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Assessment of the Maritime General Education Curriculum, Admission Policy and Faculty Status towards a Proposed Maritime Program

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ABSTRACT

The Philippines Education Reform envisions the quality of Filipino graduates to be in parallel assessment along with competitors in regional and global employment communities and educational opportunities. Thus, the Maritime Educational Institutions are obliged to assess their present educational set-up and examine the necessary changes in its general education curriculum, admission policy and faculty status to ensure smooth transition with least disruption for the shift in AY 2018. Qualitative design using document analysis and interviews was utilized. Data revealed that subjecting the current maritime curriculum to the provisions of K+12 program and CHED Memo Order No 20. S.2013 will result to the reduction of general education courses from 64 units to 36 units. English Speech Communication with IMO SMCP, World Geography and Maritime Economics should be added. The current age requirement should be adjusted from 16-22 to 18-24 years old. Those from the STEM track and the maritime high school are best suited for the maritime courses. A bridging program should be given to graduates of other tracks. The current admission test should include Philippine History and Culture, and Economics. The Human Resource Department should identify any administrative positions GE faculty may qualify or empower them in research activities. The Maritime educational Institutions should revise the GE curriculum, admission policy and faculty status.

Keywords **—** Education, maritime program, qualitative, Zambales, Philippines

INTRODUCTION

Globalization caused dramatic changes in the character and functions of higher education around the world. Therefore, there are no other options but to respond to the demands of globalization, otherwise, lag behind other countries. Universities are assessing their current policies and practices to stay competitive in the global marketplace and cope with the growing expectations and demands of the different stakeholders in the society (Mok, 2010).

Moreover, the ASEAN Vision 2020 aims to accelerate the free flow of professional and other services in the region, and enhance human resource development in all sectors of the economy through quality education, upgrading of skills and capabilities and training. Thus, the following results are expected from the education sector: greater academic mobility, greater demand for quality programs, collaborative research and extension activities, employability of graduates and race for university ranking (Association of Southeast Asian Nations, 2012).

Being a key player in the ASEAN Economic Cooperation, the Philippines had major reform in its education system after a K-12 law was passed in May 2013 (Remedio, 2014). This was also in response to a non-recognition of the college graduates and their degrees in the international labor arena, non-eligibility of high school graduates to enter overseas tertiary educational institutions and lack of the quality standards (Okabe, 2013). From a 10-year education, it was shifted to a 12-year program known Enhanced Basic Education Curriculum to be at par with the global standards as stipulated in the Republic Act 105333 (Enhanced Basic Education Act of 2013).

The transition to K to 12 education system has affected several areas such as the curriculum, workforce, course streamlining, admission guidelines and others (Remedio, 2014 and Acosta & Acosta, 2017). For example, in the maritime sector, the programs do not have specific strand or track in contrast to other tracks like Engineering, Education, Agriculture, etc. Maritime Higher Education Institutions will be in a predicament in terms of student admissions. Another area is the curriculum where most general education subjects that are previously offered in the tertiary level will be excluded from the curriculum and will now be offered in the secondary level. In effect, the General Education faculty who are

specializing in subjects that will be downloaded will also be displaced (Ortega, 2016).

With these, it is necessary that Maritime Educational Institutions look at the implication of the K+12 program and the new GEC on its present educational set-up and examine the issues relative to it. The academic community is obliged to prepare for the shift in 2018 and plan programs to align with the standards and guidelines prescribed by CHED.

FRAMEWORK

The Philippine Educational reform aims to produce graduates equipped with the skills for life in this century and gain global competitiveness. The implementation of the program requires coordination between Department of Education (DepEd), Commission on Higher Education (CHED) and the Technical Education, Skills and Development Authority (TESDA) to ensure the transition to K+12 system. The Law mandates that DepEd and CHED to harmonize basic education and higher education curricula. Thus, CHED issued Memorandum Order 20 S 2013 complimenting the K+12 program. The study aimed to assess the maritime general education curriculum, admission policy and faculty status to adapt the changes brought about by the reform and implement measures to address the issues to achieve global competitiveness for the maritime cadets and produce graduates with high degree of operational readiness and quality of service.

