# Relationship Between Maritime Students' Attitude towards School Related Factors and Academic Performance

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Abstract - Academic performance is considered one of the important measures of student progress in educational institutions. Therefore, identifying to some extent the factors that might affect this performance was explored on this study using the school-related variables. The study aims to determine the correlation between the academic performance of Maritime students and attitude towards school-related factors in terms of teachers, other students, the way classes are handled, instructional materials and facilities. Descriptive type of research method was utilized in the study with 165 Maritime students as respondents. Results revealed that the 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. The variables related to teaching and learning process are positively correlated with the academic performance which signifies that those Maritime students with higher positive attitude towards teachers, the way classes are handled and instructional materials have also higher academic performance.

**Keywords:** academic performance, maritime students, instructional materials

## INTRODUCTION

Academic performance is one of the measures of student achievement that quantify the capability of the learner to do the activities or tasks as requirements for the fulfillment of a certain degree or course. Marine Transportation requires specific skills and competency in seamanship, navigation and among others where academic performance is considered an important gauge to determine the academic growth and attainment of student outcomes. There are some factors that may influence the performance of future seafarers that this study would like to explore. The attitude of the students as emphasized in most studies are considered contributory factor to the performance that which provides a driving force for a behavioral intention to act based on the cognitive response coming from the environment (Salmela-Aro et al., 2008; Velasco et al., 2015; Mendoza et al., 2014; Bacay, Dotong & Laguador, 2015; Laguador, 2013). Attitude is one important building block of a person particularly the students to achieve their aspirations successfully or sometimes experience hopelessness and dejection. Possessing the right attitude towards something would mean an exceptional end result and vice-versa.

The environment really affects the attitude of the person. If a certain student works and occupies an atmosphere which has excellent teachers, friendly classmates, state-of-the-art facilities and which is free from negative influence and peer-pressure, he is expected to perform very well in school and obtain high grades as measures of having a first-class school environment. Agena et al. (2015) mentioned that social interaction of the students within the classroom environment involves the teachers and their classmates where teaching and learning activities are being facilitated which need to be improved and addressed some factors that may somehow influence the learning process. The University provides school facilities, relevant curriculum and training that will prepare the students for future employment (Orence & Laguador, 2013; Dotong, 2014; Chavez et al., 2016; Dotong et al., 2016). Maristela Jr, (2015) and Dacuray et al., (2015) emphasized that the physical plant and facilities are major considerations in developing the proficiency of the students to handle equipment and machines needed for their respective fields of specialization. This is the reason why do the researchers need to pursue this study because it attempts to determine whether if there is a significant relationship between the academic performance of Maritime students from one Higher Education Institution in the Philippines.

Attitudes of Maritime students towards some selected variables will be given emphasis to determine the factors that influence their academic performance through examining some school - related variables. When a student fails to submit his assignment/project on-time or absolutely fails the subject, most people blame the teachers to this end. Teacher is not the only factor must consider to the academic performance of the students. Through the implementation of the Outcomes-based education (OBE), teachers serve as facilitators of learning while the students at the center of the process. Akınoğlu and Tandoğan (2007) noted that the student-centered active learning process within which teacher is merely a guide is the focal point of contemporary education systems. Student-centered teaching and learning is the recommended approach to modern day pedagogy especially in the Outcomesbased Education where the teachers served as the facilitator of learning activities rather than performing the traditional lecture method (Laguador, 2014; Laguador & Dotong, 2014; Caguimbal et al., 2013; Guico & Dolor, 2013).

The changing landscape of the education puts the mindset of the HEIs on the perspective of successfully achieving the learning outcomes as measure of quality instruction and delivery of educational services to the students. Therefore, considering other factors rather than teachers could help the system enhance the deployment of all services. In this research, the students' attitude towards their classmates, the way classes are handled, facilities and instructional materials will be included as variables to be looked into.

In this way, the LIMA faculty members in general will be given insights on how the students feel about their presence inside the classroom and the way they handled the class. Administrators will also be provided an idea on how to make the class schedules more appropriate to the kind of students they have. The students themselves will also be oriented regarding their attitudes towards one another. This will also serve as a reference guide to the future researchers who would like to delve in the same study but in different time and setting.

## **OBJECTIVES OF THE STUDY**

It is the major purpose of this study to determine the relationship between the academic performance of Maritime students at Lyceum International Maritime Academy and their attitudes towards some schoolrelated factors.

