

THE EFFECT OF TRAINING AND PRACTICE OF AAL CADETS IN KAL CADET IN ORDER TO SUPPORT SHIP CONTROL SKILLS IN KRI

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ABSTRACT

The task of the Navy in Article 9 of Law number 34 of 2004 concerning the Indonesian National Army, this also includes the achievement of superior human resources of the Navy. To implement the excellence of AAL graduate officers, 60% of AAL's educational operations use training and practical methods, including Ship Control Lattek using KAL Cadets. The aim of this research is to analyze how the influence of AAL cadet training at KAL Cadet on ship control skills in KRI. The research method used is descriptive quantitative. With the problem of the effectiveness of AAL cadet practice training at KAL Cadets in supporting ship control skills in the KRI, this research method is the effectiveness of cadet training is variable (X1) and cadet practice is variable (X2) and the use of equipment (X3) which affects the variable (Y) namely ship control skills. Based on the research, it can be concluded that the variables of ship control training, ship control practices and the use of ship control equipment simultaneously have a significant influence on ship control skills in the KRI. In harmony with effectiveness, which has an understanding of usability, activity and the existence of conformity in an activity between someone who carries out a task with the goal to be achieved.

Keywords: AAL, effectiveness, KAL, ship control, cadets

1. INTRODUCTION

The task of the Navy in Article 9 of Law Number 34 of 2004 concerning the Indonesian National Army in paragraph (e) mandates that the Navy is tasked with implementing the empowerment of the marine defense area. So that the Navy can carry out the task of empowering the marine defense area, it must have organizational crew personnel who have four superior characters, namely; 1) excel in the field of human resources (excellent manpower), 2) excel in organization (organizationally excellent), 3) excel in operations (operationally excellent), and 4) excel in technology (excellent in technology). Excellence in the field of human resources (excellent manpower) (AAL, 2017) can be achieved through effective training and practice in educational institutions.

The form of excellence for officers who graduated from the Navy Academy (AAL) are listed in the AAL Vision and Mission (AAL, 2012). AAL's vision is to create a Naval Academy that is capable of producing responsive, responsive, and up-to-date Navy officers. To realize AAL's Vision, AAL's Mission was formulated, namely organizing the educational process, conducting educational evaluations and developing character education. To implement the excellence of AAL graduate officers, 60% of AAL's educational operations use training and practice methods, including Ship Controlling Lattek (Dalkap) using KAL Cadets.

In line with the mandate of the TNI Law and AAL's Vision and Mission, Law Number 20 of 2002 concerning the Education System states that national education standards must also be met. Process standards and graduate competencies are two things that are always strived to be improved. Based on the above, the entire series of educational operations at AAL, especially the training and practice of AAL cadets, is carried out to improve the competence of graduates in order to support assignments in KRI.

Until now, the results of the training and practice of AAL cadets are still not optimal. Based on survey data (observations and assessments) from users, namely the supervisors of juvenile officers in the Navy's Kotamakotama, it was found that 54% of juvenile officers were still unable to meet the demands according to the Job Discription, while 46% of juvenile officers were able to meet the demands. according to Job Description (AAL, 2020).

The results of the survey above indicate that the competence of AAL graduate cadets must be improved in order to be able to support the main assignment in the KRI. The results of the survey are very interesting for researchers to find out the effectiveness of the implementation of training and practice for level IV AAL cadets so far that has been carried out. To be able to answer these problems, the researchers determined the title Analysis of the Effectiveness of AAL Cadet Training and Practice at KAL Cadets in order to Support Ship Control Skills in

the KRI. The research method used is a quantitative descriptive method with the theoretical basis of effectiveness, learning, quality management (PDCA and Kaizen).

2. MATERIALS AND METHODS

2.1 Ship Control Theory

The way a ship behaves when it is moved depends on several factors, which vary depending on the propulsion device, rudder, keel shape, water structure and the presence of currents and tidal currents in the vicinity. From these factors, it can be seen clearly that ship control will differ from one another. However, the application of fundamental principles applies to all ship control situations. Naturally experience will be very helpful in increasing one's skills and abilities to control the ship, so that an officer who has understood the principles of ship control and has prepared them carefully will be able to control the ship successfully (AAL, 2018).

