, wages and compensation are the primary reasons why employees leave their job but other factors are still need to be considered by the organizations to keep their people.

Main (2008) suggested that turnover costs nearly three times of an employee's monthly salary to replace someone, which includes recruitment, severance, lost productivity and lost opportunities. Seafarers work at the shipping company during a contract term, and they have chance to change the company upon completion of the contract (Angott, 2007). Filipino seafarers are still facing a tight job market, as several out-of-work crewmen expressed frustration at being unemployed for an extended period of time, belying the optimistic outlook from local manning agencies (Kritz, 2017).

Table 6. Frequency Distribution of Maritime Graduates in terms of Job Level Position and Initial Gross Monthly Earning

Job Level Position during First Job	**f**	**%**
Deck Cadet/ Engineering Cadet	387	100
Job Level Position during Present Job		
Deck Cadet/ Engineering Cadet	130	42.1
Third Mate/ Fourth Engineer	106	34.3
Second Mate/ Third Engineer	72	23.3
Chief Mate/ Second Engineer	1	0.3
Captain/ Chief Engineer	-	
initial gross monthly earning in your **first job** after college		
Below P5,000.00	31	10.0
P5,000.00 to less than P10,000.00	1	0.3
P10,000.00 to less than P15,000.00	59	19.1
P15,000.00 to less than P20,000.00	33	10.7
P 20,000.00 to less than P25,000.00	109	35.3
P 25,000.00 and above	52	16.8

Table 6 explains the frequency distribution of maritime graduates in terms of job level position and initial gross monthly earning. For the first variable, all of the 387 respondents started as deck or engineering cadets on their first job. However, in terms of the current rank of graduate, 130 of them are deck or engine cadets which comprise 42.1 percent of the totality. With not much difference, 106 of the respondents are presently working as third mates or fourth engineers which is 34.3 percent of the

The global trend of shipping industry development provides significant evidence that the ship owners and ship operators are only concerned with their encountered problems and recruited seafarers with certain knowledge associated with certificates. High turnover rate of seafarers is common in shipping industry, and this resulted in the global shortage of experienced and well-trained senior seafarers (Tsai & Liou, 2017).

Efficiency of seafarers has two basic dimensions: technical competency which is acquired through training, education and experience, and effort and commitment which is primarily determined by the social and economic conditions of employment. As ship owners are turning to regions of low development and low salary for recruitment of seafarers, there seems now a serious problem of shortage of competent seafarers within the companies (Ceyhun, 2010).

Table 7. Frequency Distribution of Maritime Graduates in terms Competencies Learned in College

Competencies learned in college did you find very useful in your first job	**f**	**%**
Communication skills	256	82.8
Human Relations skills	295	95.5
Entrepreneurial skills	9	2.9
Information Technology skills	111	35.9
Problem-solving skills	163	52.8
Critical Thinking skills	167	54.0

As shown in Table 7, Human Relations skills topped the list of the competencies acquired in college which are beneficial on the first job with a frequency of 295 or 95.5 percent. Placing second is Communication skills gathering 82.8 percent of the totality. Moreover, skills involving Critical Thinking, Problem-solving, Information Technology and Entrepreneurship are also considered useful during the actual conduct of work garnering frequencies and percentages of 167 (54%), 163 (52.8%), 111 (35.9%) and 9 (2.9%), respectively.

In relation to this, relationships between employees and management are of substantial value in any workplace. Human relations in the workplace are a major part of what makes a business work. Through this, employees are trained, their needs are addressed and conflicts are resolved. Employees must frequently work together on projects, communicate ideas and provide motivation in order to accomplish necessary tasks. On the part of the maritime industry, it is almost impossible not to apply the human relations skills in the day-to-day encounter between officers and cadets. A

P-ISSN: 2423-2033 | E-ISSN: 2467-513X

ship's operation will not be successful if cadets do not abide with the commands of their officers. It is through the combined efforts and compliance to maritime laws and regulations that errors and accidents can be prevented. With these skills acquired by the students, they could able to explore the world of different possibilities through the maritime program. From the study of Aguado et al. (2015) revealed that maritime students strongly believed that maritime profession will bring them to different parts of the world to fulfill their duties and responsibilities as seafarers. They can reach these aspirations if they are fully equipped of both soft and hard skills that the maritime profession required for them to possess.