Specifically, it aims to determine the academic performance of 1<sup>st</sup> Year Maritime students during 2<sup>nd</sup> Semester of Academic Year 2015-2016; determine the attitude manifested by the students along the following

school-related factors: teachers; other students; class schedule; the way classes are handled; facilities; and instructional materials; test the significant relationship between the academic performance of maritime students and their attitude towards some school – related factors.

# **METHODS**

The normative survey under the descriptive type of research will be utilized in the study. Descriptive survey method is appropriate for data derived from simple observational situations, whether these are actually physically observed or observed through the use of a questionnaire or poll techniques (Zulueta & Costales, 2006).

# Respondents

The respondents of the study are the 165 selected First Year Marine Engineering and Marine Transportation students enrolled during 2<sup>nd</sup> Semester A.Y. 2015-2016.

#### Instrument

The survey questionnaire for determining the attitude of the students towards some school-related variables was used to collect data and information. This instrument was adapted from the study of Flores et al. (2015). It was already modified by the researchers and content-validated by one guidance counselor, the Department Chair of Marine Transportation and by the Research Director. The reliability of the instrument was also tested which obtained a Cronbach Alpha value of 0.819 which implies that the instrument was reliable with "Good" internal consistency.

A documentary analysis was also utilized where the academic performance of the 1<sup>st</sup> Year Marine Engineering and Marine Transportation students during 1<sup>st</sup> semester of AY 2015-2016 was obtained from the Registrar's Office.

## **Procedure**

The questionnaires were personally distributed by the researchers to the students. The identified respondents were given an informed consent to ask whether they are willing to participate in the study. The objective of the research was also discussed and all students who agreed to participate were invited in one session to answer the questionnaires. The researchers also explained that the data will be gathered from the study will be treated with strict confidentiality.

# **Data Analysis**

Frequency count, weighted mean and percentage were the statistical tools used to describe the academic performance and the attitude of the respondents towards some selected school related variables while Pearson-Product Moment Correlation Coefficient was used to test the significant relationship between the academic performance and attitude. The given scale was used to interpret the result of the study: 3.50-4.00: Strongly Agree/Very High; 2.50-3.49: Agree/High; 1.50-2.49: Disagree/ Low; 1.00-1.4: Strongly Disagree/Very Low.

# RESULTS AND DISCUSSION

Table 1. Academic Performance of the Surveyed Student-Respondents

General Weighted Average	F	%
High (1.00 – 1.75)	8	5
Average (1.76-2.50)	85	52
Low (2.51 and below)	72	44
Total	165	100

There are 85 or 52 percent of the surveyed Maritime students have an average level of General Weighted Average (GWA) followed by the group of 72 or 44 percent with Low GWA from 2.51 and below while the least group of 8 or 5 percent with high GWA from 1.75 and above.

Table 2. Attitude Towards Any Teacher

Table 2. Attitude Towards Any Teacher					
	itude Towards Any icher	WM	VI	Rank	
1.	Know the subject.	3.23	Agree	4	
2.	Grade fairly.	3.37	Agree	2	
3.	Give individual help willingly.	3.21	Agree	5	
4.	Give test questions which are clearly understood.	3.19	Agree	6	
5.	Understand young people.	3.06	Agree	9	
6.	Are natural leader.	3.29	Agree	3	
7.	Can talk well on many subjects.	3.16	Agree	7	
8.	Inspire the students with confidence in their own abilities.	3.04	Agree	10	
9.	Make the subject matter interesting.	3.11	Agree	8	
10.	Use vocabulary best suited to the average students.	3.52	Strongly Agree	1	
Cor	Composite Mean 3.22 Agree				

Table 2 presents the attitude of the Maritime students towards any teacher. The composite mean score of 3.22 implies that the students have high positive attitude in general towards any teacher in the University. The Maritime students strongly agree that the teachers use vocabulary best suited to the average students (3.52). Language use in the classroom to discuss or demonstrate the lessons is an important aspect of teaching and learning process that enables the students to understand easily some abstract concepts. Meanwhile, they agreed that their teachers grade fairly (3.37), natural leaders (3.29), know the subject (3.23) and give individual help willingly (3.21). Maritime teachers are considerate in giving lectures where they utilize actual experiences on board ship to relate the topics to the duties of deck cadets. They also express fairness in treating all the students as equal in giving grades which is one of the characteristics of good leaders.

