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## **PERFORMANCE ATTRIBUTES OF DECK AND ENGINE CADETS ONBOARD DUTCH MERCHANT SHIPS**

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### **Abstract**

*This study was conducted to determine the attributes that influenced the performances of the deck and engine cadets of the Palompon Institute of Technology (PIT) during their apprenticeship training onboard Dutch ships. The study was a descriptive-survey method utilizing a standardized survey instrument provided in the Quality Management System of the Institute's College of Maritime Education. The subjects considered were deck and engine cadets who were onboard Dutch ships for their 1 year apprenticeship training. While deck and engine management level officers were the respondents. Results revealed the performances of the cadets were highly influenced by the associated attributes as regards "Personal Qualities" and "Professional Knowledge and Skills." Moreover, as regards to "Outlook/Expectations", majority of deck and engine cadets were expected able to perform their tasks independently as ship's officers upon completion of the onboard training period of one year; while there were few from both groups that were expected able to perform his/her task independently as ship's officer only after an additional on board training period. Furthermore, it was found out the academic*

*performance of the deck cadets was satisfactory with high grades while the engine cadets with less satisfactory. Finally, the relationship between the performance attributes and academic performance in both groups of respondents were established.*

### **Keywords**

Attributes, Deck Cadet, Engine Cadet, Performance

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## **1. Introduction**

Safe navigation is the most fundamental attribute of good seamanship. An increasingly sophisticated range of navigational aids can today complement the basic skills of navigating officers, which have accumulated over the centuries...Seafaring will never be without its dangers but the maintenance of a safe navigational watch, as well as engine watch, at all times and the careful preparation of passage plans are at the heart of good operating practice...Safe navigation means that the ship is not exposed to undue danger and that at all times the ship can be controlled with acceptable margins...To navigate safely at all times requires effective command, control, communication and management. It demands that the situation, the level of bridge manning, the operational status of navigational systems and the ship's engines and auxiliaries are all taken into account...It is people that control ships, and it is therefore people, managements and teamwork which are the key to reliable performance. People entrusted with the control of ships must be competent to carry out their duties (ICS, 1998).

This study was based on the Goals theory that represents basic categories for different achievement situations. Goals guide our behaviour and cognition (Aquino, 2009).

A performance goal is the idea that performance of certain task leads us to develop self-worth. Otherwise known as ego goals, performance goals are related to achieving success with less effort. The use of performance – orientation structure leads us to superficial processing of information involving our ability to recall, memorize, or rehearse. Since this structure is associated to social comparison, we tend to avoid challenging tasks if we have low self-esteem or low self-concept. However, if we perform to the level of other people's expectations and to the extent that we feel great because we perform better than others do, we tend to develop a feeling of self-worth and a sense of pride. When we adopt a performance-goal structure, we exhibit the

following characteristics: 1) asking what type of task is to performed first; 2) working beyond other people's expectations in order to gain more rewards; 3) asking the distribution of reward mechanisms; 4) getting dispirited when things do not go the way they want it to flourish; 5) feeling of dissatisfaction when we do not get the best; 6) becoming too concerned about our performance in relation to rewards (Aquino, 2009).

According to Glover & Law, (2002), as cited Aquino, A. M., (2009), goal theories maintain that we direct our actions in order to achieve our goals. These may not be the means to an end but simply the achievement of something for its own sake.

In the area of maritime education, the Palompon Institute of Technology (PIT), a recipient of an international cooperation with a Dutch consortium of ship-owners, the Royal Association of Netherlands Ship-owners (KVNR), has committed to globalization in its curricular programs by producing globally competitive seafarers. Thus, high expectations were just but natural from the shipping industry on how its maritime graduates' would perform onboard ships.

### **1.1 Statement of the Problem**

This study was conducted in order determine the attributes that influenced the performances of both deck and engine cadets of Batch 9 of the PIT - KVNR Maritime Education Upgrading Program during their apprenticeship training on board Dutch merchant ships.

Specifically, this study sought to answer the following questions: 1. what are the personal qualities of both deck and engine cadets; 2. what are the professional qualities of both deck and engine cadets in terms of: professional knowledge; professional skills; proficiency of the English language; 3. what is the level of academic performance of the two groups of respondents; 4. what are the out-look/expectations of these deck and engine cadets; 5. is the performance attributes of the cadets significantly related to academic performance?

