Correlation Between Academic Performance in Auxiliary Machinery 2 Subject and Navigational Trip Among Marine Engineering Students at Maritime University in the Philippines

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ABSTRACT: The purpose of this study was to ascertain the level of academic performance in Auxiliary Machinery 2 subject and navigational trip among marine engineering students at maritime university, specifically JBLFMU-Molo, Iloilo City, Philippines. It further aimed also to determine the relationship of the two variables. The researchers used the quantitative research method and employed the descriptive statistics for the analysis of data among the randomly selected participants of the present study. The statistical tools were frequency, mean, and Pearson's r. To come up with the data needed for this study, the questionnaire – checklist on "Navigational trip" was developed by the researchers. Results revealed that as an entire group, the level of academic performance was "excellent" and the navigational trip was "moderately satisfactory" among marine engineering students. The correlation between navigational trip and auxiliary machinery 2 subject was "positive and significantly correlated."

1 BACKGROUND AND THEORETICAL FRAMEWORK OF THE STUDY

Navigational trip is a subject in marine engineering, which the students undergo in partial fulfillment of the requirements for the course. The orientation and exposure to, observation of, and familiarization with the ship engine room, where their future profession will greatly apply, are the objectives of this navigational trip and the basis of the capacity of each individual student, to complete his degree in maritime field of profession as a marine engineer(De Leon, 2000).

At maritime university, specifically John B. Lacson Foundation Maritime University-Molo, Iloilo City, Philippines, the on-the-job training and apprenticeship program had been launched in line with their philosophy and objectives to produce better quality midshipmen by exposing these potential officers to actual experience on board vessel in the domestic and or foreign trade (JBLF Manual 1999).

Specially, the navigational trip has an equivalent approach to apprenticeship, which is conducted, on the sea going vessel. The navigational trip is a requirement for marine engineering students on their third year. It is being guided by qualified instructors

for them o be more acquainted with and have a thorough knowledge of the engine room set-up.

The apprenticeship is a requirement after completing the basic courses and after which one can be qualified as graduate from the bachelors degree in Marine Engineering. A two-year apprenticeship onboard the vessel is required of each student. The school closely monitors this before they are issued a special order as basis of their completion of the bachelor's degree.

The factors involved in this study are the orientation and exposure to, observation of, and familiarization with the engine room, which will yield feelings of satisfaction or no satisfaction. They are to be the under lying factors in this study, because they are the basis for yielding a qualified potential officer and an excellent graduate of a Marine Engineering School. Also, this study will ascertain factors that influence the student performance and navigational trip. Finally, this study will ascertain whether or not there is a relationship between navigational trip and the performance of students in Auxiliary Machinery 2 subject.

As marine engineering students of maritime university in Iloilo City, have strived hard to meet the

standards required for international and national (local) employment. Also, the marine engineering students tried hard that the name of this prestigious institution (JBLFMU-Molo) will not be tarnished because of the mediocre performance as future seafarers. Also, the school must provide the marine engineering students the opportunity to have hands-on and on-the-job training programs so that they can equip themselves in the cognitive and skill-based training necessary for the future employment as seafarers.

This study was intended to identify also the correlation between academic performance in the Auxiliary Machinery 2 subject and navigational trip. In order to understand the present study, the conceptual framework is shown in Figure. 1.
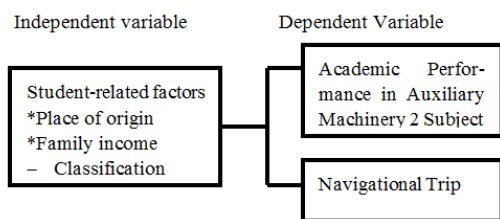

Figure 1. Correlation between navigational trip and performance in Auxiliary Machinery 2 subject

2 STATEMENT OF THE PROBLEM

The present study aimed to ascertain the level of academic performance in auxiliary machinery 2 subject and navigational trip among marine engineering students and the relationship of the two variables. Specifically this study sought to answer the following questions:

1 What is the level of academic performance in Auxiliary Machinery 2 among marine engineering students when taken as an entire group and when classified according to different categories?
2 What is the level of Navigational Trip among marine engineering students as an entire group and classified according to different categories?
3 Is there a significant relationship between academic performance in auxiliary machinery 2 subject and navigational trip among marine engineering students?

3 SIGNIFICANCE OF THE STUDY

Administration. They will be given insights in the perception of students in the gains obtained by the third year marine engineering students who undergone navigational trip.

By this, it could serve as a basis in improving the navigational trip program.

Students. They could be able to appreciate the purpose of holding navigational trip.

4 RESEARCH DESIGN

The researchers employed the quantitative research design in this investigation. Descriptive research according to Gay (1992), involves collecting data in order to test hypothesis, to test answer question concerning the current status of the subject under study.

The independent variable of this study was the student-related factors such as classification, type of residence, and monthly family income. While dependent variables were the students' performance in Auxiliary Machinery 2 subject and navigational trip.

5 THE PARTICIPANTS

The participants were the ninety nine (99) marine engineering students of the regular classes randomly selected for the purpose of this study.

The distribution of participants is shown in Table 1.

Table 1. Distribution of participants.