Likewise, they agreed that their teachers give test questions which are clearly understood (3.19), can talk well on many subjects (3.16) and make the subject matter interesting (3.11). Since majority of the teachers have onboard ship experience, they can share their practices and technical know-how to the Maritime students which directly connects the theories and principles to the actual scenario and conditions. On that note, students can raise their motivation to believe on how things are being done onboard vessels. Tella (2007) emphasized that the issues of motivation of students in education and the impact on academic performance are considered as an important aspect of effective learning.

However, understanding young people (3.06) and inspiring the students with confidence in their own abilities (3.04) obtained the least weighted mean scores. Maritime teachers are professional deck officers and some of them do not have units in education as orientation course before they were given their first teaching load. Therefore, some teaching pedagogies that would somehow help them understand the needs of the students are not yet acquired from their previous experience. Developing the potentials of the students from delivering quality instructions is one thing that should be considered by the Maritime teachers to hone and equip the students with the proper knowledge, skills and attitude.

Table 3 presents the attitude of the Maritime students towards other students. The composite mean score of 3.34 implies that the Maritime students have high positive attitude towards other students in the University.

<b>Table 3. Attitude Towards Other Students</b>				
	titudes Toward	$\mathbf{W}\mathbf{M}$	VI	Rank
Ot	her Students			
1.	I find it easy to take a genuine interest in the activities of some of my classmates	3.55	Strongly Agree	2
2.	Some of my friends/classmates consistently do things of which I approved.	3.37	Agree	3
3.	Maritime students are matured socially and emotionally.	3.18	Agree	4
4.	Some people whom I know are humble and or easy to live with.	3.03	Agree	5
5.	The success of most students I know seems primarily from their determination and motivation	3.59	Strongly Agree	1
Co	mposite Mean	3.34	Agree	

The maritime students strongly agree that the success of most students they know seems primarily from their determination and motivation (3.59) and they find it easy to take a genuine interest in the activities of some of their classmates (3.55). It is good to note that the Maritime students are optimistic on how they see other students achieved success through having enthusiasm, hope and inspiration in life. They agree that some of their friends/classmates consistently do things of which they approved (3.37) and Maritime students are matured socially and emotionally (3.18). Making positive and significant meaning to the activities of other students is a sign of appreciation, respect and acceptance on the way people play their role in the academic community. Since majority of them are males, they have common interest that bring them together in harmony. Agena et al (2015) affirmed that collaboration among students provides healthy competition and cooperation within the classroom setting.

However, some people whom they know are humble and or easy to live with (3.03) obtained the least weighted mean score. They still need to know the nature and behavior of other students within their sphere in order for them to fully understand the

character and personality of each and everyone they meet in the University.

Table 4. Attitude Towards the Way Classes are Handled

	Attitudes toward the Way Classes are Handled		VI	Rank
1.	I like to participate in the discussion with my teacher.	2.41	Disagree	3
2.	I like to do practical exercises and seat works.	2.54	Agree	2
3.	I like it when teacher always asked questions to students.	2.32	Disagree	4
4.	I like laboratory classes to enhance my hands-on experience	3.62	Strongly Agree	1
Co	mposite Mean	2.72	Agree	

The composite mean score of 2.71 implies that the students have moderately high positive attitude towards the way classes are handled as presented in Table 4.

The student-respondents strongly agreed that they like laboratory classes to enhance their hands-on experience (3.62) while they agreed that they like to do practical exercises and seat works (2.54). They believe on the constructivist theory of learning by doing where they can directly apply and enhance their knowledge through actual hands-on activities and problem solving state. They were given adequate laboratory hours in the use of navigational facilities. Agena et al. (2015) stated that providing proper instruction and direction would lead to well-informed members of the class towards a successful teaching and learning process which defines certain rules and regulations to follow by everyone for an orderly manner of day-to-day classroom activities.

However, they disagreed in their willingness to participate in the discussion with their teacher (2.41) and when the teacher always asked questions to students (2.32). It seems that these students do not want to actively participate in the discussion. They tend to listen passively without any interaction or intention to contribute in the progress of the topic or lesson. They are common students who need more confidence and encouragement to express their ideas and opinions.

