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An Evaluation of Students' Performance, Implemented Students Immersion and Faculty Qualification of Northwestern University (Nwu): Inputs for Proposed Pre-Baccalaureate Maritime Track Curriculum Enhancement



Abstract: - This descriptive study purposed to provide recommendations for curriculum enhancement by evaluating and correlating the academic performances of pre baccalaureate maritime track students and their undergoing of work immersion. Moreover, this study determined the status of qualifications of the faculty members of Northwestern University who are teaching maritime specialized courses and the 80-hour work immersion to their compliance to the prescribed Department of Education (DepEd) and Maritime Industry Authority (MARINA) standards. It was found out that about 80 to 85 percent of the 67 students enrolled in Pre baccalaureate Maritime Strand (PBMS) are satisfactory in their academic performances with regards to the specialized maritime courses including their work immersion. It was evaluated as well that their performance to two of the specialized maritime courses do not significantly correlate with their work immersion except for the subject Maritime Safety. This high percentage of satisfactory performance can be influenced by having faculty members who are highly qualified on the basis of standards set by DepEd and MARINA. It was then recommended that NWU should provide adequate enhancement programs both to the students and faculty to maintain or improve this high satisfactory rate and high quality faculty members.

Keywords: Maritime, Pre baccalaureate maritime track, work immersion, MARINA

I. INTRODUCTION

The Philippines is relatively new in the implementation of the Senior High program with Grade 11 enrolled during School Year 2016-2017. Its curriculum is patterned to the US secondary schools. The Philippines has a total of 13 years from kindergarten to Grade 12, all of which are mandatory and free especially in the public schools. It even subsidizes students who will take their grade 10 to 12 classes in the private schools or universities/colleges through the voucher program [10]. As claimed by the proponent of the K12 program, it addresses the defects of the country basic education curriculum. Accordingly, curriculum is seamless and ensure the smooth transition between grade levels and continuum of competencies. It is also relevant and responsive, enriched and learner-centered curriculum [20]. There was a total of more than 1M students in grade 11, (first year in SHS), around 60.6% were enrolled in the academic track while only 39% were in tech-voc curriculum and less than 0.5% chosen the sports, arts and design curriculum (DepEd). Data shows consistency of the report presented by Mr. Aniceto C. Orbeta, a Senior Research Fellow of Philippine of the Institute for Development Studies when conducted the public seminar last June 19, 2019. Amidst pandemic students, parents, and education institutions are open and embrace currents system of education. For them, education is one of the most important and efficient way towards an individual developing into a useful part of workforce in the industry. Knowledge has no substitution towards society's technological advancement wherein modern civilization is in need of educational progress.

In the Philippines' early adoption of the K-12 educational system, several concerns have been raised regarding its implementation, mainly, the mismatch between coursework offered in Philippine K-12 educational institutions with industry demands. With such outcomes, it is necessary to determine the status of the K-12 educational system in the Philippines. Currently still the K-12 Framework is evidently strong even under pandemics because of the millions enrolled in senior high schools both public and private institutions.

The objectives of this current study are to evaluate the grade 12 pre baccalaureate students' performance with their maritime subjects such as: a) Introduction to Maritime Career; b) Introduction to Marine Transportation and Engineering; and c) Introduction to Maritime Safety. In addition to this, the 80-hour work immersion is also evaluated by accredited technical-vocational assessors and their immersion teacher. In addition, correlation between the performance of the maritime courses and 80-hour immersion is also considered.

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Moreover, this study is looking into the status of the qualifications of faculty handling the maritime subjects in the track, as prescribed by DepEd and the Maritime Industry Authority (MARINA) and to offer inputs for possible enhancement of the pre baccalaureate maritime curriculum of the grade 12 pre baccalaureate students in the maritime subjects offered in the Northwestern University thus initiated this evaluation study.

A. Statement of the Problem

This study aims to evaluate the performance of the grade 12 students of Northwestern University taking the pre-baccalaureate maritime track, determine the qualifications for a faculty to teach the maritime subjects in the track and to formulate curriculum enhancement measures for the pre baccalaureate maritime track. Specifically, it seeks to answer the following questions.

1. What is the performance of the Grade 12 pre baccalaureate maritime strand (PBMS) students on the following specialized maritime courses?
 - 1.1. Introduction to Maritime Career
 - 1.2. Introduction to Marine Transportation and Marine Engineering
 - 1.3. Introduction to Maritime Safety
 - 1.4. 80-hour work immersion
2. Is there a significant relationship between the performances of the PBMS students in the specialized maritime courses and their work immersion performance?
3. What is the status of qualification of the faculty members handling the maritime specialized courses and 80-hour work immersion in the Northwestern University in terms of the criteria prescribed by the Department of Education and the MARINA qualification standards?
4. What measures can be recommended in order to improve the performances of the PBMS students in the specialized maritime track courses and 80-hour work immersion?

