REVISITING THE PHYSICAL EDUCATION AND PHYSICAL TRAINING PROGRAMS OF A MARITIME INSTITUTION: INPUTS FOR CURRICULAR ENRICHMENT

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Abstract

This mixed method study aimed at deriving substantive inputs to enrich the existing curricular offering of a maritime institution to adequately prepare students for ship boarding. A survey was undertaken with 155 respondent-first class maritime students who provided their perceptions as regards their Physical Education and Training, specifically on the curricular activities, faculty, facilities and equipment. To determine the adequacy and appropriateness of the actual PE activities provided in achieving curricular objectives and in developing target competencies, curriculum mapping was performed.

Survey results show that respondent-students affirmed the overall relevance of their Physical Education and Training programs in their development as future seafarers. They also favorably acknowledged the competence of the faculty and training officers but perceived a lower affirmation on the adequacy of the available facilities and equipment. Meanwhile, after curriculum mapping, it is estimated that overall, the existing physical education activities offered contribute to a moderate extent in the development of the competencies required of maritime students, revealing the need to reassess the PE program and introduce more relevant and useful activities to maximize achievement of set curricular targets.

Key words: physical education, physical training, maritime institution, curricular enrichment, curriculum mapping, mixed method

INTRODUCTION

The Maritime educational institutions, shipping companies, and other organizations have started co-operating to achieve the goal of promoting the physical well-being and health among seafarers which has been an important topic of discussion in the maritime community in recent times (Seafarer's Pension Fund, 2013).

Maritime personnel's typical well-being and health concern is critically important especially at sea. Their physical and medical condition should be given utmost consideration for this will significantly affect the performance of their jobs. Obesity can affect the seafarers' performance in safety tasks onboard during emergencies. Physically unfit seafarers may also find it critically difficult to use escape routes, ladder, and lifeboat or life raft. Such health conditions may also affect other people assisting them while doing those tasks in an emergency situation. Studies found that seafarer's health is at higher risk than any other occupation. The results can be attributed to the fact that at sea, seafarers tend to smoke and drink more, and take exercise less. Moreover, studies show that heart disease, diabetes, and lung cancer are prominent among seafarers while obesity was also found in all age groups (ISF Seafarer, 2007).

Additionally, the nature of the work of a seafarer includes physical activities like lifting and carrying in different positions, sitting in uncertain positions, crawling with heavy tools at hands, and frequently squatting. Other physical activities that required stamina but increase the risk of injury for untrained muscles and joints include dragging chains and hawsers or tightening belts.

Thus, the focus of physical well-being and health shifted toward preventive measures. An example of this is rigid physical training as early as possible in the early maritime undergraduate programs (ISF Seafarer, 2007).

A physically educated individual, first of all, possesses competency in motor skills and movement patterns to perform a variety of physical activities. Secondly, he/she demonstrates the understanding of the concepts, principles, strategies, and tactics of movements to correctly and appropriately apply these to the various physical activities. Thirdly, the individual participates in physical activities regularly. Fourthly, the individual maintains a health-enhancing level of physical fitness. Fifthly, as standards require, the individual needs to be personally and socially responsible and shows behaviors that respect the self and others in physical settings. Lastly, the individual values physical activity for health, enjoyment, challenge, self-expression, and social interaction (National Association for Sport and Physical Education, 2004).

Today, physical education programs adapt to the changes that stemmed from the increasing health concerns among adults and young adults. Health problems which include obesity, heart disease, stroke, and cancers have been increasing and growing rapidly worldwide. The role of physical education is overbearing and urgent to reverse this trend by giving provision of knowledge and understanding of the importance of self-maintained and healthy lifestyles among our children as early as possible (Monahan, 2010).

As an integral part of a person's holistic training and development, Physical Education should offer quality learning. The provision of quality learning is manifested in the integration of opportunities to learn, the presence of meaningful

content, appropriate instruction and student and program assessment, and adequate facilities and laboratories. Furthermore, NASPE (in Allison, 2012) states that the physical education curriculum must provide lessons that can help students develop competence, health-related fitness, cognitive understanding, and a positive attitude toward physical fitness.

Huit (2011) suggested that teachers need to explain and stress why learning physical fitness is important to maintain the interest of the students. Also, the provision for a variety of activities and sensory stimulations, game-style environment, set obtainable goals and the application of learning the program and continuous support to students may need to do to ensure that effective physical education in the classroom will take place. This can be achieved through proper lesson planning and strong management skills. Accordingly, the students' perception of the traditional physical education program is that it is only intended for student-athletes, and thus, non-athlete students felt under motivated and see physical education experience as just a sort of fun learning (Gould & Voelker, 2010). Also, the traditional physical education programs were sport-specific and were mainly taught by hired teacher-coach whose primary concern is to coach and to win championships. These hired teacher-coaches may neglect to focus on the pedagogical style of learning which ensures that the students will mentally, academically, emotionally, socially, and physically learn. This situation narrows the physical education programs and hinders students' participation, motivation, and cognitive understanding about the importance of the program and its role in their lifelong health fitness (Jenkinson & Benson, 2010).

Learning involves cognitive, affective, and psychomotor domains. Modern physical education teachers not only introduce new movement concepts and games but assess their students' emotions, physical abilities, and understanding of movements. This strategy helps students to ensure learning in three domains. Students who participate in this type of strategy will ideally be better because they have the ability to complete the manipulative activities, clearly understand the concepts, and perform the skill correctly while taking into consideration the emotional requirement to do such skills. With the various forms of physical movements and activities, students will have different ways to explore and live a long healthy life.

Monahan (2010) agreed that traditional physical education is indeed strictly sports-oriented where students acquire skills to participate in recreational sports activities. The emphasis of this set up places and gives importance and weight on who wins or losses and not on the objective to promote physically active and fit individuals.

In recent times, new theories and practices in physical education programs are being advanced in response to the evolving demands of people's activities. Teachers of modern physical education programs not only introduce new

movement concepts and games but also assess their learners in various ways to gain knowledge about their emotions, physical abilities and their understanding of such concepts. These adjustments help to educate individuals in all areas. Learners who participate in this approach become better-rounded persons who are capable of completing sport-manipulative skills with a clearer understanding of the cues, rules, and guidelines for such skills. As part of their physical education, learners are prepared to be emotionally ready to execute such skills. Through various forms of movements and tasks, students will have the opportunity to explore the many different ways to live a long, and healthy life (Allison, 2012).

Modern physical education programs introduce new movement concepts and games and assess their learner in various ways to gain knowledge about student's emotions, physical abilities and their understanding of movement concepts. These domains help to educate individuals in all areas; therefore; learners who participate in this approach will ideally be better-rounded in terms of physical ability to complete sport-manipulative skills and clearly understand the cues, rules, and guidelines for such skills and emotional preparedness to execute such skills. Through various forms of movements and tasks, students will have the opportunity to explore the many different ways to live a long and healthy life (Allison, 2012).