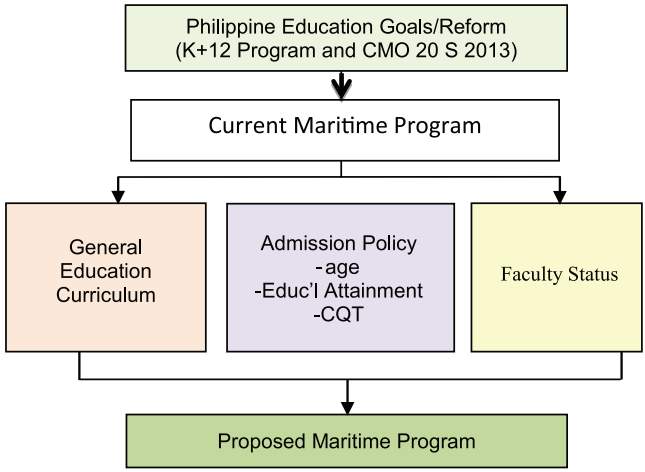

Figure 1 Conceptual Framework

OBJECTIVES OF THE STUDY

The study aimed to give the Maritime Educational Institutions solid knowledge, deeper understanding and insight on how the maritime program can best adapt and implement changes in its academic community brought about by the Philippine educational reform. Specifically, this study sought to achieve the following objectives: (1) to describe how the maritime General education curriculum adapt to the Philippine education reform; (2) to identify the changes in the admission policy of the maritime schools; (3) to extrapolate the effect of the reform to the faculty status; and (4) to propose a maritime program aligned with the changes brought about by the reform.

METHODOLOGY

Research Design

The study utilized the descriptive-qualitative method in assessing the maritime general education curriculum, admission requirements and faculty status. The knowledge, experiences and insights of the key informants were integrated to build understanding and discovery on the necessary changes in the maritime program brought about by the K+12 program and CMO 20 s 2015. Their descriptions were clustered and themes were applied to it. The themes were tied together to make a general description of their insight on the curriculum, admission policy and faculty status.

Participants

The key informants consist mainly of seasoned educators. The study includes one (1) Education Program Specialist from DepEd Region III, two (2) K+12 program focal persons from the DepEd Division of Zambales, one (1) Education Program Specialist of CHEDRO III and four (4) officers of a SUC Maritime Education and Training Institution who are current and former members of CHED –Maritime Technical Working Group and MARINA consultative committees.

Data Collection

The researcher collected all pertinent documents on the current maritime admission policy, provision of the K+12 Enhanced Basic Education Program and Maritime General Education curriculum (GEC) such as memorandum orders,

circulars, implementing rules and regulations, etc . The researcher also examined the teaching loads and status of the General Education teachers. In the in-depth interview, the researcher prepared an interview guide but the sharing was not limited to the interview questions. Articles and newspaper clips served as additional sources of data.

RESULTS AND DISCUSSION

1. **Assessment of the Maritime General Education Curriculum**

The implementation of the K+12 program has required the higher education institutions to review their curricular offering to align with the context of the K+12 program. Statements below confirmed:

> *"The downloading of general education courses in Grades 11 and 12 generates the creation of space or window that would provide an opportunity to redesign the maritime curriculum towards improving the practical and laboratory dimensions of cadet maritime education and training." (R5)*

> "*The CHED Technical Panel/Working Group on Maritime Education is currently reviewing and evaluating the present Maritime curriculum and redesigning them to complement K+12 in time for June 2018. He also revealed that CHED will release a policy on college admission for SHS graduates outside their track before AY 2018-2019 when the first nationwide batch of SHS enter college. (R4)*

Table 1 shows, the GEC of current maritime curriculum, CHED Memorandum Order No. 20 S 2015, describes the current 64 units of General Education Curriculum. Most of these courses are already downloaded in Grades 11 and 12 under the K+12 program. In the revised GEC under CHED Memorandum Order No. 20 S 2013, there is a set of 36 units of minimum standards for all degree programs regardless of their major in all private and public HEIs.

