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Research Article

CHARTING OPTIMUM EMPLOYMENT PROSPECTS FOR COLLEGE OF MARITIME EDUCATION STUDENTS AND GRADUATES

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ABSTRACT

This paper will consider the competence, training exposure, and employability performance of maritime students and graduates in the context of maritime international standards, especially the STCW Convention and the IGF Code. Based on a descriptive-correlational type of research, the study evaluated the competence in a Basic Training, IGF Code awareness, and simulator-based operations and established the relations between them and academic performance and employment success. The results show that students demonstrate sufficient competence in basic safety training and practice in simulators, but moderate competence in complex IGF related skills was found. The positive relationships between the indicators of employability, training competence, and academic performance were statistically verified. Graduates who were more operationally ready, simulator able and those who complied with the regulations were more successful in finding maritime jobs. The research highlights the importance of reinforced elements of curriculum, increased exposure to simulators, and improved congruency of training schools and industry requirements. These results reveal the importance of competency-based education to maximize employment opportunities and make maritime graduates globally competitive.

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1. Introduction

The maritime business is a very important pillar of the world trade as over 80 percent of world trade is carried by sea. This means that the need to have skilled, well trained and industry qualified maritime graduates is an ever-growing demand. Maritime education institutions have a big role to play in the production of graduates not only who have gained theoretical understanding but also operational competence in line with internationally accepted rules like Standards of Training, Certification and Watchkeeping (STCW) Convention.

In the framework of maritime education in the Philippines, which is one of the largest exporters of seafarers in the world, making graduates employable is a national and institutional priority. Another issue is constant challenges in the face of regulatory frameworks. These involve adherence to the changing industry demands, technological development, international competitiveness and the rising demands of the shipping companies in terms of safety, technical expertise and professional preparedness.

1.1 Background of the Study

The College of Maritime Education is the key to the creation of future maritime professionals which is achieved through the conduct of the basic academic education, the practical trainings, and the virtual experiences of the functioning. The maritime graduates are supposed to be competent when it comes to matters of navigation, seamanship, marine engineering operations and safe practices. Nonetheless, there have been fluctuations in employment outcomes in the field based on training exposure, institutional abilities, personal skills and trends in the global industry.

Within the recent industry reports, it is stated that maritime employers are more than ready to focus on the graduates that demonstrate initial operational skills as well as the flexibility to the shipboard environment. This highlights the importance of educational establishments to constantly evaluate and improve its curricular programs, training schemes and support programs so as to be able to match up to industry expectations and standards.

1.2 Research Gap

Despite the fact that the quality of maritime education, and the competencies acquired by seafarers have been researched extensively, less literature has been devoted to the issue regarding the relationship between institutional training practices and the real-life employability of maritime graduates. The multiplicity of

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academic preparation, simulator-based competence, compliance with regulatory training and post-graduation employability even in one analytical framework is also lacking. This gap requires a methodical investigation on the effect of maritime educational programs on job opportunities.

1.3 Objectives of the Study

The purpose of the study is to map the ideal job opportunities of College of Maritime Education students/ graduates through evaluation of their competencies, level of training exposure and employability measures. Particularly, the research aims to: 1. Assess the levels of competence of maritime students in Basic Training, IGF Code awareness and simulator-based operational procedures. 2. Identify academic and technical capabilities of graduates to work in the maritime. 3. Test the association between competence indicators and employment performance. 4. Determine institutional and external forces that have an impact on the employability of maritime graduates.

1.4 Hypotheses

The hypotheses that guide the study include the following: H1: Simulator-based competence of students and employability outcomes are significantly related. H2: Adherence to the required maritime trainings (e.g. Basic Training, IGF Code awareness) are significant predictors of employment preparedness of maritime graduates. H3: There are significant links between perceived competence and consequent employability and academic performance.

2. Literature Review

The maritime industry has a high level of strictness in regulations, dynamic nature of operations and high rate of technological changes. Consequently, educational institutions in the maritime sector should always be responsive to expectations in the industry in order to make their graduates competent and employable. The study of maritime training and employability emphasizes the importance of competency-based training, practical simulation education and international standards.

2.1 Education and Marketability

Maritime competency-based education has its basis in the STCW Convention that sets minimum training requirements of seafarers. Researchers observe that the marketability of maritime graduates can be improved in case the institutions use modernized curricula, modern simulators, and competent faculty members who can provide them with industry-relevant training. Soft skills, which include communication, leadership and adaptability, also contribute to the marketability and are regarded by employers as the key to shipboard integration.

2.2 Maritime Employment Trends

The employment patterns in the global maritime industry indicate that automation, digitalization and international regulation changes cause fluctuations in the demand of labor. Research reveals that shipping companies are more likely to hire the candidates who are also skilled in electronic navigation systems, safety management systems, and environmental compliance in addition to all the conventional seamanship. Therefore, maritime graduates are to be versatile and ready to adopt emerging technologies in ships.