Kretchmar (2008) stated that most physical educators combine both health-oriented exercises with fun activities to motivate students to engage actively and joyfully in learning activities. To create such a learning experience, it is recommended that teachers plan lessons in such a way that activities are joy-focused and play-oriented. The incorporation of non-traditional and less sport-specific lessons with the physical education curriculum will serve as the foundation for life-long fitness. There are several ways to make learning physical education enjoyable while ensuring the development of necessary skills. These include indoor activities such as mind maps, aerobic fitness, competitive and fun activities, and problem-solving challenges, and outdoor activities such as wall climbing and in-line skating. Utilization of small fitness club which provides weight and cardiovascular training and activities, as well as the new revolutionized dance revolution and fitness gram, are also in demand in the modern and fun physical education classroom. Furthermore, some physical education program provides training on surfing, snowboarding, and skateboarding through the use of technology. Finally, other physical education classrooms provide opportunities for students to have credit on electives such as certification for first aid, CPR, lifeguarding and scuba diving. In this way, physical education promotes fun learning with positive attention to life-long physical sports and fitness engagement.

Buswell (2008) profiled some PE classrooms for leading the way to give PE a new reputation. Schools are using swimming pools for canoeing, kayaking, and water aerobics. Small fitness clubs accommodate the idea of putting up weight training and cardiovascular endurance equipment. Ample space is provided for

technology programs like dance revolution and fitness gram. One of the schools profiled in the cited study take their students to the slopes by incorporating surfing, snowboarding, and skateboarding through the use of a wave board. This stimulates great interest and can result in a class consumed with an activity for weeks on end. By creating such a condition within physical education, teachers are able to promote fun with positive attention to lifelong sports, interest, and wellness.

However, many schools are not able to employ appropriately trained physical education teachers, thus creating problems in physical education program implementation. The lack of budget to maintain and support efficient equipment is also one of the issues concerning physical education program delivery. The increasing concern about the size of the class also makes the program inefficient (Allison, 2012). Research also revealed that students feel vulnerable in gym class which makes participation level difference when grouped according to gender (Di Lauro, 2008).

The strong background in the pedagogy, knowledge, training, mentorship, and work ethics of the individuals concerned in the physical education program is necessary to achieve instructional success. It is not only the teachers' knowledge that should be considered but also how the students learn.

Meanwhile, different ranks on-board have different workload regarding physical demands and ergonomics. Also, different vessels have different opportunities for physical activities. The trades differ between the vessels, and therefore physical activities also differ. Also, the climate in which the vessels operate ranges from tropical to sub-arctic thus increases the demands for the promotion of the physical wellness and fitness of the seafarers. For example, depending on the time of year on some vessels it may be too cold and slippery on deck to perform the physical activity safely outside, while on another it may be too hot for an overweight, not the too-fit person to do so (Haponnen, 2014).

On the other hand, Fogelholm, Lindholm, Lusa, Miilunpalo, Moilanen, Paronen and Saarinen (2007) stated that most of the job in modern shipping is not extremely physically strenuous, however, mariner and engineers are not comparable on the average job on-board. In the case of engineers, much of the work on board is done in ergonomically very difficult postures in confined spaces of the engine room. In this sense, improvements in physical ability and mobility maybe even more important in this line of work.

Maritime institutions together with the shipping companies create viable ways of increasing physical exercise and health levels among their present and future employees to improve their health and job satisfaction. In addition to proper nutrition, shipping managers encourage and often require their employees to undergo physical fitness programs regularly.

However, earlier studies on improving the health of seafarers through the promotion of physical activity do not exist or at least they are very difficult to find. The workplace promotion among other professions has been done, but not in maritime. There have been projects to increase the occupational well-being of seafarers, but the effects of these have not been widely studied. For instance, according to Forgelholm et al., (2007) seafarer's health issues in the musculoskeletal system can be related to either lack of exercise or too strenuous exercise, as well as strenuous work and poor ergonomics. Physical disorders can be prevented with physical exercise and activities. However, it should be made clear how much exercise is enough to have a positive effect on the health of seafarers.

In line with this, the shipping company provides the means for a healthy lifestyle. However, every seafarer has a great responsibility to improve their own health and wellness, since the employer cannot force anyone to work-out during their spare time. According to previous studies, the attitude toward physical exercise among the employees is the major factor in promoting physical health on board, and therefore it is very useful if the employees will be motivated to do their part (Folgelholm et al., 2007).

Moreover, physical fitness can also be seen from a safety management viewpoint, especially in accident situations, such as heavy lifting, abandoning vessel, or fire, physical ability, and fitness can be of crucial importance. Also, smoke diving and the ability of the seafarer to handle a prolonged smoke diving mission in a real situation has been under recent scrutiny. Also, the improvement of physical health level can be seen in physical fitness, workability, and amount of sick leaves, whereas improvement on the cognitive-behavioral level can be seen in attitudes toward physical activity and work as well as exercise behavior, or in plain words, how much a seafarer works out to maintain his/her physical well-being (Happonen, 2014).

Fogelholm et al. (2007) state that physical inactivity increases the risk of absences more than any other of the main risk factors among the working population. Also, on the list comes to body mass index (BMI) above 25 or below 18.5 (i.e. over- or underweight) which (in addition to nutrition) is closely linked to physical activity.

Nurminen's (2000) evaluation of an exercise intervention on workers found how an 8-month program of one-hour-per-week exercise affected the employees'' exercise habits, physical ability, the frequency of musculoskeletal symptoms and etc. in relation to sick leave and tardiness of the employees. The result states that the physical strength and endurance of the employees who undergo the program improved statistically. Also, the number of musculoskeletal symptoms diminished in some categories, especially neck and shoulder pain both in long term and short term examinations.

Happonen (2014) found that working hard or walking around the ship during cargo operations is all one needs in terms of physical activity. However, Fogelholm et al. (2007) found that people in physical strenuous professions actually tend to be less physically fit than office workers on average. This is, of course, related to a number of cultural causes and the benefits on the incidental exercise while working onboard cannot be neglected. In any case, one can surely be better prepared for physically demanding work through training. Functional strength exercise which increases the mobility and stability of the body is needed in addition to the quite monotonous exercise of walking around and dragging belts and chains or tightening bolts.

Haponnen (2014) further states the demand of 2 hours and 30 minutes of moderate activity for engineers and deck officers as required and suggested of the UKK Institute (Recommendation for health-enhancing physical activity for adults aged 18-64) can be easily met. However, the two times per week demand for strength and training of which the trainees undergo requires specific and additional exercise in addition to normal work. Haponnen strongly recommends providing intervention programs to meet the amount of the physical strength needed onboard. For example, the strains in sitting down (during bridge watch) causes to the human body can be alleviated with activating exercise. A low-cost solution to this would be training instruction for short on-the worksite exercises that could be done while keeping watch for example. The safety problems related to lack of concentration and falling asleep on the watch could also be tackled with such exercises.

Since there is little literature on how people perceive the field of physical education, the study gathered literature that can be associated with the physical development of mariners and how the physical education programs help seafarers attain their physical wellness.

Students and teachers have a range of perceptions of physical education and how it affects students and their learning. Past research has indicated that physical education can influence students' academic results as well as their physical development. These perceptions show that the teachers and students believe that physical education has not only provided physical benefits for students, but also a positive influence on students mentally, emotionally, and socially. The social aspect of physical education is perceived to be either positive or negative for students depending on how the teacher manages the class. Many students and teachers perceived physical education to be enjoyable for students and beneficial to their development. Physical education has the potential to impact students on a spiritual level although the degree to which this occurs is difficult to determine. Finally, how physical education is timetabled and taught can have an impact on the way students and teachers perceive this curriculum area (Taylor, 2012).