## **2. Review of Related Literature**

Learning to do is related to occupational training that is adapted to the types of work needed in the environment. It emphasizes the knowledge component of tasks including the importance of services in the economy. It is believed that the future of these economies hinges

on our ability to transform our advances in knowledge into innovations of ideas that will generate opportunities for new jobs and businesses. As information and advances in modern technology create a dramatic impact on our lives, skills training must evolve into a more challenging endeavor (Aquino, 2009).

The increasing demands for skills requirement at all levels in the industry is demonstrated by growing trends among employers in the evaluation of their employees in relation to the latter's personal competence rather than certified skills which manifest an ability to perform specific physical tasks. If employers will demand for personal commitment, it may involve qualities of the referred to as "interpersonal skills" that are combined with knowledge and other skills. Learning to do equates with the right to self-development (Aquino, 2009).

Our behavior is motivated. Without motive we cannot move even a step ahead. As a corollary, one of the principles of teaching states that an individual must be motivated in order to learn. Motivation is a force which makes us take an action. This condition may be stimulated by a physical need, an emotion, or an idea; but whatever is the cause, motivation always drives us to perform something (Aquino, 2009).

### **3. Methodology**

This study utilized a descriptive-survey (follow-up) method with the use of a standardized survey instrument (Padua, 2000). Data gathering was conducted onboard Dutch ships engaged in international trade. The subjects of this study were both deck and engine students who completed their 3-year curricular academic requirements at PIT from school years 2007-2008 up to 2009-2010. On the other hand, the respondents in this study were the deck and engine management level officers who were designated as the shipboard trainer officers' onboard Dutch ships.

The standardized survey instrument used in the study was provided in the Quality Management System Manual of the College of Maritime Education (COMEd), PIT designed for continuous improvement in the delivery of instruction, product realization and customer satisfaction. The College's Quality Management System was certified in accordance with the Det Norske Veritas (DNV) Rules for Maritime Academies for over a decade already.

The survey instruments were sent to all shipboard trainer officers' during the cadets' shipboard training. The respondents' were asked to fill up the instrument objectively and write their comments, if necessary. To ensure authenticity of the responses, the instrument has to be signed by the designated shipboard trainer officer and the Master. The instrument also has to be stamped with the ship's seal. Filled up survey instruments were then sent back to the College either through email via the cadets' respective manning agencies or by the cadets themselves upon their disembarkation.

Sample sizes achieved were 43 for deck cadets and 39 for engine cadets. The sample sizes represented 58.90% and 45.35% of the population for deck and engine, respectively, where the filled-up survey instruments have been forwarded or returned back to College.

The statistical measures used were the frequency count, weighted mean, and Spearman rho correlation of coefficient.

#### **4. Results and Discussion**

Table 1 shows the results of the different personal qualities identified to influence the performance of both deck and engine cadets.

Results showed that 'behaviour' ranked number 1 among the deck cadets with a weighted mean of 4.44, interpreted as 'Outstanding' indicating that the subjects' have possessed behaviours that were largely contributory to a favourable work and social climate onboard Dutch ships. On the other hand, the last in the ranking was 'decisiveness' with a weighted mean of 3.74, interpreted 'Above Average' indicating that the subjects' were able to take quick decisions if so required in the prevailing situations.

Likewise, results revealed in Table 1 attributed among the engine cadets shows 'cooperation' ranked number 1 with a weighted mean of 4.23, interpreted 'Outstanding,' and "Leadership talent" was observed last in the ranking with a weighted mean of 3.41, interpreted "Above Average."

Furthermore, by taking into account the top 5 attributes for each group of subjects, '*behaviour*,' '*devotion to duty and professional zeal*,' and '*cooperation*' were observed present, although not in the same ranking preferences, in the top 5 to both groups of subjects. This

implied compatibility leading to harmonious working relationships onboard ships among the two groups of subjects, the deck cadets and engine cadets. This is very important as these groups of subjects would be working in two different real environments within the ship.

Moreover, the top 5 in the ranking revealed that the groups of respondents have different attribute preferences. As observed, the deck cadets have *'initiative'* and *'appearance,'* while the engine cadets have *'care for personnel'* and *'stamina'* to complete their respective top 5 ranking.

