E.ISSN.2614-6061 DOI : 10.37081/ed.v12i2.5707
P.ISSN.2527-4295 Vol.12 No.2 Edisi Mei 2024, pp.58-62

STUDENTS' PERCEPTION IN PURSUING MARITIME HIGHER EDUCATION IN DIGITAL ERA

Oleh :
Tri Cahyadi[1)], Darul Prayogo[2)], Damar Isti Pratiwi[3)], taruga Runadi[4)]
[1,2,4] Politeknik Ilmu Pelayaran Semarang
[3] Politeknik Perkeretaapian Indonesia Madiun
[1]email: tricahy4d1.28@gmail.com
[2]email: darul@pip-semarang.ac.id
[3]email: damar@ppi.ac.id
[4]email: taruga.runadi@pip-semarang.ac.id

Informasi Artikel
Riwayat Artikel :
Submit, 27 Desember 2023
Revisi, 9 Januari 2024
Diterima, 20 April 2024
Publish, 15 Mei 2024

Kata Kunci :
Digital,
Maritime,
Maritime Education,
Maritime Higher Education
Students' Perception.

ABSTRACT
The present study aimed to investigate students' perception in pursuing maritime higher education in digital era. It involved 72 students from 3 different majors in an Indonesian maritime higher education. This study used a quantitative research design which was facilitated by a survey questionnaire to gather the data. The questionnaire was in the form of 5-Likert scale consisting of 4 categories: education quality, economic motif, job availability, and self-competence. The data were analyzed using SPSS 25 employing *Parametric tests* analysis: descriptive statistics, *Pearson r* correlation, and *Cohen d* coefficient to find out the factors affecting students' acceptance in continuing their degree in maritime higher education. The results showed that the students considered economic motif as the highest factor affecting their choice in pursuing higher degree in maritime sectors. Followed by job availability and self-competence, these factors became very important in competing toward professional maritime sectors. The lowest factor was education quality, yet the maritime higher education should keep up with improving maritime education quality as maritime industries developed fast in digital era. Some recommendations have been discussed to give insightful opinion for education policy makers and managerial board of maritime higher education institutions.

Corresponding Author:
Nama: Damar Isti Pratiwi
Afiliasi: Politeknik Perkeretaapian Indonesia Madiun
Email: damar@ppi.ac.id

1. INTRODUCTION

Every aspect of education needs to be placed in its societal context (a macro view) while also being analyzed for how it affects individuals, specifically in terms of their future, the degree to which their options are constrained, and the kinds of results that are considered to be pertinent to the societies in which they currently exist (a micro view) (Manuel, 2017). The critical and unquestionable role that proper education and training play in disseminating knowledge, preserving competence, facilitating essential change, responding to emerging challenges, and reducing the negative effects of actions and decisions taken in the past is undeniable. Higher education drives global, industry, and state social change (Pertiwi & Pusparini, 2021). Universities have evolved into more than just places where conventional wisdom is challenged; they are also treasuries of society's most advanced information.

Since the introduction of new technologies, there has been a dramatic shift in the classroom, and teachers now must incorporate these tools into their lessons (Shariq, 2020). These days, ICT is seen as a possible resource for expanding educational

possibilities. It has the potential to teach students the skills necessary to thrive in today's information society, including fluency in digital media, strong interpersonal skills, and increased output (Pratiwi, Puspitasari, et al., 2023). It is often argued that in today's digital era, learners can acquire knowledge about anything at any moment using information and communication technologies. Furthermore, numerous studies have demonstrated that the use of ICT tools has an advantageous impact on students' behavior and motivation, allowing for more independent learning (Anggoro & Pratiwi, 2023b; Pratiwi & Ubaedillah, 2021; Srisermbhok, 2020; Suwantarathip, 2019).

Specifically in maritime higher education, learning and using practical skills has always been a primary emphasis of the conventional training for seafarers (O'Neil, 2003). According to the prevailing opinion, although this method addresses some cognitive abilities, it emphasizes developing practical skills needed to accomplish particular tasks. The current tendency in maritime education and training around the world is to combine a narrowly focused vocational education with broader and more in-depth academic components that can lead to a broader and more specialized degree (Demirel, 2020; Ziarati et al., 2010). As technology continues to play an increasingly important role in society, this type of training helps ensure that the maritime sector has access to highly adaptable professionals who can adapt to emerging trends in ship management.