It is very important to understand the various factors that affect the maneuvering of a ship, so that a person will be able to study them first before he himself jumps into direct control of a ship.

The first five things are forces that can be controlled from within the ship, while wind, current, waves and water depth are external forces that can be utilized to assist the ship control process. In addition to the five internal factors mentioned above, other internal factors that can affect the ship's motion are the ship's draft and the distribution of the weight of the cargo in the ship (AAL, 2018).

2.2 Effectiveness Theory

Effectiveness is usability, activeness and the existence of compatibility in an activity between someone who carries out a task with the goal to be achieved. Indicators of effectiveness answer the question of whether what we are doing is correct. Furthermore, in measuring an activity so that it can be assessed as effective, namely by measuring as follows: 1) defining an outcome (result) of the activity to be achieved. 2) measure the performance of activities related to achieving the desired results. 3) report to the decision maker (decision makers) so that they can take action based on the information provided (Moehariono, 2014).

Meanwhile, according to Gibson et al.'s effectiveness, the source of effectiveness is a direct relationship between the management functions (Planning, Organizing, Leading and Controlling) and the organization. Effectiveness has three levels, namely 1) individual effectiveness, individual effectiveness is based on an individual perspective that emphasizes the work of employees or members in the organization, 2) group effectiveness, there is a view that in fact individuals work together in groups, so group effectiveness is a the number of contributions from all group members, 3) Organizational effectiveness, Organizational effectiveness consists of

individual effectiveness and group effectiveness. Through the influence of synergy, the organization will be able to get a higher level of work than the sum of the works of each part. With the effective implementation of each individual, group and organization it will produce an effective management function. The effectiveness of this organization can be measured or based on the criteria of the mission and goals of the organization, methods and processes of implementation, the influence of a centralized entity, and the standard performance of the organization. It is said to be effective if the goals or objectives are achieved as determined (Gibson et al, 1996). implementation methods and processes, centralized unified influence, and organizational performance standards. It is said to be effective if the goals or objectives are achieved as determined (Gibson et al, 1996). implementation methods and processes, centralized unified influence, and organizational performance standards. It is said to be effective if the goals or objectives are achieved as determined (Gibson et al, 1996).

2.3 Practice and Practice in Learning

The learning theory proposed by Benjamin S, Bloom or better known as Bloom's Taxonomy theory is a theory that explains the learning domains which consist of three domains, namely: cognitive, affective and psychomotor and each teaching domain has something different from the others. (Degeng, 1989). Here is an explanation of the whole thing:

a. Cognitive

Cognitive domain is a domain that includes mental (brain) activities. All efforts concerning brain activity are included in the cognitive domain. The cognitive domain has six levels or aspects, namely: 1) knowledge, knowledge includes memories of things that have been studied and stored in memory such as terminology, definitions, facts, ideas, patterns, sequences, methodologies and basic principles. Knowledge stored in memory will be explored when needed through the form of recall or recognition, 2) understanding, meaning a person's ability to capture meaning and meaning about things being studied, 3) application.), the ability to apply a rule or method to deal with a concrete and real problem, 4) analysis (analysis) the ability to solve complex information or problems into small parts and relate one information to another or relate one problem to another. The ability to detail a unit into its parts so that the overall structure of the information or problem and its organization can be well understood, 5) synthesis (synthesis) the ability to form a new unit or pattern by connecting the parts to one another. The ability to recognize the data or information that must be obtained to produce the required solution. 6) evaluation, the ability to give an assessment of something that is known, understood, done, analyzed and produced. Also the ability to form something with accountability opinions based on certain criteria. For example, the ability to assess the

results of scientific work of people with an opinion that can be accounted for.