**Table 1: Personal Qualities**

No.	Qualities	Description	DECK CADETS			ENGINE CADETS		
			WM	I	R	WM	I	R
1	Behavior	Extent to which his/her behavior contributed to a favorable work and social climate on board.	4.44	O	1	4.10	AA	2.5
2	Devotion to duty and professional zeal	Extent to which he/she demonstrated dedication and ardor in the fulfillment of his/her tasks.	4.32	O	3	3.97	AA	4
3	Leadership talent	Extent to which he/she is able to convince and motivate others to execute task/activities.	3.81	AA	15	3.41	AA	16
4	Organization talent	Extent to which he/she is able to plan and prepare own work activities and those of others in order to achieve required results in the most efficient way.	3.86	AA	14	3.59	AA	15
5	Autonomy	Extent to which he/she is able to perform tasks without specific instructions and supervision.	3.93	AA	12.5	3.82	AA	11
6	Decisiveness	Extent to which he/she is able to take quick decision if situations require.	3.74	AA	16	3.69	AA	13.5
7	Self-Confidence	Extent to which he/she has shown a justified confidence in own abilities.	4.05	AA	10.5	3.74	AA	12
8	Responsibility	Extent to which he/she demonstrated to be and to stay aware about the consequences of	4.07	AA	8.5	3.92	AA	6.5

		his/her own actions.						
9	Perseverance	Persistence with which he/she perform his/her obligations, also under difficult circumstances.	3.93	AA	12.5	3.90	AA	8.5
10	Initiative	Extent to which he/she spontaneously deployed activities or made suggestions to that end.	4.19	AA	4	3.69	AA	13.5
11	Cooperation	Extent to which he/she is able to perform tasks together with superiors, subordinates and fellow workers.	4.37	O	2	4.23	O	1
12	Care for personnel	Extent to which he/she is interested in the well being of subordinates and fellow workers and prepared to stand up for them.	4.14	AA	6	3.95	AA	5
13	Care for material means	Extent to which he/she properly used and maintained material means that were put to his/her disposal.	4.05	AA	10.5	3.85	AA	10
14	Appearance	Extent to which he/she is usually well groomed.	4.16	AA	5	3.92	AA	6.5
15	Stamina	Extent to which he/she can cope with physical strains related to duties at sea.	4.07	AA	8.5	4.10	AA	2.5
16	Flexibility	Extent to which he/she can cope with changing situations and accepts new policies/ideas.	4.09	AA	7	3.90	AA	8.5
	<b>Overall Weighted Mean/Interpretation</b>		<b>4.08</b>	<b>AA</b>		<b>3.86</b>	<b>AA</b>	

These differences in ranking preferences revealed very strong dynamics towards harmonious and desirable working practices onboard ships. They manifested the compatibility to co-exist onboard ships working in two different real work environments.

Table 2 shows how the deck and engine cadets were rated by their trainer officers according to the enumerated professional knowledge and skills that may influenced the cadets' performance level while on board ships for their apprenticeship training.

**Table 2: Professional Knowledge and Skills**

	Professional Knowledge and Skills	Description	Deck Cadets		Engine Cadets	
			WM	I	WM	I
1	Professional knowledge	Extent to which he/she proved and demonstrated to possess the knowledge that is required to perform as apprentice officer on board merchant ships.	4.07	AA	3.77	AA
2.1	Professional skills	Extent to which he/she proved and demonstrated to possess the skills that are required to perform watch-keeping duties as apprentice officer on board merchant ships.	4.05	AA	3.79	AA
2.2		Extent to which he/she proved and demonstrated to possess the skills that is required to perform other than watch-keeping duties as apprentice officer on board merchant ships.	4.05	AA	3.62	AA
3.1	Proficiency of the English language	Extent to which he/she is proficient at speaking the English language.	4.25	O	3.92	AA
3.2		Extent to which he/she is proficient at writing the English language.	4.14	AA	3.85	AA
<b>Overall Weighted Mean/Interpretation</b>			<b>4.11</b>	<b>AA</b>	<b>3.79</b>	<b>AA</b>

Proficiency of the English language, both speaking and writing, were rated the two highest weighted means for deck and engine cadets. Accordingly, as regards to the extent to which the cadets are proficient at speaking the English language, the deck cadets obtained a weighted mean of 4.25, interpreted “Outstanding,” while the engine cadets has a weighted mean of 3.92, “Above Average.” The results manifested that the performance of the deck cadets was

very much influenced by the associated attributes. While for the engine cadets, their performance was highly influenced by the associated attributes.

Moreover, in the ‘proficiency in writing the English language,’ it was revealed that the deck cadets obtained a weighted mean of 4.14, while the engine cadets have 3.85, both interpreted “Above Average.” Similarly, the results for both groups manifested that their performances with respect to the concerned proficiency were also highly influenced by the associated attributes.

However, results in the ‘professional knowledge’ and professional skills’ varied closely in both the deck and engine cadets. For the ‘professional knowledge,’ the deck cadets posted a weighted mean of 4.07, while the engine cadets had 3.77, although both interpreted as ‘Above Average.’