The study among the students enrolled in human kinetics suggests that the males had a more favorable attitude toward the risk-taking and thrill aspects of

physical activities when compared to females. Also, consistently with past research, it was determined that females had a more favorable attitude toward the aesthetic nature of physical activities. The results suggest that the students involved in the daily physical activity education programs were more active than the students in non-daily physical education programs. It may be that the students involved in the daily physical education program became conditioned to participate more in physical activities because of their regular physical education classes. In other words, physical activity became habitual for them and possibly because of their regular involvement, they recognize the value, and benefits of physical activity to a greater degree (Hunt, 2005).

Brubaker (2011) study found that physical education teachers believed seeing students increase their participation in physical activity and improve their overall fitness level as a motivational factor for them to improve their instruction.

Similarly, in Ravizza (2005), results indicated that multiple opportunities existed for the physical education teachers to demonstrate caring behaviors toward their students. The students described their perceptions of physical education teachers' caring along dimensions of content and pedagogy and interpersonal relationships. Facilitators of caring in physical educations included the nature of the class, flexibility in teacher expectations, and class activities. Barriers to caring were revealed as the length of time with the teacher, student personalities, role of the teacher/coach, and class size. Furthermore, physical education teachers' caring was determined to be a positive factor in students' attitudes toward physical education and their participation in a physical education class.

The study assumes that the physical education programs and physical training of a maritime institution are sufficient enough for the students to become physically active. However, the study was conducted to look into better possibilities that may be provided for students to increase their physical well-being and health and to further improve the curricular programs of physical education and physical training of maritime students as a preparation for their future tasks in the offshore.

The present study primarily aims at deriving substantive inputs to enrich the existing curricular offering of a maritime institution to adequately prepare students for ship boarding. Specifically, it seeks to: (1) determine the demographic profile of the respondents as to their age, gender, course of study (program), type of vessel in the OJT and body type; (2) identify the adequacy as well as the consistency of the PE course and activities with the intended learning outcomes through curriculum mapping; (3) describe how the students perceive the effectiveness of the Physical Education and Physical Training programs in terms of curriculum and instruction, faculty and training officers' competencies, and facilities and equipment.

The study is limited to the physical education and physical training programs provided by the maritime institution among its midshipmen/women prior to their

shipboard training program on international seagoing vessels. The emphasis of the study is the assessment of physical education and physical training programs in terms of curriculum and instruction, faculty and training officers' competency, and facilities and equipment. The students' demographic profile which is confined to their age, gender, course of study (program), type of vessel in the OJT, and blood type, is included for purposes of enriching discussion of findings and as an added guide in studying their needs and in recommending possible steps to address emerging needs in terms of curriculum and instruction, faculty and training officers' competencies, and facilities and equipment.

Findings are hoped to serve as fresh inputs for consideration for those who aspire to develop the curricula and take charge of the implementation of a maritime education program. It is ultimately desired that this study shall bridge whatever gap there is between the status quo and the ideal maritime education.

METHOD

The study utilized a mixed method, a combination of qualitative and quantitative approach. The qualitative method includes curriculum analysis through curriculum mapping of the physical education programs (PE 1, 2, 3 and 4) to derive data on the adequacy and consistency of the target outcomes and competencies with activities provided. On the other hand, the quantitative method covers the survey of the students' perceptions toward the physical education and physical training programs provided by the academy.

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The evaluation of the physical education and physical training programs was conducted with the students of both College of Marine Transportation and Marine Engineering of the participant-marine school. The respondents of the study were the 1CL midshipmen and women officially enrolled during the school year 2014-2015. These 1Cl students were selected as highly appropriate to provide the evaluation of the institution's physical education and physical training programs because they had finished their one-year shipboard training program. Also, these 1CL cadets have undergone already the Physical Education 1, 2, 3 and 4 as well as the physical training programs in the past years. The respondents comprised of 155 1CL midshipmen/ midshipwomen randomly selected from each section during the conduct of the study.

To determine the strengths and weaknesses of the physical education and physical training programs provided by the academy in terms of curriculum and instruction, faculty and training officers' competency, and facilities and equipment and further describe its usefulness on shipboard training, a quantitative approach using survey was conducted. The main concern is to gather the midshipmen/women' perception of physical education and physical training in terms of the variable mentioned in the problem. The survey consisted of questions specially devised to answer the problems indicated in the objective of the study.

The researcher-made survey form was the main instrument of the study (Appendix A). This was content validated by experts prior to its use. The survey form was a checklist-type questionnaire which gathered demographic data, personal information and perception of the cadets. The survey consisted of two parts. The first part inquired about the profile of the respondents: their age, gender, degree program/ course, type of vessel on-board shipboard training and physical/body type. The second part deals with the students' perception on the physical education programs and physical training provided by the institution in terms of curriculum and instruction, faculty and training officers' competency, and the facilities and equipment available.

Collected data were organized using the SPSS software. The SPSS was also used in the statistical treatment of data. Descriptive statistical tools utilized were frequency count and percentage which summarized the respondents profile; mean and weighted mean which described respondents' responses; standard deviation and ranking which summarized the respondents' responses.

The scale distribution of ranges and corresponding verbal interpretation used in the study are as follows:

Mean Rating	**Verbal Interpretation**
1.00 – 1.79	Not regarded at all
1.80 – 2.59	Fairly regarded
2.60 – 3.39	Moderately regarded
3.40 – 4.19	Highly regarded
4.20 – 5.0	Very much highly regarded

Meanwhile, **curriculum mapping and content analysis** of the Physical Education and the Physical Training Programs were done in the observable areas on curriculum (objectives/ outcomes/ competencies, content, and activities provided). The documents visited were: outcomes-based syllabi, the CMO No. 20, series of 2015, the Program Intended Learning Outcomes of the OBTL, and the PE programs (PE 1, 2, 3 and 4) of the participant-institution: PE 1 (Basic Swimming); PE 2 (Advance Swimming); PE 3 (Team Sports); and PE 4 (Dual Sports). The target

outcomes and competencies were compared to the activities provided to determine alignment and possible gaps.

FINDINGS

Respondents' Profile

The respondents' profile (presented in Table 1) that covers their **age, gender, course (program), type of vessel in the OJT, and body type was included f**or purposes of enriching discussion of findings and as an added guide in studying the context of other pertinent data.

Following are the highlights of their profile: in terms of age, of the 155 students, 90 of them aged 19-21 which is a little less than 60% of the total sample. This number is followed by those aged 22-24 consisting of almost 34% of the respondents. Combined, those aged 19 to 24 comprise the majority of the respondents. The mean age of the respondents is 21.29. The age distribution is comparable to the normal age of a typical student at a tertiary level, specifically the students in the fourth level.

One hundred forty-seven (147) or 94.8 percent were males and eight (8) or 5.2 percent were females. The data in Table 1 shows the dominance of male students in the academy which can be attributed to the quasi-military nature of the institution.

Those taking up BSMT (Bachelor of Science in Marine Transportation) outnumber those who study BSME (Bachelor of Science in Marine Engineering) but only to about 12%. Data show that respondents board different types of vessels where the highest number (60) is on a cargo vessel and the least figures are on the passenger (3) and chemical/ gas (1) vessels.

As to the body type of respondents, most of them (147) are classified under the average and the remaining few are in the extremes: above average (5), and below average (3). This confirms that the majority of the respondents were physically fit in terms of physical or body type. This can be attributed to the school's provision of the quasi-military training, physical education, and physical training during their 4Cl and 3Cl years. Similarly, it reflects the rigid and constant monitoring of cadets body weight which is usually conducted every semester.