The purpose of the cognitive aspect is oriented to the ability to think which includes simpler intellectual abilities, namely remembering, to the ability to solve problems that require students to connect and combine several ideas, ideas, methods or procedures learned to solve the problem. Thus the cognitive aspect is a sub-taxonomy that reveals mental activities that often start from the level of knowledge to the highest level, namely evaluation.

b. Affective

The affective domain is a domain related to attitudes and values. The affective domain includes behavioral traits such as feelings, interests, attitudes, emotions, and values. Some experts say that a person's attitude can be predicted to change if a person already has a high level of cognitive power. The characteristics of affective learning outcomes will appear in students in various behaviors. The affective domain is further detailed into five levels, namely: 1) receiving, the ability of a person to concentrate on a stimulus and have a willingness to pay attention to the stimulus, 2) responding, the ability that includes the willingness and willingness to pay close attention to the stimulus. active and actively participate in an activity, 3) valuing (assessing or appreciating), the ability to judge something and carry oneself according to that judgment. The ability to assess can take the form of accepting or rejecting something, 4) organization (regulating or organizing), the ability to form a value system as a guide and guide in life, 5) characterization by value or value complex (characterization with a value or value complex), the ability to appreciate the value of life so that it becomes personal property (internalization) and becomes a guide for oneself.

c. Psychomotor

The psychomotor domain is a domain related to skills or the ability to act after a person has received a certain learning experience. Psychomotor learning outcomes are actually a continuation of cognitive learning outcomes (understanding something) and affective learning outcomes (which only appear in the form of behavioral tendencies). The psychomotor domain is divided into seven levels, namely: 1) perception, the ability to use sensory cues to guide motor activities, 2) set (readiness), the ability to position oneself in starting a movement, 3) guided response (guided movement), the ability to perform a movement according to the example given, 4) mechanical response (accustomed movement),

2.4 Quality management

In general, quality can be defined as the characteristics of a product or service determined by the customer and obtained through process measurement and continuous improvement.³⁰ This opinion places more emphasis on the customer, namely if the customer says something is of good quality then the product/product/service can be

considered quality. In connection with this research, if the users say that the cadets have good ship control skills, it can be considered that the training and practice so far have been going well too. The following are quality assurance management models that can be used:³¹

a. PDCA (Plan Do check Action) model

The cycle popularized by Deming uses the following steps: *Plan, Do, Check, Action* (PDCA) which means plan, do, check and follow up. This PDCA will result in continuous improvement or more popularly known as Kaizen theory. PDCA is a four-step problem solving process used in quality control. PDCA is a useful tool for making continuous improvements without stopping. The PDCA concept is a guideline for every leader for a continuous quality improvement process without stopping but increasing to a better state and being carried out throughout the organization. The benefits of PDCA include: a) to facilitate the mapping of the authority and responsibilities of an organizational unit, b) as a work pattern in improving a process or system in an organization,

Based on the theory above, the implementation of exercises and practices can be started by planning exercises, carrying out exercises, checking the implementation of exercises and following up on the findings during exercise.

b. Kaizen Model

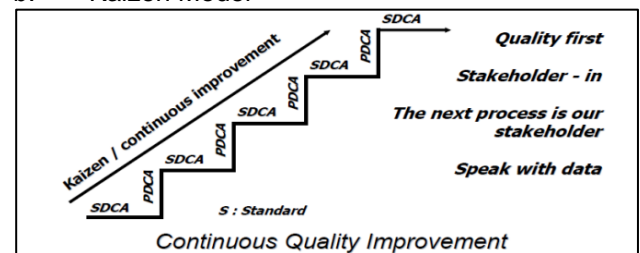


Figure 1. Quality Assurance Management Kaizen Model

(Source: Kemenristek Dikti)

Kaizen is the cornerstone of the behavioral philosophy. The concept of quality assurance has two functions, namely the maintenance function and the repair function. These two functions are summed up as standard maintenance and repair. One of the first steps in implementing Kaizen is to run a cycle *Plan Do Check Act* (PDCA) to ensure the continuity of kaizen. The PDCA cycle rotates continuously with interspersed by cycles *Standardize Do Check Act* (SDCA), this step in the cycle all new procedures that have been decided in step *Act* in the previous PDCA cycle became a mandatory guideline. SDCA focuses on maintenance activities while PDCA refers more to repairs.