Table 8. School Related Factors to Job Placement in terms of Curriculum and Instruction with regard to General Education Subjects

Curriculum and Instruction General Education Subjects	Percentage					
	VR	R	SR	NR	WM	VI
Mathematics	33.0	40.5	26.5	0.0	3.06	R
Maritime English and Literature	67.3	32.0	0.8	0.0	3.66	VR
Natural Sciences	58.2	38.7	2.8	0.3	3.55	VR
Overall Average	**52.83**	**37.07**	**10.03**	**0.10**	**3.42**	**R**

Maritime English and literature topped the list of school related factors to job placement in terms of curriculum and instruction as per general education subjects. About 67.3% of the respondents agreed that the course is very relevant in job placement (3.66).

Research says that marines are expected to be familiar with the so-called Maritime Language which is essential in their day-to-day routine and obligation at work. It is almost impossible to communicate if there is no common language used to connect with fellow workers. In relation to this, Popescu and Varsami (2010) that English was accepted as the language in communicating on-board and even off by the seafarers because it is widely used all over the world. On the other hand, natural sciences ranked second as more than half of the graduates (58.2%) agreed that this is an essential component that they may apply whenever they go onboard (3.55). However, although mathematics accumulated the lowest mean among the three courses, graduates still considered it as relevant in deployment (3.06) as it is also used in marine navigation wherein they need to provide solutions to some common problems encountered by seafarers during cruising and in pre-cruise planning. To sum it up, an average total of 89.90 percent of the graduates believed that curriculum and instruction of general education subjects are of high to very high relevance to their job placement while only 10.1 percent of them answered that the said courses are slightly relevant or not relevant at all.

Table 9. School Related Factors to Job Placement in terms of Curriculum and Instruction with regard to Professional Subjects of BS Marine Transportation

Professional Subjects (MT)	Percentage					
	VR	R	SR	NR	WM	VI
Navigation	65.9	33.1	0.0	1.0	3.64	VR
Seamanship	56.9	31.8	8.7	2.6	3.43	R
Deck Watchkeeping	57.5	32.7	7.8	2.0	3.46	R
Meteorology and Oceanography	61.3	28.0	9.5	1.2	3.49	R
Maritime Communications	52.6	38.3	7.8	1.2	3.43	R
Maritime Law	57.5	34.1	5.5	2.9	3.46	R
Maritime Training Program	59.8	29.5	9.2	1.4	3.48	VR
Shipboard Training	63.3	27.5	7.2	2.0	3.52	R
Overall Average	59.35	31.88	6.96	1.79	3.49	

Scale: 1.-1.49: Not Relevant; 1.50-2.49: Slightly Relevant; 2.50-3.49: Relevant; 3.50-4.00: Very Relevant

Table 9 reveals the school related factors to job placement in terms of curriculum and instruction for professional subjects of BS Marine Transportation. As clearly shown above, the course Navigation gathered the most number of graduates (65.9%) who assessed it as very relevant component towards employability garnering a weighted mean of 3.64. Moreover, with not much difference with the first course, Shipboard Training was considered by many as the second most relevant school related program for professional subjects of BSMT graduates (63.3%). On the other hand, with a weighted mean of 3.49, Meteorology and Oceanography landed on the third spot as a very relevant factor because 61 percent of the graduates perceived the course as beneficial in the pursuit of their study.

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Table 10. School Related Factors to Job Placement in terms of Curriculum and Instruction with regard to Professional Subjects of BS Marine Engineering (n=42)

	Percentage					
Professional Subjects (MarE)	**VR**	**R**	**SR**	**NR**	**WM**	**VI**
Machine Shop	59.5	31.0	4.8	4.8	3.45	R
Auxiliary Machinery	57.1	31.0	7.1	4.8	3.40	R
Electro	61.9	35.7	2.4	0.0	3.60	VR
Powerplant	61.9	21.4	16.7	0.0	3.45	R
Automation	59.5	33.3	4.8	2.4	3.50	VR
Engine Watchkeeping	52.4	38.1	9.5	0.0	3.43	R
Engineering Materials	61.9	21.4	16.7	0.0	3.45	R
Thermodynamics	50.0	40.5	9.5	0.0	3.40	R
Overall Average	**58.03**	**31.55**	**8.94**	**1.50**	**3.46**	**R**

Scale: 1.-1.49: Not Relevant; 1.50-2.49: Slightly Relevant; 2.50-3.49: Relevant; 3.50-4.00: Very Relevant

Table 10 reveals the school related factors to Job Placement in terms of Curriculum and Instruction with regard to Professional Subjects of BS Marine Engineering. Marine engineering graduates considered Electro (3.60) and Automation (3.50) as very relevant to their job placement followed by Machine Shop (3.45), Engineering Materials (3.45) and PowerPlant (3.45). There is a 58.03 percent of the Marine Engineering graduates considered these professional courses as very relevant while 31.55 percent of them answered relevant and 8.94 percent as slightly relevant. There is a small percentage of respondents considered these professional courses as not relevant with 1.50 percent.