Assessment of the curriculums yielded the following: Speech Communication with IMO SMCP, Economics and World Geography are not downloaded in Grades 11 and 12 of the STEM and Maritime Tracks.. While Life and Works of Rizal and Ethics are retained in the new GEC.

The school administrators understand the effect of the K+12 program on the maritime curriculum evident in this statement:

> *"With the K+12 program, more focus and time is given to specialized classes or professional subjects to strengthen students' knowledge and skills. Aside from the professional courses, students' cognitive and creative skills can be enhanced with additional GE course such as Maritime Economics and Maritime Research" (R6)*

Adarlo and Jackson (20I7) made an emphasis that interrelated curricular changes, which emphasize a student-centered, culturally responsive, inclusive, and integrative approach, came from the growing need to address issues impacted by globalization, namely poverty alleviation, sustainable development, and peaceful co-existence. Re-aligning the curriculum would make the country's education system be at par with the demands of the fast globalizing world (Tabora,v 2012).

Table 1. Description of GEC in the current Maritime curriculum, courses in K+12 program and new GEC

Current MARITIME GEC (CMO 20.2015)	**Units**
*LANGUAGE (18 UNITS)	
English 1 Study and Thinking Skills	3
English 2 Writing in the Discipline	3
English 3 Speech Communication with IMO SMCP	3
English 4 Research and Report Writing	3
Filipino 1 komunikasyon sa Akademikong Filipino	3
Filipino 2 Pagbasa at Pagsulat tungo sa Pananaliksik	3
*HUMANITIES (6 UNITS)	
Humanities 1 World Geography	3
Humanities 2 Ethics	3
MATHEMATICS (12 UNITS)	
Math 1 College Algebra	3
Math 2 Plane Trigonometrry	3
Math 3 Solid Mensuration	3
Math 4 Calculus and Analytic Geometry	3
*SCIENCE (10 UNITS)	
Nat Sci 1 General Physics	4(3-3)
Nat Sci 2 Applied Physics	3(3-3)
Nat Sci 3 General Chemistry	3(3-3)
SOCIAL SCIENCE (12 UNITS)	
Social Science 1 Politics, Governance & Philippine Constitution	3
Social Science 2 Philippine Society & Culture	3
Social Science 3 Gen Psychology w/ PADAMS	3
Social Science 4 Economics	3

*MANDATED COURSE (3 UNITS) **Rizal Life and Works of Rizal** *TECHNOLOGY (3 UNITS) Computer application and networking	3 3(2-3)
TOTAL	64

COURSES DOWNLOADED in Grades 11 and 12 (STEM and MARITIME TRACKS)	
*LANGUAGE English 1 Study and Thinking Skills English 2 Writing in the Discipline English 4 Research and Report Writing Filipino 1 komunikasyon sa Akademikong Filipino Filipino 2 Pagbasa at Pagsulat tungo sa Pananaliksik MATHEMATICS Math 1 College Algebra Math 2 Plane Trigonometrry Math 3 Calculus Math 4 Analytic Geometry *SCIENCE Nat Sci 1 General Physics Nat Sci 2 Applied Physics Nat Sci 3 General Chemistry SOCIAL SCIENCE Social Science 2 Philippine Society & Culture Social Science 3 Gen Psychology w PADAMS *TECHNOLOGY Computer application and networking	
NEW GEC UNDER CM0 20 S 2013	**Units**
CORE: Understanding the Self Readings in Philippine History The Contemporary World Mathematics in the Modern World Purposive Communication Art Appreciation Ethics Science, Technology and Society Life and Works of Rizal ELECTIVES: Math, Science &Technology Social Science and Philosophy Arts and Humanities	3 3 3 3 3 3 3 3 3 3 3 3
TOTAL	36