Table 1
Respondents' profile

Profile		Number of Respondents	Percentage
Age	18 and below	4	2.58
	19-21	90	58.06
	22-24	52	33.55
	25-27	9	5.81
Gender	Male	147	94.84
	Female	8	5.16
Course	BSMT	87	56.13
	BSME	68	43.87
Type of Vessel	Cargo	60	38.71
	Tanker	29	18.71
	Passenger	3	1.94
	Chemical/Gas	1	0.65
	Training Ship	6	3.87
	Other/s	56	36.13
Body Type	Below Average	1	0.65
	Average	3	1.94
	Above Average	146	94.19

Curriculum Mapping Results

Curriculum mapping in this study begins with the description of the Physical Education Programs with the general learning objectives and intended learning outcomes for each level as presented in Table 2, followed by the Physical Training Program that is uniquely offered in the participant-school intended to supplement the regular PE program (Table 3). Then, Table 4 presents the cross tabulation of Maritime Education Outcomes/ Competencies and PE activities as basis for deriving indicators of alignment (and possible gaps).

In Table 2, it is presented that Physical Education 1 (PE1) focuses on basic swimming which includes topics on basic swimming techniques, freestyle, back stroke, and breaststroke. The objective of the program is to promote physical fitness, develop good health and give utmost relaxation and enjoyment. It covers the history, philosophy, facilities, equipment and proper attire used in swimming. It introduces the activities and drills on the fundamentals and techniques in swimming and discusses the importance of water safety and corresponding precautionary measures. The intended learning outcome of the program is for the students to demonstrate strong knowledge and understanding of scientific swimming, apply

correctly the different basic swimming skills, strokes and drills, explain the importance of water safety and corresponding precautionary measures, and perform rhythmic breathing exercises and floating.

Physical Education 2 (PE2) focuses on advance swimming which includes topics on scientific method in swimming and survival swimming, different basic skills/drills/strokes in breaststroke/sidestroke/treading and sculling, and assessment of water safety. The objective is to promote physical fitness, develop good health and give the utmost form of relation and enjoyment. It introduces the advance and scientific method in swimming, the techniques of survival swimming and the advance water safety drills and activities. The intended learning outcome includes students practice scientific method in breaststroke, demonstrate the different skills, frills, and stroke in breaststroke/water treading.

Physical Education 3 (PE3) focuses on individual and/or dual sports such as table tennis and badminton. The discussion covers the historical background of the sport, equipment, game rules and strategies, scoring, footwork, positions and stance, and phases and stages of the game.

Table 2
The physical education programs

Curriculum		General Learning Objectives	Intended Learning Outcome
PE1	**Basic Swimming**	To promote physical fitness, develop good health and give the utmost relaxation and enjoyment. It covers the history, philosophy, facilities, equipment and proper attire used in swimming. It introduces the activities and drills on the fundamentals and techniques in swimming and discusses the importance of water safety and corresponding precautionary measures.	Demonstrate strong knowledge and understanding of scientific swimming. Apply correctly the different basic swimming skills, strokes, and drills. Explain the importance of water safety and corresponding precautionary measures. Perform rhythmic breathing and floating.
PE2	**Advanced Swimming**	To promote physical fitness, develop good health, and give the utmost form of relaxation and enjoyment. It covers the history, philosophy, facilities, equipment and proper attire used in swimming. It introduces the advance and scientific method in swimming, the techniques of survival swimming, and advance water safety drills and activities.	Practice scientific method in breaststroke. Demonstrate the different skills, frills, and stroke in breaststroke/water threading.

PE3	**Individual/Dual Sport**	To develop, improve, and maintain the highest level of physical fitness through physical education activities. Provide fundamental knowledge and skills in such activities. Realize the value of physical fitness and fundamental skills needed in participating such games and sports.	Describe the background of the game. Identify the equipment of the game/sports. Employ different strokes and styles of the play. Perform skills.
PE4	**Team Sports**	Comprehend the basic knowledge and skills in team sports and game. Develop and improve skills in team sports. Realize the value of physical fitness, and health and its life-long benefits.	Demonstrate fundamental knowledge of the sports. Identify the equipment of sports and know how to use it. Understand and employ the rules and regulations of the game/sports. Demonstrate skills and follow the proper execution of the game/sports.

Meanwhile, Physical Education 4 (PE4) focuses on individual sports specifically volleyball and basketball. The semester provides meaningful discussion on fundamental concepts and principles of the sport, historical background, facility and equipment, terminologies, fundamental skills, simplified rules, and regulations, etc. Time is allotted to motivate the students to appreciate and understand volleyball and basketball through drills and exercises. The general learning objective of this program is also to develop, improve, and maintain the highest level of physical fitness through physical education activities; provide fundamental knowledge and skills in such activities; and realize the value of physical fitness and fundamental skills needed in participating such games and sports. Learning outcomes include describing the background of the game, identifying the equipment of the game/sports, employing the different strokes and styles of the play and performing the skills.

In general, the physical education curriculum provides the students the fundamental knowledge and skills in the chosen sport. The objective is to comprehend the basic knowledge and skills in different sports, to develop and to improve skills in team sports and to realize the value of physical fitness, and health and its life-long benefits. The intended learning outcomes include demonstrating the fundamental knowledge of the sports through class participation, identifying and utilizing equipment of a particular sport and employing the rules and regulations of the game/sports, and demonstrate the skills and follow proper execution of the game/sports.

The Physical Training Program. The uniqueness of this maritime school and being a quasi-military institution led to the development of the **physical training programs** for the aspiring marine officers of the institution in addition to the PE curriculum. This training program includes the cadets' daily calisthenics. Daily road run activities are also strictly monitored among them, especially those cadets who need to undergo such activity and exercise. (See Table 3).

Daily calisthenics includes pull-ups, push-ups, chin-ups, squats, lunges, sit-ups, leg-raise, shoulder-push-ups, and others. Also, it includes brisk walking, jogging, jogging in place, running, basic lifting, swimming, group exercise such as aerobics, and other individual exercises. These activities are also regularly monitored.

The daily calisthenics and daily road activities are conducted alternately. In addition, cadets undergo the so-called hard works/hard jobs during their stay in the academy. These jobs include gardening, forestry, among others.

Table 3
The physical training program

Training	Activities Involved	Duration	Schedule
Daily Road Run	Reveille	25-30 minutes	Between 4:30-6:00 Mondays to Fridays
Daily Calisthenics	Pull-ups	5 minutes	
	Push-ups	15 minutes	
	Chin-ups	5	
	Squats	10	
	Lunges	5	
	Sit-ups	5	
	Leg-raise	10	
	Shoulder push-ups	10	
Hard Works/Jobs	Gardening	8 hours	8:00-5:00 Saturdays and Sundays
	Forestry	8 hours	

Curriculum Mapping: Comparing outcomes/competencies with PE activities. This subsection of the Curriculum Mapping results shows the Physical Education activities with the course objectives of the BS Marine Transportation and BS Marine Engineering courses. Table 4 presents a cross tabulation of the maritime

education outcomes/ competencies with the physical activities provided. *It could be quickly noted that overall, the physical education subjects have a moderate contribution in the attainment of the competencies required of the maritime education curriculum as shown in the checked and unchecked competencies.*

It can also be noted that as to the preparation of students in their skills as seafarers, the PE course in the participant-institution has to be supplemented with the physical training program in order to align activities to the demands of the development of higher-level physical skills needed in the maritime work. At an early stage, students have to be familiar with survival and self- defense in the water which the general PE programs do not seem to sufficiently provide for.