Table 5 presents the attitude towards instructional materials. They strongly agree that the instructional materials give better appreciation of the topics being discussed (3.57). Visual aids help the students figure out the abstract concepts and follow thoroughly the method through demonstration of actual process on

how vessel facilities and equipment work efficiently and productively.

**Table 5. Attitude Towards Instructional Materials** 

Instructional Materials		WM	VI	Rank
1.	Help students understand the lessons.	3.36	Agree	3
2.	Suitable for Maritime students.	3.46	Agree	2
3.	Enhance the learning experience.	3.18	Agree	5
4.	Give better appreciation of the topics being discussed	3.57	Strongly Agree	1
5.	Develop better concentration on the lessons.	3.25	Agree	4
Co	mposite Mean	3.36	Agree	

It guides the teaching and learning process to catch the attention of the students using video simulations in maritime professional courses. In the study of Garcia et al. (2015) found out that the students strongly agreed that their course in Shops, Ship Routines and Ship Construction (Sea 1) is relevant in developing their professional skills and its Intended Learning Outcomes were also clear and relevant to the teaching and learning activities with sufficient access to internet and electronic databases. Abdurrahman and Garba (2014) also emphasized that in making instruction interesting, there is need to use methods/strategies material/media which will make learning more active, investigative and adventurous as much as possible. Magtibay et al. (2015) argued that most of the instructional materials in LIMA were able to utilize, though some students were not mindful of the available aids so they are not able to maximize the function of it.

Furthermore, they agree that the instructional materials are suitable for Maritime students (3.46) and it can help students understand the lessons (3.36). However, developing better concentration on the lessons (3.25) and enhancing the learning experience (3.18) obtained the least weighted mean score. If the teachers will only be using the Powerpoint presentation or they will be showing videos without any further discussion on how things work would defeat the purpose of these educational technologies to increase the positive learning experience of the students. Overuse of any technology without any variation could also make it boring and monotonous.

Table 6. Attitude Towards Facilities					
At	titudes toward Facilities	WM	VI	Rank	
1.	Adequate books are available at the library.	3.18	Agree	5	
2.	There are adequate laboratories in the school.	3.31	Agree	4	
3.	Classrooms are wide enough.	3.61	Strongly Agree	1	
4.	The environment is conducive to learning	3.52	Strongly Agree	3	
5.	The classrooms are well-ventilated.	3.59	Strongly Agree	2	
Со	Composite Mean 3.44 Agree				

They strongly agree that classrooms are wide enough (3.61), well-ventilated (3.59) and the environment is conducive to learning (3.52). The respondents have observed that the learning facilities and the physical plant of the University is already adequate to serve them effectively. The University ensures that the students received the right services they deserved to get from the faculty members and staff as the primary customers and stakeholder. Flores et al. (2015) from the previous study affirmed that marine Engineering students believed that the university has adequate instructional facilities that are conducive for quality learning, therefore, they have high positive attitude towards the instructional facilities of the university.

However, they agree that there are adequate laboratories in the school (3.31) and adequate books available in the library (3.18) with the least weighted mean scores. The composite mean score of 3.44 implies that they have high positive attitude towards the facilities of the University. The University has Global Maritime Distress and Safety System (GMDSS) which is an important facility that equips students with knowledge about safety procedures, types of equipment, and communication protocols used to increase safety and make it easier to rescue distressed vessels (Maristela Jr., 2015).

There might be some instances that the books are not readily available in the library because somebody borrows the book and the copies would not be enough for many students if they will use it simultaneously. The University Library has adequate collections of books and instructional materials to support the curriculum of the Maritime courses.

Table 7 presents the relationship between the academic performance and attitude towards selected school related factors.