2. **Assessment of the Maritime Admission Policy**

2.1. **Age Requirement**

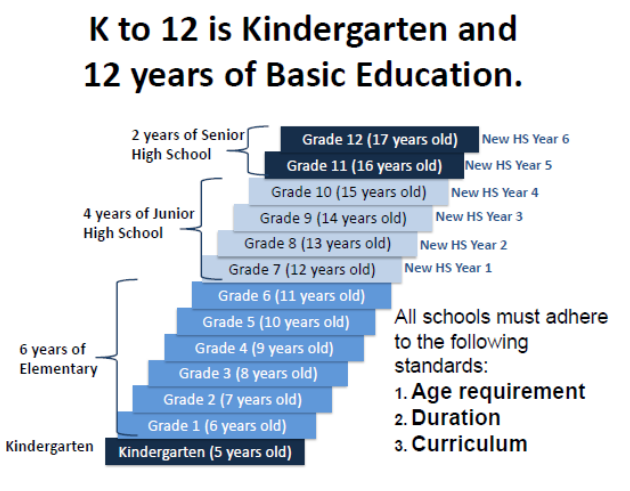

Figure 2. Entrant Age for Various Grade Levels

Figure 2 reveals that the age entrant for various grade levels under the K+12 program, shows that the school age starts at 5 years old for kindergarten, primary school ends at 11 years old, junior high school ends at 15 years old and senior high school ends at 17 years old.

The key informants agree that current entrant age requirement should be changed from 16-22 years old to 18-24 years old. They added that this is an advantage for the maritime school because cadet entrants are not only academically ready but older and more mature.

The age of students after completing the basic education years (about 18) are more mature to decide for the courses they will take that is suitable for their abilities and interests (Magno 2011).

2.2. **Scholastic Entrant Requirement**

Document analysis reveals that the current scholastic entrant requirement is "at least high school graduate qualified to enroll in a four year course." Moreover, the old Basic education of 10 years do not have academic tracks.

Under the K+12 program, the high school graduates would be classified according to their career pathways or tracks: Academic track (GAS,STEM, HUMSS and ABM stands), Technical-vocational-livelihood track, Sports track, and Arts and Sciences track. The specialized competencies allow learners to meet the expectations and demands of work. The extended number of years devoted for specialized tracks allow students to explore the suitable areas of study appropriate for them (Guay, 2005).

With the introduction of the four major career tracks, a question arose on which track should be preferred for acceptance into the Maritime Education and Training (MET) Institution.

The account of the key informants support this:

"METs can accept graduates from any of the tracks just like in the old curriculum when college entrants are "at least high school graduates". The tracks should not be an issue in the selection of applicants because the K+12 program provides for the mastery of core subjects needed in college regardless of the tracks." (R1,R2,R3)

"Graduates from the STEM track and maritime high school are best suited for the Maritime program a but "bridging" program-especially on physics, chemistry, calculus, trigonometry and geometry can be designed to the graduates of other tracks." (R2,R3)

The concept presented was reiterated by the American Association of Community Colleges (2016) which urges that colleges should provide first-year students who are not yet college ready with co-requisite and other evidence-based remediation opportunities as well as guided pathways to support their success. Moreover, Conley (2005) stated that the increasing number of students who met GPA and minimum course requirements caused university admission officers to pay closer attention to the composition of high school transcript and number and type of academic courses applicants took.

2.3. **College Qualification/Admission Test**

Just beyond a student's performance in rigorous academic coursework, colleges have placed an increasing emphasis on admission test scores and overall grade point averages. During the same time span, colleges have de-emphasized their assessment of a student's rank in class. (Hawkins, DA., Lautz, J 2005)

The current College Qualification/Admission Test is designed as diagnostic and prediction test. It measures the cadet-applicant's skills and evaluate help colleges evaluate how ready students are for college-level work. It is designed to forecast their academic success or failure in the maritime program.