It is clear that the focus of maritime education has to be shifted from teaching students' theoretical concepts to teaching them how to apply those concepts in actual situations in response to the needs brought about by globalization and technological development. Further, there is a growing interest in pursuing a job in the maritime industry through formal education. The widespread belief that financial gain is the primary reason for students to pursue higher maritime education ignores the fact that many skillsets are gained only through formal education (Pallis & Ng, 2011). Therefore, this study was conducted to fill the gap in the existing literature toward students' view in pursuing maritime higher education in digital era. The results were hoped to be considered as recommendation for maritime higher education institutions to acknowledge students' needs in compiling curriculum to face globalization and digitalization.

2. METHOD

Research Design and Participants

This research employed a survey quantitative research design to answer the research question about students' perspective in pursuing higher degree in maritime education institutions. It was involved 72 students from 3 different major in an Indonesian maritime vocational polytechnic. Each major consisted of 24 students. The participants were selected through a purposive sampling method in which 3 classes were selected to join in this study to get comprehensive answer from all majors in the selected maritime polytechnic. The students were 2nd year students between the ages of 19 and 21. All of them have been informed regarded the purpose of the study and asked to fill the informed consent.

Data Collection

The data were collected through a close-ended questionnaire. It was modified from previous research about pursuing maritime education in digital era which using 5-Lakert scale indicators to answer to survey questions: 1 to state very disagree to 5 to state very agree (Pratiwi et al., 2023). The questions were divided into 4 categories: education quality, economic motif, job availability, and self-competence.

Table 1. Questionnaire

No	Questions
Education quality	
1	Program accreditation by professional units
2	High quality of teaching staff
3	Enhance knowledge about maritime industries.
4	High quality of supporting facilities of the institution
Economic motif	
5	Affordable tuition fee
6	Higher earnings in maritime industries than others
7	Chance to secure a scholarship
Job Availability	
8	Institution has a good network with industries.
9	Higher chance of getting a job
10	I want to be associated with my country's maritime tradition.
Self-competence	
11	Course are practice-oriented
12	Internship availability

Data Analysis

The results of the questionnaire were tabulated in Microsoft Excel 2019 and analyzed using SPSS 25 employing Parametric tests. It was started by calculating descriptive analysis, finding Pearson r correlation, and considering Cohen d coefficient. Descriptive analysis was used to know the mean of each factor which affecting students' choice in pursuing degree in maritime higher education. Pearson r correlation was used to reveal the correlation between and among factors toward students' perception, while Cohen d coefficient was used to find out the size effect of each correlated factor. The results of the analysis, then, were described and explained as recommendation for maritime higher education institution in managing maritime programs to meet students' needs.

3. RESULTS AND DISCUSSION

Results

The results of descriptive statistics showed students' very high acceptance of all factors affecting their motivation to continue education in maritime higher institutions (see Table 3). From all questions, the minimum result was 4.09 (SD = .858) and maximum results was 4.37 (SD = .659). These results showed that the students considering 4 factors altogether in choosing maritime higher education institutions to pursue their degree. Categorizing the questions into each affected factor, the highest perception was on the second one – economic motif,

which became students' choice in getting higher degree for maritime education (M = 4.33; SD = .593). It was followed by third factor – job availability (M = 4.26; SD = .697), and fourth factor – self-competence (M = 4.25; SD = .697). The lowest affected factor was the first – education quality (M = 4.20; SD = .629). It might be assumed that the students put their priority in continuing their study in maritime sectors to support their financial income as well as ease their ways in getting job and improve their self-competence. However, they also considered education institutions as place to facilitate their study in continuing their education as this factor also hinted very high acceptance.

The descriptive statistics results also showed the results of Skewness and Kurtosis value, in which all results laid between +2 to -2 which meant that all data were homogenous (Muijs, 2010). The homogeneity of the data, then, resulted the fulfillment of required condition for the Parametric test analysis for deeper analysis of this study. The Parametric test analysis was used to explained correlation and size effect of each factor toward students' acceptance in choosing maritime higher education institutions to continue their study. The results of Parametric test analysis were described and explained thoroughly.