Table 4

Curriculum mapping: Cross tabulation of maritime education outcomes/ competencies and PE activities

PE 1 Activities						
Maritime Outcomes/Competencies	Discussion of the History of Swimming	Orientation of facilities and equipment	Body floats	Water safety	Freestyle	Backstroke
1. Demonstrate the ability to perform at the operational level, the task& responsibilities posted in Column 1 of table III/under section A-III/1 (STCW).	/	/	/	/	/	/
2. Apply knowledge in Mathematics, Science & Technology in solving problems related to the profession and the workplace.						
3. Work in a multi-cultural and/or multi-disciplinary team.				/		
4. Understand professional & ethical responsibilities.				/		
5. Communicate effectively, oral or written, in the English language.	/	/				
6. Understand the impact and implications of various contemporary issues in the global and social context of the profession.	/	/		/		

Maritime Outcomes/Competencies	Discussion of the History of Swimming	Orientation of facilities and equipment	Body floats	Water safety	Freestyle	Backstroke

7.Engage in lifelong learning and to keep current on the development in the field of specialization/or profession.			/	/	/	/
8. Use appropriate techniques, skills & modern tools in the practice of the profession in order to remain globally competitive.			/		/	/
9. Conduct research using appropriate research methodologies.	/					

PE 2 Activities

Outcomes/Competencies	**Breastroke**	**Water treading**	**Dog Paddle**	**Down proofing**	**Eggbeater**	**Eggbeater**	**Sculling**
1. Demonstrate the ability to perform at the operational level, the task& responsibilities posted in Column 1 of table III/under section A-III/1 (STCW).	/	/	/	/	/	/	/
2. Apply knowledge in Mathematics, Science & Technology in solving problems related to the profession and the workplace.							
3. Work in a multi-cultural and/or multi-disciplinary team.	/	/	/	/	/	/	/
4. Understand professional & ethical responsibilities.							
5. Communicate effectively, oral or written, in the English language.							
6. Understand the impact and implications of various contemporary issues in the global and social context of the profession.							
7.Engage in lifelong learning and to keep current on the development in the field of specialization/or profession.	/	/	/	/	/	/	/
8. Use appropriate techniques, skills & modern tools in the practice of the profession in order to remain globally competitive.	/	/	/	/	/	/	/

PE 2 Activities							
Outcomes/Competencies	**Breastroke**	**Water treading**	**Dog Paddle**	**Down proofing**	**Eggbeater**	**Eggbeater**	**Sculling**

9. Conduct research using appropriate research methodologies.							

PE 3 Activities								
Outcomes/Competencies	Discussion of the History, facility & equipment in Dual sports	Safety measures	Game rules	Racket handling and footwork	Basic skills	Strategies and techniques	Drills	Mock games
1. Demonstrate the ability to perform at the operational level, the task& responsibilities posted in Column 1 of table III/under section A-III/1 (STCW).	/	/	/	/	/	/	/	/
2. Apply knowledge in Mathematics, Science & Technology in solving problems related to the profession and the workplace.								
3. Work in a multi-cultural and/or multi-disciplinary team.		/	/		/	/	/	/
4. Understand professional & ethical responsibilities.		/	/					
5. Communicate effectively, oral or written, in the English language.	/	/	/					
6. Understand the impact and implications of various contemporary issues in the global and social context of the profession.	/	/	/					
7.Engage in lifelong learning and to keep current on the development in the field of specialization/or profession.		/	/	/	/	/	/	/
8. Use appropriate techniques, skills & modern tools in the practice of the profession in order to remain globally competitive.			/	/	/	/	/	/
9. Conduct research using appropriate research methodologies.	/							

PE 4 Activities							
Outcomes/ Competencies	Discussion of the History, facility &	Safety measures	Game rules	Basic skills	Strategies and techniques	Drills	Mock games

	equipment in Dual sports						
1. Demonstrate the ability to perform at the operational level, the task& responsibilities posted in Column 1 of table III/under section A-III/1 (STCW).	/	/	/	/	/	/	/
2. Apply knowledge in Mathematics, Science & Technology in solving problems related to the profession and the workplace.							
3. Work in a multi-cultural and/or multi-disciplinary team.		/	/	/	/	/	/
4. Understand professional & ethical responsibilities.		/	/				
5. Communicate effectively, oral or written, in the English language.	/	/	/		/	/	
6. Understand the impact and implications of various contemporary issues in the global and social context of the profession.	/	/	/				
7.Engage in lifelong learning and to keep current on the development in the field of specialization/or profession.	/	/	/	/	/	/	/
8. Use appropriate techniques, skills & modern tools in the practice of the profession in order to remain globally competitive.	/	/	/	/	/	/	/
9. Conduct research using appropriate research methodologies.	/	/	/	/	/	/	/

Respondent's Perceptions on the Physical Education Programs and Physical Training in terms of Curriculum and Instruction, Faculty and Training Officers' Competency and Facilities and Equipment

Data in Tables 5, 6, and 7 show the perceptions of the respondents towards the participant-institution's Physical Education and Physical Training Programs in terms of curriculum and instruction (Table 5), faculty and training competency (Table 6), and facilities and equipment (Table 7). At the close of this subsection, Table 8 summarizes data on students' perceptions.

Table 5 shows the weighted mean, standard deviation, and verbal interpretation of the respondents' perception of participant-institution's Physical Education programs and physical training in terms of curriculum and instruction.

The overall weighted mean obtained is 4.34 which corresponds to Highly Regarded. The high regard of the respondents is manifested in their belief that the physical education and training program curriculum provides meaningful physical health awareness among the students, the indicator with the highest mean of 4.37 and standard deviation of .685.

Respondents rated all indicators *highly regarded* which attests to their satisfaction with the relevance of the physical education and training programs curriculum to the course, the enhancement of the skills necessary for the shipboard training of students as well as their physical health. Among the indicators, the curriculum's alignment with the goals and objectives of the course was rated lowest at 4.35.

The provision of meaningful health awareness of the physical education programs and physical training curriculum among respondents shows that the participant-institution's PE curriculum and instruction gives an avenue and outlet to better equip the students with knowledge on the importance of health awareness in maritime education and training. The standardization of the BSMT and BS marine Engineering had contributed to the harmonization of the program in the IMO. The CMO no.20, series of 2016 provides how the programs would operate considering the STCW Manila 2010 Amendment.

Table 5
Respondents' perceptions on the physical education programs and physical training in terms of curriculum and instruction

Curriculum and Instruction	Weighted Mean	Std. Deviation	Verbal Interpretation
The physical education and training programs curriculum is relevant to the course.	4.35	.708	Highly Regarded
The physical education and training programs curriculum is aligned with the goals and objectives of the course.	4.28	.719	Highly Regarded
The physical education and training programs curriculum enhances the skills necessary for the shipboard training of students.	4.33	.704	Highly Regarded
The physical education and training programs curriculum enhances the overall physical health of the students.	4.35	.680	Highly Regarded
The physical education and training programs curriculum provides meaningful physical health awareness among the students.	4.37	.685	Highly Regarded

Overall Weighted Mean	**4.34**	**Highly Regarded**

Table 6 shows the weighted mean, standard deviation, and verbal interpretation of the respondents' perception of physical education programs and physical training in terms of faculty and training officers' competency.