The current college/admission test includes: ENGLISH (Reading Comprehension, Spelling Power, Vocabulary, and Analogy); MATH (Arithmetic, Algebra, Trigonometry and Geometry); SCIENCE (Chemistry and Physics) and ABSTRACT REASONING.

Result of the in-depth interview with the key informants reveals that a review of the coverage of the CQT should be made and align the questionnaire with the skills of the applicants and consider incorporating the core subjects of the Senior High School, basic maritime course, Philippine History and Economics.

3. **Assessment of the Faculty Status**

Table 2. Description of Faculty Status for SY 2018-19 onwards

Department		Present teachers	Will be displaced/ re-assigned SY 2018-2019	To be retained in SY 2018-2019
Mathematics		2 permanent 1 temporary	1 will be displaced	2 to be retained
Natural Science		2 permanent 1 part time	1 will be displaced 1 will not be re-hired	1 to be retained
Languages	English	1 permanent 1 temporary	2 will be displaced	1 to be retained
	Filipino	1 part time 1 permanent	1 will be displaced	None
Social Science		3 permanent w/admin function 1 permanent 1 part time	1 will be displaced 1 will not be re-hired	2 will be retained
Humanities/Rizal		1 permanent	None displaced	1 to be retained
Info Technology		1 permanent	1 will be displaced	None

Table 2 reveals that an average of 4-6 sections per year level can be observed. With the new GEC, it can be projected that 12 to 18 units teaching loads for each course is required thus only 1 teacher for each course is needed, some teachers will be displaced and part-time teachers will not be re-hired.

CHED (2016) "K to 12 Transition: The Higher Education Perspective" states that

"In the study conducted by CHED, the Philippine Institute for Development Studies (PIDS) and the UP Population Institute, across 2016-2021, about 13,273 teaching and 10,464 non- teaching personnel may be displaced. For displaced personnel the DepEd will establish a "Green Lane" to prioritize and fast-track the hiring of displaced HEI personnel, matching them in terms of location and salary, and at least 30,000 new teachers and 6,000 new non-teaching staff will be needed for SHS per year in 2016 and 2017. DOLE will offer income support, employment facilitation and training and livelihood to displaced employees who do not or cannot transfer to SHS. CHED will provide opportunities for upgrading qualifications and income support to personnel and HEIs (as a result of lower salaries because of reduced enrolment) inclusive of: scholarships for Grad Studies, Instructions, Research and Sectoral Engagement Grants, SHS Training Packages and Innovation Grants for Institutions.

The above projection of CHED was confirmed by the statements

"Displaced teachers can be recommended for administrative functions and retention of teachers should be based on their performance and specialization. However, they should not replace administrative staff but will serve as additional personnel." (R6)

"*Teachers with less than 18 units teaching load should be Given required to conduct 2 action researches or 1 full research each school year.*" (R7)

4. Proposed Maritime Program

Table 3. Description of Proposed Maritime Program

COURSES UNDER CM0 20 S 2013	Units	Admission Requirement	Faculty Status
CORE:			
Understanding the Self	3	18-24 years old	Design a faculty
Readings in Philippine History	3	Pass the admission Test	development
The Contemporary World	3	Graduate Senior HS	and placement
Math in the Modern World	3		program for
Purposive Communication	3	Admission test should	displaced GE
Art Appreciation	3	include courses	faculty
Ethics	3	taken in Senior HS	
Science, Technology & Society	3	(English, Arithmetic,	
Life and Works of Rizal	3	Algebra, Trigonometry, Geometry, Chemistry,	
ELECTIVES: Math, Science & Technology	3	Physics, Philippine	
Social Science and Philosophy	3	History, Economics and	
Arts and Humanities	3	Abstract Reasoning)	
To be retained			
World Geography	3		
Speech Communication with IMO SMCP	3		
To be added			
Maritime Economics	3		
Maritime Research	3		
TOTAL	48		