On the first factor, the correlations were resulted very high pairing to second (r = .823; Sig. = 000), third (r = .816; Sig. = 000) and all factors (r = .930; Sig. = 000). Yet, the correlation between first and fourth factor was only high (r = .779; Sig. = 000). It meant that the high acceptance in first factor affected second, third and all factors very high and vice versa. Further, the first factor affected fourth factor high and vice versa as well. The effect size was very small for all paired difference with first factor, except the pairing of first and second factor was small. These results revealed that the high correlation from other factors in affecting students' choice toward education quality had very small size effect affecting their perceptions.

On the second factor, the correlations were resulted very high pairing to first (r = .823; Sig. = 000), third (r = .860; Sig. = 000), fourth (r = .836; Sig. = 000) and all factors (r = .935; Sig. = 000). It meant that the high acceptance in second factor affected first, third, fourth and all factors very high and vice versa. The effect size was very small for paired difference with third and fourth factor, yet the pairing of first and all factors were small. These results revealed that the high correlation from other factors in affecting students' choice toward economic motif had very small size effect affecting their perceptions.

On the third factor, the correlations were resulted very high pairing to first (r = .816; Sig. = 000), second (r = .860; Sig. = 000), fourth (r = .910; Sig. = 000) and all factors (r = .953; Sig. = 000). It meant that the high acceptance in second factor affected first, second, fourth and all factors very high and vice versa. The effect size was very small for paired difference with first, second, fourth and all factors. These results revealed that the high correlation from other factors in affecting students' choice toward job availability had very small size effect affecting their perceptions.

On the fourth factor, the correlations were resulted very high pairing to second (r = .836; Sig. = 000), third (r = .910; Sig. = 000) and all factors (r = .926; Sig. = 000). Yet, the correlation between fourth and first factor was only high (r = .779; Sig. = 000). It meant that the high acceptance in fourth factor affected second, third and all factors very high and vice versa. Further, the fourth factor affected first factor high and vice versa as well. The effect size was very small for all paired difference with fourth factor. These results revealed that the high correlation from other factors in affecting students' choice toward self-competence had very small size effect affecting their perceptions.

Tabel 3. Descriptive Statistics Results

Questions	Min	Max	Mean	SD	Skewness		Kurtosis	
					Statistic	SE	Statistic	SE
Q1	2.00	5.00	4.09	.858	-.740	.283	-.009	.559
Q2	2.00	5.00	4.23	.759	-.825	.283	.487	.559
Q3	3.00	5.00	4.19	.704	-.294	.283	-.932	.559
Q4	3.00	5.00	4.30	.684	-.477	.283	-.784	.559
Q5	3.00	5.00	4.37	.659	-.583	.283	-.633	.559
Q6	3.00	5.00	4.29	.700	-.476	.283	-.853	.559
Q7	3.00	5.00	4.34	.631	-.432	.283	-.636	.559
Q8	3.00	5.00	4.33	.712	-.588	.283	-.826	.559
Q9	2.00	5.00	4.27	.826	-.872	.283	-.075	.559
Q10	2.00	5.00	4.18	.844	-.646	.283	-.529	.559
Q11	3.00	5.00	4.29	.700	-.476	.283	-.853	.559
Q12	2.00	5.00	4.22	.791	-.773	.283	.082	.559

Table 4. Pearson Correlation and Cohen Size Effect Results

	r	Sig.	Paired Differences					t	df	Sig. (2-tailed)	d
			Mean	SD	SE Mean	95% Confidence Interval of the Difference					
						Lower	Upper				
F1-F2	.823	.000	-.129	.365	.043	-.215	-.043	-3.011	71	.004	-.353
F1-F3	.816	.000	-.055	.418	.049	-.154	.042	-1.132	71	.262	-.132
F1-F4	.779	.000	-.048	.445	.052	-.153	.056	-.926	71	.357	-.108
F2-F3	.860	.000	.073	.369	.043	-.012	.160	1.696	71	.094	.198
F2-F4	.836	.000	.080	.382	.045	-.008	.170	1.798	71	.076	.209
F3-F4	.910	.000	.007	.301	.035	-.063	.078	.203	71	.840	.023
F1-All	.930	.000	-.054	.233	.027	-.109	.000	-1.984	71	.051	-.232
F2-All	.935	.000	.075	.218	.025	.023	.126	2.907	71	.005	.344
F3-All	.953	.000	.001	.229	.027	-.052	.055	.046	71	.963	.004
F4-All	.926	.000	-.005	.265	.031	-.068	.056	-.191	71	.849	-.019