Furthermore, as regards to ‘professional skills,’ the deck cadets had 4.05, while the engine cadets had 3.79, both interpreted as ‘Above Average’. Whereas, for the professional skills needed to perform other than watch-keeping duties as apprentice officer the deck cadets posted 4.05, while the engine cadets had 3.62, likewise, both interpreted as ‘Above Average.’

Moreover, no matter how professional knowledge and professional skills trailed behind English, yet, overall, the deck cadets obtained a weighted mean of 4.11, while the engine cadets had 3.79 and both were interpreted as ‘Above Average.’ This meant that both the deck and engine cadets’ overall professional knowledge and skills were highly influenced by the associated qualities.

Table 3 shows the overall performance attributes of the subjects deck and engine cadets.

**Table 3: Overall Performance Attributes**

<b>Attributes</b>	<b>Deck Cadets</b>		<b>Engine Cadets</b>	
	<b>WM</b>	<b>I</b>	<b>WM</b>	<b>I</b>
Personal Qualities	4.08	AA	3.86	AA
Professional Knowledge and Skills	4.11	AA	3.79	AA
<b>Grand Weighted Mean</b>	<b>4.095</b>	<b>AA</b>	<b>3.825</b>	<b>AA</b>

The table showed results manifesting that deck cadets were able to post higher weighted means at 4.08 and 4.11 for ‘personal qualities’ and ‘professional knowledge and skills’, respectively, both interpreted ‘Above Average.’ On the other hand, while the weighted means posted by the engine cadets at 3.86 and 3.79 for ‘personal qualities’ and ‘professional knowledge and skills’ were relatively lower than what were obtained by the deck cadets, still their performances were interpreted ‘Above Average’ also indicating that their shipboard performances were highly influenced by their associated attributes. Collectively, the results meant that the deck and engine cadets’ shipboard performances were highly influenced by the associated attributes. This implied the kind of merchant officers these cadets in the near future would become largely predicable by the positive interactions of the attributes.

Table 4 shows the out-look/expectations of the respondents on the subjects’ deck and engine cadets.

**Table 4:** *Out-look/Expectations As Rated by Cadets’ Training Officers*

<b>Description</b>		<b>Deck Cadets</b>		<b>Engine Cadets</b>	
		<b>f</b>	<b>%</b>	<b>f</b>	<b>%</b>
When will he/she be able to perform his/her task independently as ship’s officer?					
a	Upon completion of the on-board training period of one year.	30	69.77	20	51.28
b	After an additional on board training period.	4	9.30	9	23.08
c	Not to be assessed yet.	2	4.65	-	-
d	Prefer not to indicate his look/expectations.	7	16.28	10	25.64
TOTAL		43	100.00	39	100.00

On the question when will he/she be able to perform his/her task independently as ship’s officer, 30 out of 43 or 69.77% for deck and 20 out of 39 or 51.28% for engine indicated that upon completion of the on-board training period of one year these cadets would be able to perform their tasks independently as ship’s officers. Moreover, there were 4 out of 43 or 9.30% from deck and 9 out of 39 or 23.08% from engine respondents who indicated that only after an

additional on board training period that these cadets shall only be able to perform his/her task independently as ship's officer.

Furthermore, results showed that 4.65% or 2 out of 43 from deck and none from the engine respondents indicated that these cadets were not to be assessed yet. Additionally, results showed that 7 out of 43 or 16.28% from the deck and 10 out of 39 or 25.64% from the engine respondents preferred not to indicate their lookout/expectations for the subjects.

The results implied that majority of the two groups of subjects were expected able to independently perform the tasks of a ship's officers after completion of the one year shipboard training. However, there were few from both groups that were expected able to perform his/her task independently as ship's officer only after an additional on board training period.

Table 5 shows the overall academic performance of deck and engine cadets.

**Table 5: Overall Academic Performance of Deck and Engine Cadets**

<b>Group of Subjects</b>	<b>Mean Grade</b>	<b>Qualitative Description</b>
Deck Cadets	2.0	Satisfactory
Engine Cadets	2.5	Less Satisfactory

As revealed in Table 5, the overall academic performance of the deck cadets was observed at 2.00 indicating satisfactory performance with high grades. On the other hand, the engine cadets were observed with their overall academic performance at 2.50 indicating less satisfactory with average grade. This implied that cadets from the deck department excelled in their academic performance more than the engine cadets have achieved.

Table 6 revealed the relationships between the performance attributes and academic performance of both the deck and the engine cadets.