The indicator with the highest weighted mean of 4.25 pertains to the capability and effectiveness of the teachers/training officers in teaching the different physical education activities and training. The lowest weighted mean obtained, however, is 4.15 with reference to the supportiveness of the teachers/training officers in facilitating the proper performance of the physical education activities and training programs. The latter indicator's mean is interpreted as more regarded.

Table 6

Respondents' Perceptions of Physical Education Programs and Physical Training in termsof Faculty and Training Officers' Competency

Faculty and Training Officers' Competency	**Weighted Mean**	**Std. Deviation**	**Verbal Interpretation**
Teachers/training officers are capable and effective in teaching the different physical education activities and training.	4.25	.767	Highly Regarded
The teachers/training officers are supportive in facilitating the proper performance of physical education activities and training programs.	4.15	.757	More Regarded
Teachers/training officers are innovative in teaching physical education activities and training programs.	4.22	.732	Highly Regarded
Teachers/training officers are diligent in students' opinion and comment re physical education activities and training programs and entertained students' suggestions.	4.21	.798	Highly Regarded
Teachers/training officers attend to the needs of students with regards to the physical education activities and training programs.	4.21	.868	Highly Regarded
Overall Weighted Mean	**4.21**	**Highly Regarded**	

Table 7 presents the results on the respondents' perceptions of the physical education programs and physical training in terms of facilities and equipment. Overall, a weighted mean of 3.98 was obtained interpreted as more regarded. Except for one, all indicators obtained ratings that corresponded to being more

regarded. This expressed the students' giving importance to facilities and equipment available in the school. Being more regarded instead of highly regarded, this implies that the respondents perceive facilities and equipment as important but not the most important.

The highest rated aspect was "facilities and equipment provided effective physical learning venue" with a weighted mean of 4.03 and standard deviation of .949 followed closely by "facilities and equipment enhanced the physical skills of the students" with a weighted mean of 4.02 and standard deviation of .936.

The respondents *more regarded t*hat facilities and equipment helped them attain the physical education and training programs' curricular goals and objectives with a weighted mean of 3.98 and a standard deviation of .950.

The respondents *more regarded* that the facilities and equipment aligned and supported the physical education activities and training programs with a weighted mean 3.95 and standard deviation of .935.

The respondents *regarded* that the facilities and equipment were enough to cater the needs of students in their physical activities with a weighted mean of 3.94 and standard deviation of .941.

Table 7
Respondents' perceptions of physical education programs and physical training in terms of facilities and equipment

Facilities and Equipment	Mean	Std. Deviation	Verbal Interpretation
Facilities and equipment are enough to cater to the needs of students in their physical activities.	3.94	.941	More Regarded
Facilities and equipment aligned and supported the physical education activities and training programs.	3.95	.935	More Regarded
Facilities and equipment helped attain the physical education and training programs curriculum's goals and objectives.	3.98	.950	More Regarded
Facilities and equipment enhanced the physical skills of the students.	4.02	.936	More Regarded
Facilities and equipment provide effective physical learning venue.	4.03	.949	More Regarded
Overall Weighted Mean	**3.98**	**More Regarded**	

Summary of data on perceptions. Table 8 shows the summary of respondents' perceptions on Physical Education Programs and Physical Training provided among the cadets. Among the indicators, curriculum and instruction rank 1 as the most highly regarded (4.34) followed by faculty and training officers'

competency (4.21). The facilities and equipment perceived as more regarded (3.98) by the respondents.

Table 8
Summary of respondents' perceptions of physical education programs and physical training

Indicator	Overall Weighted Mean	Verbal Interpretation	Rank
Curriculum and Instruction	4.34	Highly Regarded	1
Faculty and Training Officers' Competency	4.21	Highly Regarded	2
Facilities and Equipment	3.98	More Regarded	3

DISCUSSION

The study was conducted to have a closer look at the programs of physical education and physical training through curriculum mapping and survey of students' perspectives on the effectiveness of the programs. This is done to come up with inputs which may be offered to improve the PE programs, and the physical training program which is uniquely provided to the maritime students, and to address emerging gap between the *intended outcomes/ competencies for development* and the *activities provided in the PE programs as well as in the special Physical Training Program*.

As to the respondents' profile, results of the study show that respondent-cadets of the maritime institution are mostly between the age of 21-24, and their mean age is 21.29. The academy is obviously male-dominated as manifested in the 94.8 percent male respondents. This is probably because the nature of the curricular programs provided by the institution are naturally appealing for men (being highly physical) and that the character of the institution is quasi-military. The respondents randomly selected are officially enrolled under BSMT (56.1%) and BSMarE (43.9%) programs. The majority of the respondents aboard on cargo (38.7%) and bulk (37.5%) ships and the majority of them are naturally fit in terms of physical or body type.

Meanwhile, related to the noted dominance of male in the maritime programs and the seeming connection to sex roles, it may be interesting to look back at previous studies among the students enrolled in human kinetics that suggest that the males had a more favorable attitude toward the risk-taking and thrill

aspects of physical activities when compared to females—giving a possible explanation why in the maritime programs, more males are enrolled than their female counterpart. On the other hand, studies determined that females had a more favorable attitude toward the aesthetic nature of physical activities. But beyond these found differences, the overall results suggest that the students involved in the daily physical activity education programs were more active than the students in non-daily physical education programs, regardless of sex. It may be that the students involved in the daily physical education program became conditioned to participate more in physical activities because of their regular physical education classes. In other words, physical activity became habitual for them and possibly because of their regular involvement, they recognize the value, and benefits of physical activity to a greater degree (Hunt, 2005).

Continuing with the findings of the present study, the Physical Education program includes swimming, advanced swimming, individual and teams sports. Physical Education 1 and 2 enhance the swimming skills of the students in preparation for their life at sea. Physical Education 3 and 4 enhance their physical abilities to their chosen and preferred individual and team sports. Their Physical Training program includes daily calisthenics. Daily road run activities are also strictly monitored among them, especially those students who need to undergo such activity and exercise. The school's goals of integration of meaningful and appropriate physical education programs were aligned with the study of Allison (2012) which states that quality education is founded on the students' opportunity to learn, meaningful content, appropriate instruction, and student and program assessment. Allison also suggests that lessons which help develop the physical competence are a must for excellent physical education programs which the school highly regard by training the future seafarers' swimming abilities. Curriculum mapping however, shows that the Physical Education programs have no direct contribution to the attainment and acquisition of the competencies required by the maritime education curriculum, which may be read as one emerging need for the re-thinking of the activities provided in the PE curriculum.

Meanwhile, based on the results, the respondents regard highly the maritime institution's physical education and physical training programs in terms of curriculum and instruction. Findings confirmed the institution's provision of meaningful health awareness of the physical education programs and physical training curriculum among respondents. This means that the curriculum and instruction, as the students perceive, provide for equipping the students with knowledge on the importance of health awareness in maritime education and training. This was aligned with the study of Allison (2012) which states that physical education programs stem from or be anchored on strong foundation on the development of awareness on health concerns among the youth. Furthermore, the integration of health and wellness programs in physical education has been increasingly trending at the present time since the goal of new physical education is to motivate learners with fun and healthy life-long fitness curriculum.