3. RESULTS AND DISCUSSION

3.1 Research Hypothesis

The hypothesis carried out by the researcher is an initial or temporary assumption of the relationship

between variables, which must be proven true. The hypotheses in this study are as follows:

H0: Simultaneous training and practice as well as the use of ship control equipment does not affect the navigational skills of AAL cadets in the KRI.

H1: Simultaneously the training of AAL cadets' ship control has an effect on ship control skills in the KRI.

H2: Simultaneously the practice of controlling AAL cadets has an effect on ship control skills in the KRI.

H3: Simultaneously the use of ship control equipment in KAL Cadet affects the skill of controlling cadet ships in KRI.

3.2. Framework

This study uses a framework that was designed because of the problem of ship control skills of AAL cadets so that it can be illustrated that the training and practice of cadets have a direct effect on ship control skills as follows:

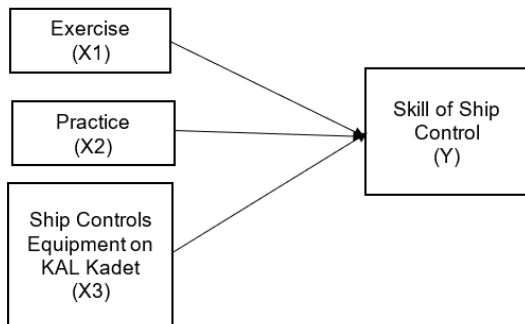


Figure 2. Thinking Framework

3.3. Variable Validity Test of Ship Control Exercises (X1)

In testing the independent variable Ship Control Exercise (X1) on 10 questions with the number of respondents as many as 38 people. The results of the validity test using the IBM SPSS Statistics 25 Software give the results as shown in table 1

Table 1. Results of the Validity Test of Exercise Variables (X1)

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X11	29,39	13,218	,543	,830
X12	29,82	13,722	,415	,840
X13	29,68	12,817	,525	,832
X14	29,89	11,826	,643	,820
X15	29,63	13,644	,514	,833
X16	29,71	12,914	,562	,828
X17	29,66	13,420	,464	,837
X18	29,61	13,543	,468	,836
X19	29,66	12,177	,619	,822
X110	29,71	12,103	,656	,818

Source: Primary data processed by SPSS Ver 25 Software, 2021

To test the Validity of the Ship Control Exercise variable (X1), pay attention to the table above in the

Corrected Item-Total Correlation column, namely X11 (in the X1 variable in question 1) to X110 (in the X1 variable in question 10), where the X variable is said to be valid if the value of $r_{count} > r_{table}$. The value of r_{count} is in the Corrected Item-Total Correlation column. The value of r_{table} with $N = 38$ is 0.320. Because the calculated r value from X11 to X110 $>$ from r_{table} , then the results of the validity test of the independent variable Ship Control Exercise (X1) are all declared valid.

3.4. Ship Control Practice Variable Validity Test (X2)

In testing the independent variable Ship Control Practice (X2) on 10 questions with a total of 38 respondents. The results of the validity test using the IBM SPSS Statistics 25 Software give the results as shown in table 2.

Table 2. Validity Test Results of Dalkap Practice Variables (X2)

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X21	30,68	12,817	,700	,845
X22	30,89	13,178	,548	,858
X23	30,71	13,833	,499	,861
X24	30,84	12,623	,660	,848
X25	30,89	13,826	,553	,858
X26	30,84	14,137	,445	,865
X27	30,74	13,659	,547	,858
X28	30,74	12,794	,650	,849
X29	30,68	12,762	,655	,849
X210	30,63	13,590	,565	,857

Source: Primary data processed by SPSS Ver 25 Software, 2021

To test the Validity of the Vessel Control Practices variable (X2), pay attention to the table above in the Corrected Item-Total Correlation column, namely X21 (in variable X2 question 1) to X210 (in variable X2 question 10), where the variable X is said to be valid if the value of $r_{count} > r_{table}$. Because the calculated r values from X21 to X210 are all greater than the r_{table} , as in table 2, the results of the validity test of the independent variable Ship Control Practices (X2) are all declared valid.