Category	f	%
A. Entire group	99	100
B. Family income		
P12,001 & below	72	72
P12,001 –30,000	24	24
P30,001 and above	3	3
C. Type of residence		
Rural	78	78
Urban	22	22
D. Classification		
Class A	33	33
Class B	33	33
Class C	33	33

6 DATA-GATHERING INSTRUMENT AND STATISTICAL TOOLS

To come up with the data needed for this study, the questionnaire – checklist on "Navigational trip" was developed by the researchers. Frequency counts was used to describe the profile of the respondents in terms of type of residence, family income and classification, mean was employed to describe the navigational trip and students' performance as perceived by the second year marine engineering students at maritime university, specifically John B. Lacson Foundation Maritime University-Molo, Iloilo City, Philippines. To determine the correlation between academic performance in auxiliary machinery 2 subject and navigational trip among the marine engi-

neering students, Pearson r Coefficient of Correlation was used.

7 RESULTS OF THE STUDY

The results revealed that:

As an entire group, the level of academic performance was "excellent"(M = 4.32) among marine engineering students of JBLFMU-Molo, Iloilo City, Philippines.

Marine engineering students who stayed or resied in rural and urban areas had "very good" and "excellent" academic performance (M = 4.12; M=4.50) in Auxiliary Machinery 2 respectively. The respondents' academic performance was "excellent" (M = 4.27; M = 4.28) whose family income belong to high and low income groups and "very good" for middle income group (M = 4.13). In terms of classification, the marine engineering students posted an "excellent" for class A and B (M = 4.47; M=4.61) and "very good" for Class C ((M = 3.45) on their academic performance in Auxiliary Machinery 2 subject.

Table 2. Level of the academic performance in Auxiliary Machine 2 subject among Marine Engineering students

Category	M	Description
A. Entire group	4.32	Excellent
B. Type of residence		
Rural	4.12	Very good
Urban	4.50	Excellent
C. Family income		
P12,000 and below	4.27	Excellent
P12,001 – P30,000	4.13	Very good
P30,001 and above	4.28	Excellent
D. Classification		
Class A	4.47	Excellent
Class B	4.61	Excellent
Class C	3.45	Very good

Legend:
4.21-5.00 – Excellent
3.41-4.20 – Very good
2.61-3.40 – Good
1.81-2.60 – Fair
1.00-1.80 – Poor

As an entire group, the navigational trip was "moderately satisfactory"(M = 4.02) among marine engineering students. Marine engineering students who stayed or resided in rural and urban areas found "satisfactory" and "moderately satisfactory" the navigational trip (M = 3.34; M=4.15) respectively. The respondents' navigational trip was "moderately satisfactory" those family income belong to high and low income groups ((M = 4.18; M=4.12) and "satisfactory" for middle income group (M = 3.22). In terms of classification, the students posted a "moderately satisfactory" for class A and B ((M = 4.16;

M=4.13) and "satisfactory" for Class C ((M = 3.32) on navigational trip.

The correlation between navigational trip and auxiliary machinery 2 subject of the present study revealed a significant correlation.

Table 3. Level of navigational trip among Marine Engineering students of JBLFMU-Molo

Category	M	Description
A. Entire group	4.02	Moderately satisfactory
B. Type of residence		
Rural	3.34	Satisfactory
Urban	4.15	Moderately satisfactory
C. Family income		
P12,000 and below	4.18	Moderately satisfactory
P12,001 – P30,000	3.22	Satisfactory
P30,001 and above	4.12	Moderately satisfactory
D. Classification		
Class A	4.16	Moderately satisfactory
Class B	4.13	Moderately satisfactory
Class C	3.32	Satisfactory

Legend:
4.21-5.00 – Highly satisfactory
3.41-4.20 – Moderately satisfactory
2.61-3.40 – Satisfactory
1.81-2.60 – Unsatisfactory
1.00-1.80 – Very unsatisfactory

Again, the result of correlation between auxiliary machinery 2 subject and navigational trip revealed a positive and significant correlation employing Pearson's r (r = .735, p < .05).

Table 4. Correlation between navigation trip and academic performance in Auxiliary Machinery 2

Variable	Academic Performance Auxiliary Machinery 2	
	r	r-prob
Navigational Trip	.735*	.024

* $p < 0.5$

8 CONCLUSIONS

The level of navigational trip was perceived to be "very satisfactory" when taken as an entire group. This means that navigational trip is necessary among marine engineering students in developing their personal and technical skills, as well as to social relationships. This finding was in agreement in the study of Casco (2003) stating that attending navigational trip, the students are exposed to actual sea experience. Marine engineering students were observed to have developed the sense of cooperation with co-seafarers, learned to follow the command of their superiors and learned to apply theories in their classes to actual situation. That is one of the reasons that the result revealed a significant correlation between

academic performance in Auxiliary Machinery 2 subject and navigational trip among marine engineering students.

9 IMPLICATIONS FOR THEORY AND PRACTICE

Navigational trip gives the marine engineering students a chance to meet and talk with people in the field that could provide them with information about their profession (JBLF SPS Manual).

The findings of this study are supported by the objectives formulated by maritime university, specifically John B. Lacson Foundation-Maritime University-Molo, Iloilo City, Philippines regarding the navigational trip or On-the-job Training (OJT) emphasizing that actual sea experience and exposure to the field of marine engineering is productive in the development of students.

10 RECOMMENDATIONS

Based on the findings of this study, the researchers arrived at the following recommendations:

1 Navigational trip program should be conducted effectively to ensure that students may develop their personal, technical and also social skills especially those marine engineering students belong to Class C category.

2 Personnel in-charge of the program should see to it that the implementation of the navigational trip program will be strictly observed so that the students will be oriented not only as simply an excursion or vacation.

3 Further studies be conducted to ascertain the effect of navigational trip in the teaching-learning process of marine engineering students at maritime university, specifically JBLFMU-Molo, Iloilo City, Philippines.

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