In addition to the overall wellness and fun derived from PE classes, previous research on physical education attests to the influence of PE in students' academic results as it does in their physical development. Perceptions show that the teachers and students believe that physical education has not only provided physical benefits for students, but also a positive influence on students mentally, emotionally, and socially. The social aspect of physical education is perceived to be either positive or negative for students depending on how the teacher manages the class. Many students and teachers perceived physical education to be enjoyable for students and beneficial to their development. Likewise, PE has the potential to impact students on a spiritual level although the degree to which this occurs is difficult to determine. Finally, how physical education is timetabled and taught can have an impact on the way students and teachers perceive this curriculum area (Taylor, 2012). Hence, for the objective of the current study, it may be added for the inputs that curriculum as delivered through the actual instruction may also be reviewed in order to maximize the benefits that students get from their Physical Education programs. The review of the PE curriculum and instruction in the maritime school may include both the lined-up activities per level, the direct alignment of such objectives to the primary competencies necessary for seafarers, and how instruction is scheduled and delivered by the teachers with the availability of required space, facilities and equipment. The maritime school's provision of an added physical training program to supplement PE could be a practice worth-emulating.

As to the faculty and training instructors, the respondents of the current research regard highly the faculty and training officers' competence in the delivery of its physical education and physical training program. The respondents, through the results, confirmed that the teachers/training officers were capable and effective in teaching the different physical education activities and training. Students documented that if the activity is enjoyable, then their motivation and participation are also high. The strong emphasis on individual sports, cooperative learning groups, and differentiated instruction help to engage students at multiple levels. Allison (2012) confirmed that teachers' integration of joy-focused and play-oriented activities made the physical education learning fun and exciting among the students. Additionally, teachers using mind maps, competitive learning activities and problem-solving challenges to engage students in the class are highly regarded.

The respondent-students also attested to the provision of the facilities and equipment to aid the teaching and learning process of this maritime institution's physical education and physical training programs. The respondents agree that the facilities and equipment provided effective physical learning venue. The finding agreed with the previous researchers' claims as cited in Allison (2012), which states that schools continue to become problematic with regard to physical education facilities and which SUCs in the Philippines also experience due to budget constraint.

Physical education and physical training are indeed very important to the life of a seafarer. This is because their line of work is relatively physical. Lifting and carrying in difficult positions, sitting in uncertain positions, crawling with heavy tools, frequently squatting, dragging chains and hawsers or tightening belts are some of the common physical activities of a seafarer on board which causes an increased risk of injury among them. Also, the physical activities which require stamina for untrained muscles stressed the joints and muscles. This could thus mean that apart from physical activities for the development of muscular strength, safety precautions and stress management may be infused in the curriculum.

With the school's suitable physical education and well-grounded physical training programs, they continuously produce highly competent mariners of the world who are physically fit and strong to face and conduct the rigid physical activities onboard vessels.

The study also shows that the Physical Education curriculum is different in such a way that the first two semesters is intended to establish knowledge and skills on basic and advanced swimming among the students. This intended to prepare the students for life at sea. The Physical Education program includes swimming, advanced swimming, individual and team sports. The Physical Education 1 and 2 enhance the swimming skills of the students in preparation for their life at sea. Physical Education 3 and 4 enhance the physical abilities of the students to their chosen and preferred individual and team sports. These physical education curricula provide the students with the fundamental knowledge and skills in the chosen sport, develop, improve, and maintain the highest physical level of physical fitness through physical education sports and activities, realize the value of physical fitness and fundamental skills needed in participating in such games and sports, appreciate games and sports, and develop good values and healthy lifestyle.

One strong feature found of the special physical training program of the participant- school is the inclusion of daily calisthenics which cover daily road run activities that are strictly monitored, especially with those students who need to undergo such activity and exercise. Daily calisthenics includes pull-ups, push-ups, chin-ups, squats, lunges, sit-ups, leg-raise, shoulder-push-ups, and others. Also, it includes brisk walking, stationary jogging, jogging in place, running, basic lifting, swimming, group exercise such as aerobics, and other individual exercise that are proven to be beneficial for the overall health. These activities are also found to be regularly monitored. Cadets/ cadettes also undergo the so-called hard works/hard jobs during their stay in the institution. These jobs include gardening and forestry, among others.

The curriculum mapping indicates that the subjects have a moderate contribution to the students' mastery of skills regarding the maritime profession in the future. Although swimming activities scored higher than the other subjects, the school may need to still provide the necessary activities which will hone the

students' skills in their profession by integrating activities on water survival and life-saving.

In the assessment of the physical education and physical training programs provided by the maritime school in terms of curriculum and instruction, the respondents *confirmed* the following: (1) that the physical education and training program curriculum provided meaningful physical health awareness among the students; (2) that the physical education and training programs curriculum as relevant to the course and the physical education and training programs curriculum enhanced the overall physical health of the students; and (3) that the physical education and training programs curriculum enhanced the skills necessary for the shipboard training of students; and (4) that students *strongly agree* that the physical education and training programs curricula were aligned with the goals and objectives of the course. The overall weighted mean of the respondents' perception on physical education programs and physical training in terms of curriculum and instruction is 4.34 interpreted as *highly regarded*.

In the assessment of the physical education and physical training programs provided by the maritime school in terms of faculty and training officers' competency, the respondent-students *confirmed* that the (1) teachers/training officers were capable and effective in teaching the different physical education activities and training; (2) teachers/training officers were innovative in teaching physical education activities and training programs; (3) teachers/training officers were supportive in facilitating the proper performance of the physical education activities and training; and (4) teachers/training officers were diligent as per students' opinion and comments regarding physical and training program. They are open to students' suggestions and that the teachers/training officers attended to the needs of students with regards to the physical education and activities and training program. The overall weighted mean of the respondents' perception of physical education programs and physical training in terms of faculty and training officers' competency is 4.21 interpreted as *highly regarded*.

The space for the further improvement of the school's PE curriculum for future seafarers is still seen to be much open. New developments and demands keep coming as educational eras and societal changes happen especially in terms of health and wellness. For instance, the new generation's emphasis for increased personal and national wellness is a renewed focus on opportunities for children and adults to become more physically active (U.S. Department of Health and Human Services, 2008). This interest provides many opportunities for physical education teachers to become involved in promoting physical activity as part of larger community and school health initiatives. It is also a challenge for them to obtain professional competencies learned in teacher education programs that are vital to these public health initiatives. Additionally, teachers will need to expand their competencies beyond teaching sports and games to embrace pedagogical

competencies associated with the health-related physical education (Ribeiro et al., 2010)

Additionally, in the assessment of the physical education and physical training programs provided by the school in terms of facilities and equipment, the respondents confirmed to a certain extent that (1) the facilities and equipment provided effective physical learning venue; that facilities and equipment enhanced their physical skills; (2) facilities and equipment helped them attain the physical education and training programs curriculum's goals and objectives; (3) facilities and equipment are aligned to the demands of the programs and supported the physical education activities and training programs; and (4) facilities and equipment were enough to cater to the needs of students in their physical activities. The overall weighted mean of the respondents' perception of physical education programs and physical training in terms of facilities and equipment is 3.98 interpreted as *more regarded*.

It is generally ideal to provide state-of-the art learning facilities for any program. But schools with lesser means to supply or provide all of the necessary facilities may resort to maximizing available ones. Studies have ventured into how different schools respond to the needs of their respective programs. Buswell (2008), for example, profiled some PE classrooms for leading the way to give PE a new reputation. These schools are using swimming pools for canoeing, kayaking and water aerobics. They are also utilizing a small fitness club that accommodates weight training and cardiovascular endurance equipment and has put a space for technology programs like dance revolution and fitness gram. Through these provisions, PE curriculum becomes more interesting to teach and learn.