Table 3 shows that after examining the current maritime GEC and the revised GEC, the Proposed Maritime General Education Curriculum has a total of 48 units. With the provision of the K+12 program, the college entrant age requirement should be changed to 18-24 years old. All applicants should be a senior HS graduate and must pass the entrance exam. The coverage of the proposed CQT includes: ENGLISH (Reading Comprehension, Spelling Power, Vocabulary, and Analogy); MATH (Arithmetic, Algebra, Trigonometry and Geometry); SCIENCE (Chemistry and Physics), PHILIPPINE HISTORY, ECONOMICS, and ABSTRACT REASONING. The faculty development program should be designed to determine the teachers who will be displaced or retained for their re-assignment on administrative positions and re-tooling for the requirements of the new GEC.

Rivera (2014) emphasized the following implications of the K to 12 Basic Education Program on the Philippine Military Academy (PMA) education system: PMA may need to decide whether to limit cadetship applicants to those belonging to the High School academic track or not; there is a need to revise the PMA Cadet Qualification Test (CQT; there is a need to adjust the entrant age for PMA cadetship; there is a need to revise the 2015 PMA curriculum; it is expected that the K+12 program would produce more academically prepared cadets; and the employment of civilian and military instructors who are affected by the K-12 program is dependent on the PMA curriculum which will be adopted by PMA.

CONCLUSIONS

While maritime education is one of the key elements of the country's maritime industry, it cannot remain rigid and unyielding to the demands brought about by changes in the country's education system and the quality education standards of the world. Like the results of the previous studies there is a need for re—aligning the GE curriculum to the K+12 program and CMO 20 s 2013. The findings of the study also revealed that admission policy on age, scholastic level and coverage of the admission test should be amended. The findings of the study on faculty status are significant for GE faculty development and placement program.

It is, therefore, recommended that Maritime Education and Training institutions should create committees on curriculum review, admission policy and faculty development and placement, to resolve issues relative to admitting only the maritime and STEM high school graduates or creation of bridging programs to non-maritime HS graduates, and distribution of teaching loads or re-assignment to administrative positions.

TRANSLATIONAL RESEARCH

The result of the study could be translated into a project report to the CHED- Maritime Technical Working Group for information dissemination and to consider the integration of the findings in crafting the new Consolidated Policies, Standards and Guidelines for the Maritime Programs. Additionally, Maritime Education and Training Institution might be able to translate it into a more comprehensive institutional policy on curriculum development, admission and program for displaced faculty members.

LITERATURE CITED

Adarlo, G. & Jackson, L. (2017). For Whom Is K-12 Education: A Critical Look into Twenty-First Century Educational Policy and Curriculum in the Philippines. In *Educating for the 21st Century* (pp. 207-223). Singapore: Springer.

Acosta, I. & Acosta, A. (2017). A mixed methods study on teachers' perceptions of readiness of higher education institutions to the implementation of the K-12 curriculum. *Universal Journal of Educational Research* 5(7): 1215-1232. DOI: 10.13189/ujer.2017.050714

American Associations of Community Colleges. (2016). Seizing the Moment: Community Colleges Collaborating with K-12 to Improve Student Success. Retrieved from https://goo.gl/agR9Fk.

Association of Southeast Asian Nations. (July 2012). ASEAN Vision 2020. Retrieved February 2016 from http://asean.org/?static_post=asean-vision-2020.

Bayod, R. (2015) Rising from the Ashes: The Journey of Single, Unmarried College Students Who got Pregnant. Retrieved from https://goo.gl/mcULFS.