Table 7. Correlation Between the Academic Performance and Attitude Towards Selected School Related Factors

<b>School Related Factors</b>	r- value	p-value	Remarks
Teachers	0.637	0.002	Significant
Other Students	0.149	0.518	Not Significant
The way Classes are Handled	0.432	0.024	Significant
<b>Instructional Materials</b>	0.501	0.032	Significant
Facilities	0.205	0.433	Not Significant

There is a significant positive relationship between the academic performance of the Maritime Students and their attitude towards teachers (0.637), the way classes are handled (0.432) and instructional materials (0.501). This signifies that those students with higher academic performance have also higher positive attitude towards these mentioned variables compared to students with lower academic performance. Positive attitude towards the teachers has something to do with the achievement of the students in their studies as they see teachers as emblem of hope and trust of their future success. Teachers can build either strong or weak foundation depending on how students perceived and received the words of encouragement and the way teachers put them into test. Due to individual differences of the students, it would be really hard for the teachers to address the specific needs of the students at once; therefore, students might get affected by the common treatment of teachers across all types of student coming from different communities and family background that also contribute to the totality of students on the way they accomplish academic tasks (Alcantara, Deligero & Laguador, 2015). Richardson et al. (2012) emphasized that distinct strands of evidence indicate that predictions of academic performance may be more accurate if they are based on assessment of a variety of individual differences, not just of past achievement and cognitive capacity.

However, there is no significant relationship between the academic performance of the students and their attitude towards other students (0.149) and facilities (0.205). This signifies that the responses of the students are diverse in nature and they see other students and school facilities in different perspectives. Therefore, these variables might not have direct influence to the academic performance of the surveyed Maritime students.

## CONCLUSION AND RECOMMENDATION

Majority of the surveyed Maritime students have low to average level of academic performance. They have high positive attitude towards facilities followed by Instructional materials and other students while the least variables towards teachers and the way classes are handled. They have noted the state-of-the-art facilities of the University where they consider the environment as conducive to learning. The positive attitude of the students towards teachers; the way classes are handled and instructional materials have something to do with their academic performance. The way they see and perceive the important elements of teaching and learning process could possibly generate good outcomes on their academic performance.

Exploring on the possibility of improving the teaching methodologies and approaches of teachers towards handling the classes in an interactive manner would somehow increase the interest and enthusiasm of the students to actively participate in the class discussion without reservation or hesitation. New Maritime faculty members must be given proper orientation and seminar on teaching pedagogies that would be suitable for the nature of Maritime students.

LIMA Faculty members, administrators, Maritime students themselves and future researchers will be benefited to the findings of the study. The result will be utilized to provide insights for the faculty members on how the students feel about their presence inside the classroom and how they handled the class. The students may be oriented regarding their attitudes towards one another and the result of this study will be useful for LIMA Counseling and Testing Center so that this will serve as one of their guidelines in planning the future activities for Counseling of the Maritime students.

## REFERENCES

Abdurrahman, M. S., & Garba, I. M. (2014). The Impact of Motivation on Students' academic Achievement in Kebbi State Junior Secondary School Mathematics. *International Journal of Advance Research*, 2(12).

Agena, E. M., Tiongson, B. L., Arevalo, B., Clemeno, M. C., Dolor, G., & Laguador, J. M. (2015). Marine transportation and marine engineering students' attitude on classroom social environment. *Asian Journal of Basic and Applied Sciences Vol.*, 2(1).

Akınoğlu, O., & Tandoğan, R. Ö. (2007). The Effects of Problem-Based Active Learning in Science Education on Students' Academic Achievement, Attitude and Concept Learning. Eurasia Journal of Mathematics, Science & Technology Education, 3(1), 71-81.