III. METHODOLOGY

The research methodology is descriptive in nature. Specifically, the researcher used the qualitative research method in describing the condition of the academic performance of the pre-baccalaureate students of the maritime track of Northwestern University.

In order to answer the problems, an evaluation tool used to evaluate the qualification of the instructors teaching the specialized courses and work immersion of the pre baccalaureate maritime track students based on the Joint DepEd Memorandum and and STCW Circular No. 1, series of 2016 was used. The evaluation tool contains a set of complied/not complied questions about their maritime experiences and the prescribed DepEd and MARINA regarding the qualification of a faculty of maritime subjects. The academic performance of the students in their specialized subjects and work immersion are indicated by the final grades given by the Senior High School Department of Northwestern University. In describing the academic performance of the student, the researcher used frequency-percentage to identify the distribution of students' scores in the assessment that will be administered in the study. The researcher used weighted mean to determine the qualification of the faculty members assigned to teach the maritime subjects in the pre baccalaureate track.

IV. RESULTS

Table I shows that the overall performance of the Grade 12 PBMS in their Introduction to Maritime Career is interpreted as *satisfactory* with a mean of 84.30% and a standard deviation of 3.07. Most of the students incurred a grade range of 80-84 and 85-89, both with a frequency of 31 and both with a percentage of 46.27%. Also, 4.48% of the students have a grade with the range of 90-100 with a frequency of 3, and 2.98% of the students incurred a grade within the 75-79 range and a frequency of 2. It is shown also in the table that no students incurred a grade below 75.

Table I. Performance of the Grade 12 PBMS in the specialized maritime course – Introduction to Maritime Career

Range	Frequency	Percentage
Below 75	0	0
75 – 79	2	2.98%
80 – 84	31	46.27%
85 – 89	31	46.27%
90 – 100	3	4.48%
Total	67	100.00%
Overall Academic Performance of G12 PBMS students in the Introduction to Maritime Career	MEAN = 84.30% SD = 3.07 Interpretation: SATISFACTORY	

Table II shows that the overall performance of the Grade 12 PBMS in their Introduction to Marine Transportation and Marine Engineering is interpreted as SATISFACTORY, with a mean of 83.16% and standard deviation of 4.63. Most of the students have grades within the range of 80-84 with a frequency of 35. Followed by 75-79 and 90-100, both with a frequency of 14 and a percentage of 20.89%. Four (4) students have grades within the range of 85-89 and a percentage of 5.98%. No students incurred a grade lower than 75.

Table II. Performance of the Grade 12 PBMS students in the specialized maritime course – Introduction to Marine Transportation and Marine Engineering

Range	Frequency	Percentage
Below 75	0	0
75 – 79	14	20.89%
80 – 84	35	52.24%
85 – 89	4	5.98%
90 – 100	14	20.89%
Total	67	100.00%
Overall Academic Performance of G12 PBMS students in the Introduction to Marine Transportation and Marine Engineering	MEAN = 83.16% SD = 4.63 Interpretation: SATISFACTORY	

Table III shows that the overall performance of the Grade 12 PBMS in their Introduction to Maritime Safety is interpreted as *satisfactory*, with a mean of 83.60% and standard deviation of 2.82. Most of the students have a grade within the range of 80-84 and a frequency of 39. Also, a frequency of 25 falls within the range of 85-89 with a percentage of 37.31%. There are 2 students out of 67 has a grade within 90-100 with a percentage of 2.99%. Only 1 student has a grade within the range of 75-79 with a percentage of 1.49%. No students incurred a grade below 75.

Table III. Performance of the Grade 12 PBMS students in the specialized maritime course – Introduction to Maritime Safety

Range	Frequency	Percentage
Below 75	0	0

75 – 79	1	1.49%
80 – 84	39	58.21%
85 – 89	25	37.31%
90 – 100	2	2.99%
Total	67	100.00%
Overall Academic Performance of G12 PBMS students in the Introduction to Maritime Safety	MEAN = 83.60% SD = 2.82 Interpretation: SATISFACTORY	

Table 4 shows that the overall performance of the Grade 12 PBMS in their 80-hour Work Immersion is interpreted as *very satisfactory*, with a mean of 85.55% and standard deviation of 6.09. Most of the students have grades within the 90-100 and 80-84 ranges, both with a frequency of 21 and a percentage of 31.34%. A 26.87% of the students with a frequency of 18 have a grade range of 85-89. Seven (7) out of 67 with a percentage of 10.45% have grades within the range of 75-79. No students incurred a grade below 75.