**Table 6:** Relationship between Performance Attributes and Academic Performance

Group of Subjects	r-value	t-value	Decision
Deck Cadets	0.50	2.77	Ho was rejected. The computed t-value was bigger than the tabular t-value thus already in the rejection area. This meant there was high positive relationship between performance attributes and academic performance.
Engine Cadets	0.49	2.70	Ho was rejected. The computed t-value was bigger than the tabular t-value thus already in the rejection area. However, by considering the r-value result, there was moderately small positive relationship between performance attributes and academic performance.

$\alpha = 0.025$

$df = 25 - 2 = 23$

critical value = 2.069

The results in Table 6 for both the groups of subjects revealed the computed t-value 2.77 and 2.70 for deck and engine, respectively, indicated the null hypothesis *there is no significant relationship between the tasks performance and academic performance of the respondents* was rejected. In rejecting the null hypothesis the alternative hypothesis was instead accepted. This implied that there were relationships between performance attributes and academic performances of both groups of subjects.

## 5. Findings

1. The personal qualities of both subjects were found ‘Above Average’ manifesting the cadets’ shipboard performances were highly influenced by their associated attributes. Results showed top 5 personal qualities among the deck cadets, as follows: behavior, cooperation, devotion to duty and professional zeal, initiative, and appearance; and for the engine cadets, as follows: cooperation, behavior, stamina, devotion to duty and professional zeal, and care for personnel.
2. The professional qualities for both deck and engine cadets were likewise found ‘Above Average’ indicating the cadets’ shipboard performances were highly influenced by their professional qualities.

3. Deck cadets were found to have satisfactory academic performance with high grades, while engine cadets with less satisfactory academic performance.
4. The respondents' manifested that a little over 2/3 of the cadets from the deck department and little over 1/2 of the engine department have demonstrated that these cadets would be able to perform their tasks independently as ships officers upon completion of the one year onboard apprenticeship training period.
5. Relationship between performance attributes and academic performance in both deck and engine groups of respondents were established in the study.

## **6. Conclusion**

Deck and engine cadets demonstrated to have desirable positive personal attributes that were contributory to their personal and professional developments as future ship officers. The deck cadets have shown behaviour, cooperation, devotion to duty and professional zeal, initiative, and care for personnel as their best personal attributes that helped them so much in easily adapting to their working environment. On the other hand, the engine cadets have also showed cooperation, behaviour, stamina, devotion to duty and professional zeal, and care for personnel as their best personal attributes that described how they easily adapted to the world of seafaring. It was found that these personal attributes possessed by the cadets have largely contributed in making them more easily to work with, interact with fellow crew of different nationalities, and sustains good working relationships onboard ships.

On the other hand, both deck and engine cadets also demonstrated to possess professional qualities through knowledge and skills required from them in the performance of their duties and responsibilities as apprentice officers. In fact, results indicated that both groups of subjects manifested performances ranging from higher to highest level in terms of proficiency of the English language. Other professional qualities were similarly described positively.

As manifested by the management level officers, the outlooks/expectations for both deck and engine cadets opened up room for improvements to some individual cadets as not all of them would be able to perform their tasks independently as ships officers upon completion of the onboard apprenticeship training period of one year.

Moreover, the academic performances for both groups of respondents were found not quite similar. These were manifested with the findings that deck cadets have satisfactory or high grades, while the engine cadets have less satisfactory or average grades. Finally, the study was able to establish the presence of relationship between tasks performance and academic performance in both deck and engine groups of respondents. This implied that the higher the academic performances of the cadets will certainly result also to higher tasks performances.

## **7. Recommendations**

1. Re-visit the admission policy for freshmen who desired to study in the College of Maritime Education. Attitude and behavioral attributes of the freshmen applicants should be given more emphasis.
2. Policies that deal with attitude and behavioral attributes of the students inside the classroom should be formulated.
3. The physical fitness activities of the 3<sup>rd</sup> year students should be expanded to include students in all year levels in the College of Maritime Education.
4. Develop 'soft skills' of the students to improve their working attitude while still in school by empowering and training them as officers rather than as students.
5. Develop students good study habits to further improve their academic performance.

## **References**

Aquino, A. M. (2009). *Facilitating Human Learning*:/REX Book Store, 856 Nicanor Reyes Sr. St., Manila, Philippines.

International Chamber of Shipping (1998). Bridge Procedures Guide, Third Edition

Padua, R. N. (2000). Elements of Research and Statistical Models: MPSC Publishing House,  
C.M. Recto Ave., Lapanan, Cagayan de Oro City, Philippines