Discussion

The main objective of this study is to explore students' perception in getting higher degree in maritime higher institutions by considering factors affecting their choice in choosing the institutions. There are four factors investigated on the present study: 1) education quality, 2) economic motif, 3) job availability, and 4) self-competence. The results showed that economic motif became the highest factors in affecting students' choice. The students believed that they could get higher earning after they graduated from maritime higher education institutions, so that they were willing to pursue their higher degree in maritime education institutions. This result supported the previous study which stated that maritime education was essential components of a prosperous future for seafarers, their families and the maritime sector (Baylon & Santos, 2011; Sofiana et al., 2018). Further, the students also considered affordable tuition fee and a chance for getting scholarship in deciding their choices of maritime higher education institutions. Due to high demand of maritime human resource in digital era, maritime higher education institutions should provide varieties in maritime programs with affordable tuition fees. Indeed, helping the students to find available scholarship for their degree could be a smart step which would attract students' perspectives.

Considering the next factor abut job availability, many of the students wanted to work in maritime sectors due to their ancestors who also worked in maritime area. Indonesia as an archipelago country offered large opportunities to work in maritime sectors. Further, the students thought that by studying in a chosen maritime higher institution, they would get higher chance in getting jobs from professional maritime industries. It was claimed that a good maritime education institution had to provide students with chances to learn about maritime industries as whole with interconnected with the professional maritime sectors for students' chosen profession (Horck, 2010; Pallis & Ng, 2011). These results could be basic fundamental for a maritime higher education institution and its managerial board to reflect and review its curriculum and networking, whether they have had connected with professional maritime industries. The students' expectation to work in a professional maritime sector should be acknowledged to improve maritime education quality.

Furthermore, improving students' self-competence became the next factor in gaining higher degree in maritime sector. Since the maritime industry developed and became increasingly complicated, the industry required professional expertise to keep the work with (Manuel, 2017). Indeed, the students had to improve their self-competence to answer the challenges in maritime sectors. The maritime course should provide practice-based and professional programs to boost productivity in maritime industry (Pallis & Ng, 2011). Soft-skills should be incorporated during the program, for instance, communication, critical thinking, leadership, teamwork, etc. (Lau & Ng, 2015). Developing maritime education with more-in-depth academic components following with internship availability can lead to broader, yet specialized degree in maritime sectors (Pratiwi, Prayogo, et al., 2023; Ziarati et al., 2010). Therefore, maritime education institutions have to involve all parties in charge of maritime industries to get comprehensive insight in developing maritime program to fulfill professional maritime human resources.

The last but not least, the quality of maritime higher education institution became the lowest factor compared to other factors in affecting students' choice, yet it resulted very high acceptance. Although the student did not consider this factor as the main point, maritime higher education had to provide high-quality teaching staff and high-quality facilities to enhance students' knowledge in maritime professional industries. It was argued that high-quality institution could support globalization and created social change (Anggoro & Pratiwi, 2023a; Pratiwi et al., 2021). Hence, maritime education should consider this factor as important as other factors in resulting good accreditation program from professional units. It was the institution's responsibilities to support students' needs with high-quality education in tracking their pathway to work with professional maritime industries. Education policy makers in general or specifically managerial boards in a maritime higher education institution need to take it for granted to improve maritime education quality in this digital era.

4. CONCLUSION

The results of the present study revealed the factors affecting students' choice in continuing education in maritime higher education: 1) economic motif, 2) job availability, 3) self-competence, and 4) education quality. The students believed that they could be a professional maritime human resource with higher earnings by having higher maritime degree. Instead, they wanted to improve their self-competence, they considered the quality of the maritime institutions to pursuing their degree. It was assumed that by studying in a good quality maritime higher education institution, the students could get higher chance in working at professional maritime sectors as the institution had networking to maritime professional industries. As much as the present study intended to explain, the study had some limitations. It was only used an close-ended questionnaire which limited students' comprehensive opinions, and the participants were limited from a maritime institution. Future research is suggested to employ larger participants from several maritime institutions and supported with open-ended questionnaire as well as interview to gather a more comprehensive insight of students' perceptions.

5. REFERENCE

Anggoro, K. J., & Pratiwi, D. I. (2023a). Fostering self-assessment in English learning with a generative AI platform : a case of Quizizz AI. *Studies in Self-Access Learning Journal*, *14*(4), 489–501. https://doi.org/10.37237/140406

Anggoro, K. J., & Pratiwi, D. I. (2023b). University students' perceptions of interactive response system in an English language course: a case of Pear Deck. *Research in Learning Technology*, *31*, 1–13. https://doi.org/10.25304/rlt.v31.2944

Baylon, A. M., & Santos, V. E. M. R. (2011). The challenges in Philippine maritime education and training. *International Journal of Innovative Interdisciplinary Research*, *1*(1), 34–43.