Table IV. Performance of the Grade 12 PBMS students (80-hour Work Immersion)

Range	Frequency	Percentage
Below 75	0	0
75 – 79	7	10.45%
80 – 84	21	31.34%
85 – 89	18	26.87%
90 – 100	21	31.34%
Total	67	100.00%
Overall Academic Performance of G12 PBMS students in their 80-hour Work Immersion	MEAN = 85.55% SD = 6.09 Interpretation: VERY SATISFACTORY	

V. DISCUSSIONS

This study aimed to determine the degree of association between the performances of the PBMS students in the specialized maritime courses and their 80-hour work immersion. In addition, this degree of association was tested for its statistical significance to support the prevailing theories or corpus of knowledge signifying that the acquired knowledge of learners in theory-based courses can assist them to perform effectively in field-based activities such as in this case, the work immersion program.

The Pearson product moment of correlation was used to obtain the strength of relationship (r) that exists between the two aforementioned variables while the test statistics having degree of freedom of $n - 2$ is used to confirm whether such relationship is statistically significant. These statistical tools are operated through the use of the SPSS. The probability value was compared to the alpha value which was set at 0.05 or 95% level of confidence. A p-value equal to or lower than the 0.05 alpha value lead to the decision of rejecting the null hypothesis of no significant relationship; thus, accepting the alternative hypothesis that there is a significant relationship between the data being tested for.

Moreover, there are very small positive correlations between the performances of the PBMS students in the specialized maritime courses, Introduction to Maritime Career and Introduction to Marine Transportation and Marine Engineering, and their performance in the 80-hour work immersion. This suggests that while the students

perform satisfactorily in these two specialized courses; a progress in their work immersion is noted but with a very small degree. This further implies that the relationship found between the variables in question only true to the sample respondents and not necessarily, exist with the population that they are drawn from. On the other hand, the degree of association between the performances of the PBMS students in the Introduction to Maritime Safety and the 80-hour work immersion is moderately small positive which indicates a parallel movement of progression at moderate level. This simply means that when the students appreciate the learning they acquired from the Introduction to Maritime Safety, their performance in the 80-Hour Work Immersion is also seen with moderate progression. This suggests that the observed relationship between the students' performance in the Introduction to Maritime Safety and their Work Immersion can also be true and observable in the population where the samples are drawn from.

This research also studied the qualification of the faculty members teaching the specialized courses and the 80-hour work immersion of the PBMS. It was found out that the average length of experience as instructors and assessors of the faculty members teaching the specialized courses and 80-hour work immersion is 6.33 years. Their average length of seagoing service in the capacity of ratings is 6 years. Also, the average length of seagoing service in the capacity of an officer-in-charge of a watch is 13 years. Further, all of the faculty members handling the Maritime Specialized courses and 80-hour Work Immersion Program have satisfied the IMO Model Course 6.09 requirement and have also completed the IMO Model Course (Assessor Course) and IMO Model Course 6.10 (Simulator Instructor Course). This signifies that the subject faculty members possess qualifications above the prescribed standards as specified in the Joint DepEd and STCW Circular No.1, series of 2016.

VI. CONCLUSIONS

The gathered data being analyzed and interpreted suggests that the pre-baccalaureate maritime students of Northwestern University, AY 2019-2020, have satisfactory performed in their specialized courses namely, Introduction to Maritime Career, Introduction to Marine Transportation and Marine Engineering and Introduction to Maritime Safety. While, the students have very satisfactory performance in their 80-hour Work Immersion Program. It is further concluded that the relationship between the Introduction to Maritime Career, Introduction to Marine Transportation and Marine Engineering to the 80-hour Work Immersion Program is *not significant*. While, the relationship between the Introduction to Maritime Safety and 80-hour Work Immersion is *significant*.

Further, it was found out that all of the faculty members teaching the specialized courses of PBMS are hired based on the qualification set by the department of education.

VII. RECOMMENDATION

The researcher noted that the Immersion of the PBMS was purely observational. Immersion should immerse the students to have the actual experience of the realities and required skills of their future career. Add to this, the 80 hours immersion must be increased (i.e. 130 hours) to make the students more competitive and at par with the graduates of the world. The researcher also proposes that the SHS Department should create more linkages with companies and can tie up with the NWU College of Maritime Education on their linkages. The SHS can even strategize a short cadetship type immersion for the PBMS.

Further, it is recommended for an enhancement of the current PBMS curriculum specifically a revisit of the curriculum and realigning of the goals and objectives of instruction to the STCW.

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