Table 11 presents the school related factors to Job Placement in terms of Faculty and Instruction. There are 62.9 percent of the graduates who believed that the teachers' mastery of the subject matter is very relevant to their job placement (3.60). More than half of the graduates (56.4%) believed that the quality of instruction which is relevant to the course (3.54) has contributed to their job placement together with 55.7 percent of them who answered very relevant to their job placement from the communication skills of the teachers (3.52) and 58 percent on making use of various teaching aids (3.52).

Likewise, 51.5 percent of the graduates answered on how teachers relate subjects to other fields and other life situation (3.47) and how teachers conduct accurate and objective evaluation of the student performance are still relevant to their job placement.

However, conducting themselves in a dignified and professional manner (3.45) obtained the least weighted mean score but still considered relevant to their job placement. Furthermore, there are an average total of 95.25 percent of the graduates believed that there is a high to very high relevance of the faculty and instruction to their job placement while only 4.75 percent of them answered slightly to not relevant. Agena et al (2017) emphasized that Maritime education institutions are considered important training ground of future seafarers where they should have the resources and practices to deliver quality instruction and relevant services towards efficient and effective implementation of STCW or ILO requirements.

From the study of Aguado (2015) it was revealed that Maritime faculty members generally have above average faculty performance rating and professional growth is the work related factor that maritime faculty members really valued most in working with higher education institution and job security as the least. The good traits and characteristics of the faculty members can be transferred to the attitude and behavior of the students what could be useful in the future employment of the students.

Table 11. School Related Factors to Job Placement in terms of Faculty and Instruction

	Percentage						
Faculty and Instruction	**VR**	**R**	**SR**	**NR**	**WM**	**VI**	**Rank**
1. Conducts himself in a dignified & professional manner	58.2	31.4	7.2	3.1	3.45	R	7
2. Has good communication skills	55.7	41.2	2.1	1	3.52	VR	3.5
3. Teacher has mastery of the subject matter	62.9	34.3	2.6	.3	3.60	VR	1
4. Makes use of various teaching aids	58.0	35.8	6.2	0	3.52	VR	3.5
5. Relates subjects to other fields & other life situation	51.5	44.6	3.6	.3	3.47	R	6
6. Conducts accurate & objective evaluation of student performance	51.5	44.3	3.9	0	3.48	R	5
7. Quality of instruction is relevant to the course	56.4	41	2.6	0	3.54	VR	2
Overall Average	**56.31**	**38.94**	**4.03**	**0.67**	**3.51**	**VR**	

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Table 12. School Related Factors to Job Placement in terms of Student Services

Student Services	Percentage					
	VR	R	SR	NR	WM	VI
1. Library services	53.4	39.9	5.4	1.3	3.45	R
2. Registrar's Office services	47.4	47.2	4.6	.8	3.41	R
3. College Dean's Office services	47.4	38.9	11.9	1.8	3.32	R
4. Office of Student Affairs services	38.7	45.4	11.6	4.4	3.18	R
5. Health services	45.6	42.5	9.0	2.8	3.31	R
6. Counseling and Testing Center	39.2	49.5	9.0	2.3	3.26	R
7. Physical Plant and Facilities	39.2	41.8	13.7	5.4	3.15	R
8. Laboratories	30.9	48.5	17.8	2.8	3.07	R
Overall Average	**42.73**	**44.21**	**10.38**	**2.70**	**3.27**	**R**

Table 12 presents the School Related Factors to Job Placement in terms of Student Services. Result revealed that the maritime graduates considered the student services as very relevant to their job placement primarily the library services (53.4%) as well as the services from Registrar's office (47.4%) and college dean's office (47.4%). The remaining services are also considered relevant in terms of Office of Student Affairs, Health, Counseling and Testing Center, Physical plant and facilities and laboratories. There is 44.21 percent of the students answered that the student services are relevant to their job placement while 42.73 percent of them answered very relevant while 10.38 percent as slightly relevant and 2.70 percent as not relevant. Student services helped the maritime students in building their character to become future seafarers. The way employees handled the issues and concern of the students brought them a certain level of trust and confidence to promote and nurture their core values. Study of Atienza et al. (2017) revealed that Maritime students have high positive attitude primarily in the school facilities followed by Instructional materials and other students while the least variables towards teachers and the way classes are handled.