Demirel, E. (2020). Maritime education and training in the digital era. *Universal Journal of Educational Research*, *8*(9), 4129–4142. https://doi.org/10.13189/ujer.2020.080939

Horck, J. (2010). The gender perspective in maritime education and training. *WMU Journal of Maritime Affairs*, *9*(1), 93–119. https://doi.org/10.1007/BF03195168

Lau, Y. yip, & Ng, A. K. Y. (2015). The motivations and expectations of students pursuing maritime education. *WMU Journal of Maritime Affairs*, *14*(2), 313–331. https://doi.org/10.1007/s13437-015-0075-3

Manuel, M. E. (2017). Vocational and academic approaches to maritime education and training (MET): trends, challenges and opportunities. *WMU Journal of Maritime Affairs*, *16*(3), 473–483. https://doi.org/10.1007/s13437-017-0130-3

Muijs, D. (2010). *Doing Quantitative Research in Education with SPSS* (#2). SAGE Publications Ltd.

O'Neil, W. A. (2003). The human element in shipping. *WMU Journal of Maritime Affairs*, *2*(2), 95–97.

Pallis, A. A., & Ng, A. A. K. Y. (2011). Pursuing maritime education: an empirical study of students' profiles, motivations and expectations. *Maritime Policy and Management*, *38*(4), 369–393. https://doi.org/10.1080/03088839.2011.588258

Pertiwi, A. K., & Pusparini, R. (2021). Vocational high school English teachers' perspectives on "merdeka belajar" curriculum. *Edukatif: Jurnal Ilmu Pendidikan*, *3*(5), 1982–1992. https://edukatif.org/index.php/edukatif/article/view/672

Pratiwi, D. I., Astuti, S. W., Puspitasari, A., & Fikria, A. (2021). Analisis tata kelola perguruan tinggi vokasi dan indeks kepuasan siswa pada politeknik perkeretaapian Indonesia Madiun. *Edukatif: Jurnal Ilmu Pendidikan*, *3*(6), 4556–4567. https://doi.org/https://doi.org/10.31004/edukatif.v3i6.1491

Pratiwi, D. I., Prayogo, D., & Runadi, T. (2023). Pursuing maritime education in digital era : students ' voices. *Jurnal Pendidikan Progresif*, *13*(3), 1174–1189. https://doi.org/10.23960/jpp.v13.i3.2023

Pratiwi, D. I., Puspitasari, A., & Fikria, A. (2023). Mind-mapping technique and writeabout application integration in an online writing class: an Indonesian vocational university context. *Teaching English as a Second Language Electronic Journal (TESL-EJ)*, *26*(4), 1–20. https://doi.org/10.55593/ej.26104a4

Pratiwi, D. I., & Ubaedillah, U. (2021). Digital vocabulary class in english for railway mechanical technology. *Teaching English with Technology*, *21*(3), 67–88. https://tewtjournal.org/download/digital-vocabulary-class-in-english-for-railway-mechanical-technology-by-damar-isti-pratiwi-and-ubaedillah-ubaedillah/

Shariq, M. (2020). Mobile learning in business English course: adoptability and relevance to Saudi EFL students' learning styles. *The Asian ESP Journal*, *16*(4), 334–354.

Sofiana, N., Yuliasri, I., & Haryanto, H. (2018). Promoting English education along Indonesian coastal zone. *IOP Conference Series: Earth and Environmental Science*, *175*(1). https://doi.org/10.1088/1755-1315/175/1/012220

Srisermbhok, A. (2020). Analysis of the impact of IT and media on business English major students ' autonomous learning. *Rangsit Journal of Educational Studies*, *7*(1), 1–11.

Suwantarathip, O. (2019). Predictors of students' satisfaction with a hybrid English course. *Turkish Online Journal of Distance Education*, *20*(1), 115–130. https://doi.org/10.17718/tojde.522427

Ziarati, R., Demirel, E., & Albayrak, T. (2010). Innovation in maritime education and training. *International Maritime Lecturers Association (IMLA)*, 21–26.