3.5. Variable Validity Test Using Ship Control Equipment (X3)

In testing the independent variable Use of Ship Control Equipment (X3) on 13 questions with a total of 38 respondents. The results of the validity test using the IBM SPSS Statistics 25 Software give the results as shown in table 3.

Table 3. Test Results of the Variable Validity of Ship Control Equipment (X3)

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X31	40,55	30,686	,627	,923
X32	40,55	31,821	,492	,927
X33	40,53	29,013	,722	,920
X34	40,58	30,196	,610	,924
X35	40,42	30,521	,689	,921
X36	40,47	29,770	,697	,921
X37	40,37	29,482	,736	,919
X38	40,71	30,049	,643	,923
X39	40,42	29,980	,715	,920
X310	40,42	28,953	,819	,916
X311	40,55	30,849	,600	,924
X312	40,47	30,040	,712	,920
X313	40,68	29,465	,716	,920

Source: Primary data processed by SPSS Ver 25 Software, 2021

3.6. Vessel Control Skills Variable Validity Test (Y)

In testing the dependent variable, Ship Controlling Skills (Y) on 10 questions with a total of 38 respondents. The results of the validity test using the IBM SPSS Statistics Ver 25 Software give the results as shown in table 4

Table 4. Validity test results for Dalkap Expertise Variable (Y)

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Y1	30,74	10,361	,550	,841
Y2	30,95	10,430	,475	,847
Y3	30,87	9,685	,624	,834
Y4	31,03	10,080	,623	,835
Y5	31,00	10,865	,418	,851
Y6	30,74	10,037	,661	,832
Y7	30,89	10,259	,515	,844
Y8	30,87	10,280	,505	,845
Y9	30,87	9,955	,606	,836
Y10	30,89	9,989	,600	,836

Source: Primary data processed by SPSS Ver 25 Software, 2021

To test the Validity of the Vessel Control Skills variable (Y) pay attention to the table above in the Corrected Item-Total Correlation column, namely Y11 (in the Y1 variable in question 1) to Y110 (in the Y1 variable in question 10), where the Y variable is said to be valid if the value of $r_{count} > r_{table}$. Because the calculated r values from Y11 to Y110 are all greater than the r table, as in table 4.9, the results of the validity test of the dependent variable Ship Control Skills (Y) are all declared valid.

3.7. Ship Control Exercise Reliability Test (X1)

In the reliability test of the ship control exercise variable (X1) which consists of 10 questions, it is as shown in table 5.

Table 5. X1 . Reliability Test Results Reliability Statistics

Cronbach's Alpha	N of Items
,844	10

Source: Primary data processed by SPSS Ver 25 Software, 2021

The results of reliability testing on all variables with Cronbach's Alpha as shown in the table above shows that the Alpha value is $0.844 > 0.6$. So it can be concluded that all research instruments on the Ship Control Exercise Variable (X1) are Reliable.

3.8. Ship Control Practice Reliability Test (X2)

In the reliability test of the ship control practice variable (X2) which consists of 10 questions, it is as shown in table 6.

Table 6. X2 . Reliability Test Results Reliability Statistics

Cronbach's Alpha	N of Items
,868	10

Source: Primary data processed by SPSS Ver 25 Software, 2021

The results of reliability testing on all variables with Cronbach's Alpha as shown in the table above shows that the Alpha value is $0.868 > 0.6$. So it can be concluded that all research instruments on the Vessel Control Practice Variable (X2) are Reliable.

3.9. Ship Control Equipment Reliability Test (X3)

In the reliability test of the use of ship control tools (X3) which consists of 13 questions, it is as shown in table 7.