Commission on Higher Education. (2013). Memorandum Order No. 20 series of 2013: General Education Curriculum: Holistic Understandings, Intellectual and Civic Competencies. Retrieved from http://www.ched.gov.ph/wp-content/uploads/2013/07/CMO-No.20-s2013.pdf

Commission on Higher Education. (2015). Memorandum Order No 20 series of 2015: "Consolidated Policies, Standards and Guidelines for the Bachelor of Science in Marine Transportation (BSMT) and Bachelor of Science in Marine Engineering (BSMarE) Program". Retrieved from https://goo.gl/Ddvyka

Commission on Higher Education. (n.d.). CHED K to 12 Transition Program: Investing in the future if Philippine higher education. Retrieved from https://goo.gl/1X1oUD.

Conley, D.T (2005). College Knowledge: What it really takes for students to succeed and what we can do to get then ready. Retrieved from https://eric.ed.gov/?id=ED496372

Guay, F. (2005) Motivations Underlying Career Decision-Making Activities: The Career Decision-Making Autonomy Scale (CDMAS). Journal of Career Assessment 13 (1). Retrieved from http://journals.sagepub.com/doi/abs/10.1177/1069072704270297

GOVPH. (2013). Republic Act No 10533: "An Act Enhancing the Philippine Basic Education System by Strengthening its curriculum and Increasing the Number of Years for Basic Education, appropriating Funds Thereof and for other Purposes". Retrieved from http://www.officialgazette.gov.ph/2013/05/15/republic-act-no-10533/

Hawkins, D. & Lautz, J. (2005). State of College Admission. National Association for College Admission Counseling. Retrieved from http://files.eric.ed.gov/fulltext/ED489862.pdf.

Magno, C. (2011). Analysis of the Basic Education of the Philippines: Implications for the K to 12 Education Program. Retrieved from https://www.academia.edu/3814475/Analysis_of_the_Basic_Education_of_the_Philippines_

Mok, K. H. (2003). Globalisation and higher education restructuring in Hong Kong, Taiwan and Mainland China. *Higher education research & development*, *22*(2), 117-129. http://dx.doi.org/10.1080/07294360304111

Okabe, M (2013) Where Does Philippine Education Go?: The K to 12 Program and Reform of Philippine Basic Education. Retrieved from http://www.ide.go.jp/library/English/Publish/Download/Dp/pdf/425.pdf

Ortega, R. B. (2016). K to 12 Program: It's Implication to Faculty and Institutional Management. *Proceeding of International Joint Seminar on The Contribution of Education Institution to ASEAN Economic Community* (pp. 129-140). Indonesia: Universitas Ahmad Dahlan. Retrieved from http://eprints.uad.ac.id/2907/1/PROCEEDING%20-%20ASEAN%20Economic.pdf.

Remedio, E.M. (2014). Innovations in Philippine Higher Education:
A Timely Response to ASEAN Economic Cooperation 2015. Paper presented at the TLHE 2014: International Conference on Teaching & Learning in Higher Education. Singapore: National University of Singapore. Retrieved from http://www.cdtl.nus.edu.sg/Tlhe/tlhe2014/abstracts/emremedio.pdf.

Rivera, F. J. (2014). K-12 Basic Education Program: Implications on the Philippine Military Academy Education System. Unpublished Master's Thesis. Quezon City: National Defense College of the Philippines.

Philippine Merchant Marine Academy. (n.d.) Message from the Superintendent. Retrieved from February 2016 from http://pmma.edu.ph.

Tabora, J. (2012). Challenges in Implementing K-12 and Transformative Education [Blog]. 3rd COCOPEA-Mindanao Congress, General Santos City. Retrieved August 2017 from https://goo.gl/pZgAhD

Valenzuela, E. A. (2012) K to 12 Trends in Southeast Asia 1 International Comparison of Curriculum, Structure and Content of Brunei Darussalam, Malaysia, Philippines and Singapore Retrieved from http://www.seameo-innotech.org/content

Yin, R.K. (2003). *Case Study Research*. Design and Methods (third Edition). Thousand Oaks, CA: SAGE