2.3 Professional Growth and Problems.

The maritime profession has career development whereby a career starts as a cadet and then graduate to the level of an officer. Some of the issues identified in research include shortage of cadet berths, lack of financial resources, institutional gaps in training standards, and international competitiveness of the labor market of seafarers. Also, psychological and emotional strength has proven to be very critical factors of survival in the maritime industry.

2.4 Employability Technical and Soft skills.

Technical competence Maritime employment readiness is based on technical competence especially in Basic Training, IGF Code compliance, and operations on simulators. Nevertheless, literature pays more attention to the equal significance of soft skills. Quality partnership, awareness of situations, decision-making, and cultural flexibility all play a major role in performance in the air. The implementation of these competencies in maritime education has been proved to enhance the employability and professional success of graduates.

3. Methodology

The research design that was used in this study was descriptive-correlational research design, which was used to investigate competence, training exposure, and employability prospects of maritime students and graduates. Through this design, it was possible to offer a detailed description of the competency levels of the participants, as well as to analyze the correlation between academic preparation, training on simulators and training on mandatory certifications and the employment outcomes.

3.1 Research Design

The descriptive part of the research was aimed at recording the level of competence of students in the main areas of training in maritime training, and the correlational part of the research was aimed at the relationship between academic performance, training variables, and indicators of employability. This mixed design provided the opportunity to strictly study the factors affecting employment preparedness in maritime education.

3.2 Respondents and Sampling

The respondents were maritime students and newly graduated maritime people who graduated the College of Maritime Education. Purposive sampling was adopted to get individuals who have attained Basic Training, IGF Code awareness training and attended simulator-based exercises. Graduate respondents were those who were interested in securing maritime jobs or those who were already in shipboard jobs. The sampling method guaranteed the coverage of different maritime training and career preparation stages.

3.3 Research Instrument

The research tool was a structured survey questionnaire. The tool consisted of items to measure (1) demographic data, (2) academic achievement, (3) Basic Training competence, (4) IGF Code awareness, (5) simulator training proficiency, and (6) indicators of employability, including application of jobs, employer comments, and job placement success. The questionnaire was pilot-tested and validated by the professionals of maritime education.

3.4 Data Gathering

The questionnaires were distributed to existing students and graduates in order to collect data. The administration staff made it possible to distribute questionnaires to the respondent in the campuses, and online questionnaires were made available to the graduates who were either on deployment or in an external location. Responses were to be treated with high level of

confidentiality and participation was voluntary. There was compliance with the institutional ethical standards in data collection.

3.5 Data Analysis

The descriptive statistics (frequency counts, means, and standard deviations) were applied to analyse quantitative data to profile respondents and summarize the levels of competency. It was observed that academic performance, training competency, and employment outcomes are correlated and pertinent to each other through correlational analysis, which involved Pearson r. The analysis processes gave a methodological basis of the interpretation of the results and drawing conclusions that applied to maritime education and job preparation.

4. Results

In this section, the summarized results of the study, including the competence levels during the Basic Training, IGF Code awareness, performance on the simulator and its correlation with the outcomes of academic preparation and employability, are presented. The tables are located at the final part of the manuscript according to the demands of the journal.

4.1 Competence Levels of Students

4.1.1 Basic Training

Basic Training competence was fairly satisfactory with the evaluation of the means showing that respondents had a sufficient grasp of personal survival techniques, fire prevention and firefighting, elementary first aid, and personal safety and social responsibility. These skills correspond to the requirements of the regulations and indicate the basic preparedness to work as a maritime officer at the entry level.

4.1.2 IGF Code Training

The levels of competence as it pertains to Code awareness on IGF were moderate implying partial acquaintance with low-flashpoint fuel regulations. Although students showed understanding of the basic safety measures, weaknesses were identified in the advanced working processes, in dealing with emergencies, and fuel management. These results indicate the necessity of better instructional coverage.

4.1.3 Simulator Training

Assessments involving simulator training demonstrated the expertise of the fundamental aspects of navigational skills, such as avoiding collisions, bridge resource management and maneuvering skills. Nonetheless, however, there was performance variability in high-stress or complex conditions, which implies that there is a necessity to have prolonged exposure to simulator and scenario-based learning.

4.2 Correlation between Academic Performance and Competence Academics.

The results of analysis provided a positive correlation between academic performance and competence levels that were measured. Students of greater academic level tended to do better at simulator and IGF Code tests, which is why it is assumed that theoretical knowledge supports the practical competence.

4.3 Success of Graduates in Employment

The reactions of the graduates showed that those who had better competence profiles, especially simulator performance and required trainings, received more positive feedbacks by employers and better chances of securing jobs. Employer preferences were usually in the form of shown operational preparedness, versatility and mastery of safety measures.