Table 7. X3 . Reliability Test Results Reliability Statistics

Cronbach's Alpha	N of Items
,927	13

Source: Primary data processed by SPSS Ver 25 Software, 2021

The results of reliability testing on all variables with Cronbach's Alpha as shown in the table above shows that the Alpha value is $0.927 > 0.6$. So it can be concluded that all research instruments on the Variable Use of Ship Control Equipment (X3) are Reliable.

3.10. Ax Control Skills Reliability Test (Y)

In the reliability test of the ship control skill variable (Y) which consists of 10 questions, it is as shown in table 8

Table 8. Y . Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of Items
,854	10

Source: Primary data processed by SPSS Ver 25 Software, 2021

The results of reliability testing on all variables with Cronbach's Alpha as shown in the table above

shows that the Alpha value is $0.854 > 0.6$. So it can be concluded that all research instruments on the Ship Control Skills Variable (Y) are Reliable.

3.11. Normality test

In this study, the Kolmogorov-Smirnov test method was used, to test the normality of the distribution of the sample data that had been obtained, using the IBM SPSS Statistics 25 Software. By compiling all the sample data that had been obtained, namely (X1), (X2), (X3) , and (Y), then with the help of IBM SPSS Statistics 25 Software, the normality test analysis can be obtained according to table 9.

Table 9. Kolmogorov Smirnov . Normality Test Results **One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		38
Normal Parameters, b	mean	,0000000
	Std. Deviation	1.15091894
	Absolute Differences	
Most Extreme Differences	Positive	,061
	negative	0.051
		-,061
Test Statistics		,061
asymp. Sig. (2-tailed)		,200c,d

- Test distribution is Normal.
- Calculated from data.
- Lilliefors Significance Correction.
- This is a lower bound of the true significance.

Source: Primary data processed by SPSS Ver 25 Software, 2021

The basis for decision making in the One-Sample Kolmogorov-Smirnov test is the residual is normally distributed if the significance value is > 0.05 . Guidelines for making decisions about the data are close to or are normal distributions based on the Kolmogorov-Smirnov test can be seen from:

- If the value of Sig or significant is normal or probability < 0.05 , then the data is not normally distributed.
- If the value of Sig or significant is normal or probability > 0.05 then the data is normally distributed.

The test results show that the entire Sig scale value is 0.200 and has a value > 0.05 . Therefore, it can be concluded that all of the research instruments are normally distributed, so that they have met the requirements for further processing in the following discussion.

3.12. Multicollinearity Test

Testing for the presence or absence of multicollinearity symptoms is done by looking at the VIF and Tolerance values. If the VIF value is below 10.00 and the Tolerance value is more than 0.100, it can be concluded that the regression model does not have multicollinearity problems. From the results of the correlation test, it will be used to choose whether H0 or H1 from a predetermined hypothesis will be accepted and will be used as a conclusion.

All sample data that has been obtained are then compiled, namely the variables of ship control training (X1), ship control practices (X2), the use of ship control tools (X3), the output variable is ship control skills (Y) with the help of IBM SPSS Statistics 25 Software. correlation test analysis can be obtained, as follows:

Table 10. Multicollinearity Test Results

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	5.068	1,856		2,731	,010		
	X1	,386	,082	,435	4,698	,000	,367	2,724
	X2	,195	0.075	,223	2,589	0.014	,425	2,353
	X3	,225	,065	,378	3,469	,001	,265	3,772

a. Dependent Variable: Y

Source: Primary data processed by SPSS Ver 25 Software, 2021

Based on the data processing above, it can be concluded that the three variables have a VIF value, namely (X1) is 2.724, (X2) is 2.353, and (X3) is 3.772 and < 10.00 while the Tolerance is (X1) is 0.367, (X2) is 0.425, (X3) is 0.265 and > 0.100, so it can be stated that there is no multicollinearity problem between independent variables. This shows that there is a positive relationship, meaning that the increase in the three independent variables, namely ship control

exercises, ship control practices and the use of ship control tools will increase the skill of controlling cadet ships in the Cadet KAL.