In the present study, statistics show that there is a significant difference in the respondents' perceptions of the school's physical education and physical training programs in terms of curriculum and instruction, and facilities and equipment when grouped according to course. There is a *very strong positive relationship* between the school's physical education programs and physical training in terms of curriculum and instruction and faculty and training officers' competency, and between faculty and training officers' competency and facilities and equipment. There is a *strong positive relationship* between the perceptions on curriculum and instruction and facilities and equipment, which means, statistically, the students' perceptions of the curriculum and instruction go in the same direction as their perceptions in the facilities and equipment; their positive outlook of the PE instruction and curriculum goes with their optimistic view of the value of the available learning equipment.

While the respondent-students generally view the PE programs and the physical training they undergo to, the present study finds it still necessary to recommend that participant-institution may continuously improve the school's Physical Education and physical training programs provided to the midshipmen /

women since changes in the seafarers' physical life are possible to take place in matter of few years. Conventional curricular and instructional approaches may need to be adjusted to fit students' changing learning needs. Based on the reviewed literature, years before the present study has been done, curriculum experts have not stopped looking for ways to fine-tune exiting curricula with the emerging societal concerns.

Fine-tuning PE curricula with existing physical facilities may also be extra-challenging for schools as there are impediments, more so with attempts to operate an instructional program beyond the usual trend. For example, in Jenkinson and Benson (2010), the findings show that the implementation of the physical education program which operates outside the traditional classroom, are impeded by barriers that are largely institutional. Some of these barriers can be planned for and overcome, but others require considerable negotiation, lobbying, and strong leadership: in particular, to gain access to and funding for equipment, facilities, teaching spaces and curriculum positioning. It is evident that many barriers to providing quality physical education programs have not changed over time: they have merely evolved and become more complex in their own context, in both primary and secondary settings. A focus on addressing institutional barriers alone is no longer possible, particularly as teachers report that students are increasingly responsible for their own educational and physical activity choices and, consequently, their participation or non-participation in physical education.

Overall, this study also concludes that survey results show the respondent-students affirming the overall relevance of their Physical Education and Training programs in their development as future seafarers. They also favorably acknowledged the competence of the faculty and training officers but perceived a lower affirmation on the adequacy of the available facilities and equipment. Meanwhile, after curriculum mapping, it is estimated that overall, the existing physical education activities offered contribute to a moderate extent in the development of the competencies required of maritime students, revealing the need to reassess the PE program and introduce more relevant and useful activities to maximize achievement of set curricular targets.

In addition, despite odds, great importance may be given to the improvement of facilities and equipment including spaces used to conduct physical education and physical training programs. The administration needs to purchase additional equipment for physical education and training programs. It is also recommended to provide additional structure intended for physical activities only to simultaneously cater to the vigorous physical activities of the students. It is also recommended to review physical education programs aligned with the competencies required by the profession at the international level, regularly assess the physical education and physical training programs of the school, and conduct future studies on the physical activities of students in relation to their work. Another study may also be accomplished on the physical wellness of the midshipmen/women during their

shipboard training to determine the factors which may affect their physical well-being. In the future, the factors that may influence the implementation of Physical Education Program as to time, space, student interest, and other school-related factors may be considered for further research.

Summary of the possible inputs for the curricular enrichment of the PE programs in maritime schools. In sum, this study offers the following as possible doable steps for this purpose: (1) continuing regular systematic curricular evaluation to elicit valid inputs for upgrading the physical education instructional quality and relevance and alignment to the emerging standards of the maritime programs in the international level; (2) regular checking of the overall well-being, wellness and competencies of both the teachers/ trainers and students; (3) regular checking and upgrading of the facilities and equipment necessary for the conduct of physical activities and training programs; and (4) continuing equipping of both teachers/ trainers and students of the skills on physical safety in seafaring, life-saving and other lifelong learning competencies and soft skills necessary for both male and female individuals.

REFERENCES

Allison M.K. (2012). *A physical education curriculum study: A comparison of traditional views and the introduction of new PE*. University of Wisconsin-Stout. USA

Brubaker, K. (2011). *The importance of physical education in today's schools*. Ashland University

Buswell, N. (2008). Physical education reinvented. *Current Health*, 34(8)

Di Lauro, L. (2008). Gym's benefits fade as student get older. *New York Amsterdam News*, 99 (25)

Fogelholm , M., Lindholm, H., Lusa , Miilunpalo , S., Moilanen, J., Paronen , O.Saarinen, K. (2007). Healthy movement - of health good practices in occupational health care. *Helsinki: Finnish Institute of Occupational Health*

Gould, D. & Voelker, D. K. (2010). Youth sports leadership development: Leveraging the
sports capacity experience. *Journal of Sport in action*, 1(1). Retrieved from http://www.tandfonline.com/doi/full/10.1080/21520704.2010.497695

Happonen, V. (2014). Promoting physical exercise among seafarers. A study on the exercise habits, experienced health and attitudes towards exercise

interventions among Godby Shipping seagoing personnel. Novia. University of Applied Sciences

Huit, W. (2011). Motivation to learn: An overview. *Educational Psychology Interactive*.

Hunt, J.D. (2005). The impact of a daily physical education program on students attitudes towards and participation in, physical activity. University of British Columbia. Vancouver

ISF Seafarer (2007). *Journal of 9th International Symposium on Maritime Health* 3-6 June 2007.

Jenkinson, K. A. & Benson, A.C.. 2010. Barriers to Providing Physical Education and Physical Activity in Victorian State Secondary Schools. *Australian Journal of Teacher Education, 35*(8). http://dx.doi.org/10.14221/ajte.2010v35n8.1

Kretchmar, R.S. (2008). The increasing utility of elementary school physical education: A mixed blessings and unique challenge. *Elementary School Journal*, 108 (3), 161-170

Monahan, T. (2010). An empathetic approach to physical education teacher education. *Master's theses, dissertations, and graduate research overview*. Paper 29. Retrieved from http://digitalcommons.ric.edu/etd/29

National Association of Sport and Physical Education (2004). *Standards based-teaching in physical education*. Appalachian State University. Retrieved from http://teachingpe.appstate.edu/naspe-content-standards

Nurminen, E. (2000). Workplace Effectiveness of physical exercise pursuits, physical function , musculoskeletal symptoms , perceived work ability as well as cost - benefit physically moderate as employees in women. Systematic review of the literature and a randomized comparative study . Helsinki: *Finnish Institute of Occupational Health*

Seafarers' Pension Fund (2013). Occupational well-being. Retrieved from http://www.seafarerspensionfund.fi/en/Frontpage/Occupational-wellbeing/Pages/default.aspx

Ravizza, M. (2005). Students' perceptions of physical educations teachers' caring. Retrieved from scholar.lib.vt.edu/theses/available/etd-05202005.../DRavizzaetd.pdf

Ribeiro, I.C., Parra, D.C., Hoehner, C.M., Soares, J., Torres, A., Pratt, M., Legetic, B., Malta, D.C., Matsudo, V., Ramso, L.R., Simoes, E.J., & Brownson, R. C. (2010). School-based physical education programs: Evidence-based physical activity interventions for youth in Latin America. Global Health Promotion, 17(5), 5-15 DOI: 10.1177/175797591036523

Taylor, J. (2012). Students' and teachers' perceptions of physical education. Avondale College. Retrieved from http://research.avondale.edu.au/these_bachelor_honours

U.S. Department of Health and Human Services. Physical Activity Guidelines for Americans. Washington, DC: 2008. Retrieved from http://www.health.gov/PAGuidelines