Table 13 presents the school related factors to Job Placement in terms of Organization and Administration. Results revealed the 47.9 percent of the graduates believed that their department heads possess positive attitude towards work, staff and students is considered very relevant to their job placement while 40.2 percent of them also answered very relevant in ensuring that training programs for students are adequate and well-organized. There is a 48.2 percent of them considered the organization and administration as relevant in terms of having department heads who are effective in guiding the training and development of students to improve their performance. More than half of them or 51.8 percent considered the adherence of the administration to the vision-mission and institutional values as relevant to their job placement.

Table 13. School Related Factors to Job Placement in terms of Organization and Administration

Organization and Administration	Percentage						
	VR	R	SR	NR	WM	VI	Rank
1. The school officers & heads include within their spheres of responsibility, all the vital activities of the institution and colleges	31.4	48.7	15.7	4.1	3.07	R	4.5
2. The organization & administrative set-up of the institution and colleges are well integrated & function efficiently	17.5	57.5	18	7.0	2.86	R	6
3. Department heads are effective in guiding training & development of students to improve their performance	39.4	48.2	10.3	2.1	3.25	R	2
4. Department heads possess positive attitude towards work, staff and students	47.9	43.0	8.5	.5	3.38	R	1
5. The administration ensures that training programs for students are adequate and well-organized	40.2	44.1	14.4	1.3	3.23	R	3
6. The administration adheres to its vision-mission and institutional values	28.4	51.8	18.6	1.3	3.07	R	4.5
Overall Average	**34.13**	**48.88**	**14.25**	**2.72**	**3.14**	**R**	

P-ISSN: 2423-2033 | E-ISSN: 2467-513X

Table 14. School Related Factors to Job Placement in terms of Community Extension, Linkages & Research

Community Extension, Linkages & Research	VR	R	SR	NR	WM	VI	Rank
1. Community Extension services of the college	46.6	40.5	11.9	1.0	3.33	R	1
2. Linkages with Other Institutions and OJT	29.9	49.2	18.6	2.3	3.07	R	3
3. Development of research activities in the college	35.8	51.3	11.3	1.5	3.21	R	2
Overall Average	**37.43**	**47.00**	**13.93**	**1.60**	**3.20**	**R**	

Table 14 presents the School Related Factors to Job Placement in terms of Community Extension, Linkages and Research which acquired a weighted mean of 3.20. With this, majority of the graduates (46.6%) perceived community extension services of the college as the most relevant component to job placement among the three (3.33).

Moreover, the development of research activities in the college claimed the second spot wherein 35.8% of the respondents concurred that this is very relevant as the knowledge and skills they have acquired in this area were applied in their chosen career (3.21). Research plays a vital role especially in addressing problems encountered onboard, the skills and attributes that graduates should possess. From then, the necessary alterations and modifications will be inculcated in the curriculum.

However, linkages with other institutions and OJT gained numerous slightly relevant and not relevant responses compared to other factors as stated in the table making it last in rank (3.07).

Hence, an average total of 84.43 percent stated that the areas mentioned above were of high to very high relevance to job placement after they have finished their three year academics. Thus, only 15.57 percent of them said that those are slightly relevant or in any case significant to their studies.

CONCLUSIONS AND RECOMMENDATIONS

Majority of the respondents aged 23 – 25 years old, work in container vessel and whose monthly income range from Php 50,000-69,999. There is 80 percent employed among the surveyed graduates while 20 percent of them are previously employed which means that 100% of them had been employed on-board. Human relations and communication skills are the closest relevant skills acquired by the maritime graduates from the University. There is a high level of school related factors that contribute to present employment and relevant to the job placement of maritime graduates like the curriculum and acquired necessary skills and technical knowledge.

It is recommended that Maritime faculty members may include relevant maritime concerns and challenges during classroom discussion in order for the students to connect the practices from theories. Maritime students may be allowed to join national and international research conferences for them to be exposed in the current issues and problems of the society and maritime industry. The Dean may improve the monitoring strategies on the implementation of the curriculum and skills assessment of the students. The Department Chairs may provide co-curricular activities to strengthen the positive character and work values of the maritime students under the LIMA in-house program. Future researchers may consider this research paper as a point of reference, source of information, or further continue this research in a more in-depth approach. Future researchers may explore on other factors that affect the employment and productivity of seafarers as well as problems in terms of personal, family, health, environment, social, spiritual and emotional aspects.

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P-ISSN: 2423-2033 | E-ISSN: 2467-513X