5. Discussion

The results indicate that the maritime education institutions still have to work hard to enhance training programs in a bid to meet the international standards and expectations of the industry. The fact that academic performance and operational competence are positive establishes that theoretical mastery is still requisite to the acquisition of practical maritime skills.

5.1 Congruity with the Industry Expectations.

Employers also insist on bridge operations, fuel handling, and emergency response- skills that are directly related to training in simulators and IGF Code. Although the basic competence among students was satisfactory, the demands in the industry can only increase as a result of technological progress and more stringent safety rules. Curriculum modules on advanced procedures should be increased to equip graduates.

5.2 Training Needs and Implications.

Intermediate results in IGF Code awareness reveal training weaknesses that can influence employability as more ships change to alternative fuels. Enhancing training modules as well as adding further exercises based on scenarios would greatly enhance preparedness. Moreover, the performance variability in simulator when the stress is put on, shows that the amount of practice and exposure to high-risk simulations should be increased.

5.3 Impact on Employability

The research establishes that competence based on academic and practical training has a significant positive impact on employment. The graduates with good skills in simulated knowledge and current regulatory knowledge are likely to be employed faster. Employment opportunities can be increased dramatically by institutions that improve the quality of training, modernize instructional resources, and have good connections with the industry.

6. Conclusion

This paper concludes that the best employment opportunities among the maritime students and graduates lie in academic highness, simulator skill and adherence to the necessary requirements of training. Although basic competencies are sufficiently satisfied, such aspects as IGF Code awareness and advanced simulator operations still need improvement. These areas will be enhanced to enhance the competitiveness of graduates in the international maritime labor market.

7. Recommendations

1. Incorporate complex and high-stress scenarios into the simulator training hours.
2. Increase IGF Code training modules to high level fuel handling and emergency operations.
3. Increase the connections with shipping companies to make the curriculum aligned with the needs of the industry.
4. Improve student support initiatives about employability, e.g., communication and decision-making.
5. Conduct regular training to the current material regarding the changing international maritime regulations.

8. Limitations of the Study

The research is constrained by its use of self-reported information of graduates and limited number of respondents who are already at sea. Future research ought to utilize longitudinal monitoring and include performance-based evaluation certified by industry collaborators.

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Tables and Figures

Table 1. Respondent Demographics

Category	Frequency	Percentage
Current Students (Marine Transportation)	81	50%
Current Students (Marine Engineering)	81	50%
Graduates	68	100%
Male	65	93%
Female	3	7%
Age 20-30	13	19%
Age 31-40	21	31%
Age 41-50	24	35%
Age 51-60	7	10%
Above 60	3	4%

Table 2. Basic Training Competence Levels

Training Criteria	**Mean**	**Interpretation**
Importance	4.8736	Highly Significant
Clarity Of Goals	4.7418	Highly Understandable
Quality	4.1978	Excellent
Frequency	2.4121	Rarely
Effectiveness	4.0275	Effective
Expectations	3.8791	Good prospects
Meaningfulness	4.2802	Very Significant
Engagement	3.6374	Engaging
Informative	4.5055	Highly educational
Satisfaction	3.2418	Neither delighted nor discontented

Table 3. IGF Code Awareness Evaluation

Training Criteria	**Mean**	**Interpretation**
Importance	3.7198	Important
Clarity Of Goals	3.7857	Fathomable
Quality	3.5440	Above average
Frequency	3.1099	Neither frequently nor rarely
Effectiveness	3.6374	Effective
Expectations	3.5000	Good prospects
Meaningfulness	4.0495	Important
Engagement	3.7582	Engaging
Informative	3.6374	Enlightening
Satisfaction	3.7143	Delighted

Table 4. Simulator Training Performance

Training Criteria	**Mean**	**Interpretation**
Importance	4.8242	Highly Significant
Clarity Of Goals	4.4451	Highly Understandable
Quality	4.3407	Excellent
Frequency	3.7692	Frequently
Effectiveness	4.3846	Highly effective
Expectations	2.8516	Neither good prospects nor doubtful
Meaningfulness	3.7802	Important
Engagement	4.2363	Highly involved
Informative	4.0275	Enlightening
Satisfaction	3.0495	Neither delighted nor discontented

Table 5. Employment Outcomes of Graduates

Employment Indicator	**Frequency**	**Percentage**
Employed in Maritime Industry	56	82%
Currently Seeking Employment	12	18%

Table 6. Analysis of Training Criterion - Correlation between GWA and Training Criteria

Training Criterion	Pearson Correlation (r-value)	*p*-value	Remarks
Importance	.006	.937	Not Significant
Clarity of Goals	-0.217	.003	Significant
Quality	.015	.843	Not Significant
Frequency	.276	.000	Significant
Effectiveness	.022	.766	Not Significant
Expectations	.162	.029	Significant
Meaningfulness	.101	.177	Not Significant
Engagement	.094	.208	Not Significant
Informative	-0.011	.882	Not Significant
Satisfaction	.282	.000	Significant