- Alcantara, F., Deligero, J. C. L., & Laguador, J. M. (2015). Profile Aspirations of Maritime Students in one Higher Education in the Philippines. *Asian Journal of Basic and Applied Sciences Vol*, 2(2).
- Bacay, T. E., Dotong, C. I., & Laguador, J. M. (2015). Attitude of Marine Engineering Students on Some School-Related Factors and their Academic Performance in Electro Technology 1 and 2. Studies in Social Sciences and Humanities, 2(4), 239-249.
- Caguimbal, D. A., Delacion, D. C., Medina, A. O., Mendoza, M. S., Mendoza, R. J. M., & Sanchez, M. M. (2013).
  Level of Awareness of the Maritime Students on the Outcomes-Based Education. *Educational Research International*, 2(1), 7-12.
- Chavez, N. H., Dotong, C. I., Camello, N. C., & Laguador, J. M. (2016). Employability of Engineering Graduates of one Asian University as Basis for Curriculum Review. *EPH-International Journal of Science and Engineering*, 1(6), 18-29.
- Dacuray, M. J., De La Rosa, R., De Chavez, J., Dolor, P.
  C., Guevarra, L. J., Caiga, B. T., & Mandigma, L. B.
  (2015). Maritime Students' Satisfaction on the Services of one Training Center in the Philippines. *International Journal of Management Sciences*, 4(8), 343-353
- Dotong, C. I. (2014). School–Related Factors in the Development of Graduates' Competencies towards Employability. *Journal of Education and Literature*, 2(1), 28-36.
- Dotong, C. I., Chavez, N. H., Camello, N. C., De Castro, E. L., Prenda, M. T. B., & Laguador, J. M. (2016). Tracer Study of Engineering Graduates of One Higher Education Institution In The Philippines For Academic Year 2009-2012. European Journal of Engineering and Technology Vol., 4(4).
- Flores, J., Masangcay, R. M., Mendoza, M. P., Garcia, O. B., Aguado, C. L., & Laguador, J. M. (2015). Attitude on School Facilities and Services of High and Low Performing Marine Engineering Students. Asian Journal of Social Sciences, Arts and Humanities, 3(1), 1-8.
- Garcia, O. B., Agena, E. M., Gonzales, A. A., Reyes, J. A., Salazar, L. R., & Laguador, J. M. (2015). First Year Students' feedback Survey on Marine Transportation Professional Courses During SY 2012-2013. Asian Journal of Educational Research Vol, 3(1).
- Guico, T. M., & Dolor, G. (2013). Level of awareness and possible concerns of the marine faculty members on outcomes-based education. *Journal of international academic research for multidisciplinary*, 1(7), 159-167.
- Laguador, J.M. (2013). Academic Performance of Freshman Engineering Students Based on Their Perception and Actual Final Grades. *Journal of International Academic Research for Multidisciplinary*, 1(7)

- Laguador, J. M. & Dotong, C. I. (2014). Knowledge versus Practice on the Outcomes-Based Education Implementation of the Engineering Faculty Members in LPU, International Journal of Academic Research in Progressive Education and Development, 3(1), 63-74.
- Laguador, J. M. (2014). Cooperative Learning Approach in an Outcomes-Based Environment, International Journal of Social Sciences, Arts and Humanities, 2(2), 46-55
- Magtibay, D. L. A., Lanto, R. V., Magnaye, A. J. E., Castillo, J. C. M., Baoy, J. V. M., & Caiga, B. T. (2015). Maritime Student Satisfaction on the Instructional Materials Utilized in one Asian Maritime Academy. *Asia Pacific Journal of Maritime Education*, 1(1), 40-48.
- Maristela Jr, J., Moredo, D., Panaligan, L., Pontalba, F., Sabater, P. A., & Caiga, B. T. (2015). Satisfaction of Maritime Students in using Laboratory Facilities. *Asia Pacific Journal of Maritime Education*, *1*(1), 33-39.
- Mendoza, M. P., Masangcay, R. M., Batalla, E. T., Bacay, T. E., & Laguador, J. M. (2014). Environmental Elements of Learning Style Preference of High and Low Performing Marine Engineering Students. Studies in Social Sciences and Humanities, 1(4), 150-156.
- Orence, A., & Laguador, J. M. (2013). Employability of Maritime Graduates of Lyceum of the Philippines University from 2007-2011. *International Journal of Research in Social Sciences*, 3(3), 142.
- Richardson, M., Abraham, C., & Bond, R. (2012).
  Psychological Correlates of University Students'
  Academic Performance: A Systematic Review and MetaAnalysis, Psychological Bulletin, 138(2), DOI: 10.1037/a0026838
- Salmela-Aro, K., Kiuru, N., Pietikäinen, M., & Jokela, J. (2008). Does school matter? The role of school context in adolescents' school-related burnout. *European Psychologist*, *13*(1), 12-23.
- Tella, A. (2007). The impact of motivation on student's academic achievement and learning outcomes in mathematics among secondary school students in Nigeria. *Eurasia Journal of Mathematics, Science & Technology Education*, 3(2), 149-156.
- Velasco, A. G., Agena, E. M., Orence, A. C., Gonzales, A. A., Beldia, R. A., & Laguador, J. M. (2015). Emotional elements on learning style preference of high and low performing junior marine transportation students. *International Journal of Multidisciplinary Academic Research*, 3(1), 1-8.
- Zulueta, F. M., & Costales Jr., N. E. B. (2006). Methods of Research. Thesis-Writing and Applied Statistics, National Bookstore, Manila, Philippines