3.13. Simple Linear Regression Test for X1 and Y Variables

The results of the simple linear regression test between X1 and Y variables are as in table 11.

Table 11. Simple Linear Regression Test Results for X1 and Y . Variables

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	8,644	2,365		3,656	,001
	X1	,779	,071	,877	10,933	,000

a. Dependent Variable: Y

Source: Primary data processed by SPSS Ver 25 Software, 2021

From the table it can be seen that between the variables X1 and Y there is a correlation with a significance <0.05 so that a regression equation can be obtained based on the coefficient table equation:

$$Y = 8.644 + 0.779 X1$$

$$Y = a + b X$$

So that the linear regression equation can be obtained between the variables X1 and Y as follows:

3.14. Simple Linear Regression Test for X2 and Y Variables

The results of the simple linear regression test between the variables X2 and Y are as shown in table 12.

Table 12. Simple Linear Regression Test Results for Variables X2 and Y

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	10,843	3,102		3,495	,001
	X2	,687	0.090	,786	7,617	,000

a. Dependent Variable: Y

Source: Primary data processed by SPSS Ver 25 Software, 2021

From the table it can be seen that between the variables X2 and Y there is a correlation with a significance <0.05 so that a regression equation can be obtained based on the coefficient table equation:

$$Y = a + b X$$

So that the linear regression equation can be obtained between the variables X1 and Y as follows:

$$Y = 10,843 + 0.687X2$$

3.15. Simple Linear Regression Test for X3 and Y Variables

The results of the simple linear regression test between the X3 and Y variables are as shown in table 13.

Table 13. Simple Linear Regression Test Results for X3 and Y . Variables

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	11,067	1,989		5.565	,000
	X3	,530	0.045	,891	11,794	,000

a. Dependent Variable: Y

Source: Primary data processed by SPSS Ver 25 Software, 2021

From the table it can be seen that between the variables X3 and Y there is a correlation with a significance <0.05 so that a regression equation can be obtained based on the coefficient table equation:

$$Y = a + b X$$

So that the linear regression equation can be obtained between the variables X1 and Y as follows:

$$Y = 11.067 + 0.530 X3$$

help of IBM SPSS Statistics 25 Software, the results can be obtained as shown in table 14

3.16. Multiple Linear Regression Test

All sample data that has been obtained are then compiled, namely (X1), (X2), (X3), and (Y) and with the

Table 14. Multiple Linear Regression Test Results

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	5.068	1,856		2,731	,010
	X1	,386	,082	,435	4,698	,000
	X2	,195	0.075	,223	2,589	0.014
	X3	,225	,065	,378	3,469	,001

a. Dependent Variable: Y

Source: Primary data processed by SPSS Ver 25 Software, 2021

From the table above, it is shown that the significance value is less than 0.05, so for the three variables there is a correlation or relationship of influence and a multiple regression linear equation can be formulated which is derived from the general formula described previously, namely:

$$Y = 5.068 + 0.386 X1 + 0.195 X2 + 0.225 X3$$

3.17. X1 and Y Variable Correlation Test

The results of the correlation test between variables X1 and Y are as in table 15. From the table it can be seen that between variables X1 and Y there is a positive correlation with an R value (correlation coefficient) of 0.877 and a termination coefficient (R2) of 0.769 or 76.9%.

Table 15. Correlation Test Results for X1 and Y . Variables

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,877a	,769	,762	1,716

a. Predictors: (Constant), X1

Source: Primary data processed by SPSS Ver 25 Software, 2021

3.18. X2 and Y . Variable Correlation Test

The results of the correlation test between the variables X2 and Y are as shown in table 16. From the

table it can be seen that between the variables X2 and Y there is a positive correlation with an R value (correlation coefficient) of 0.786 and a termination coefficient (R2) of 0.617 or 61.7%.

Table 16 Correlation Test Results for X2 and Y . Variables

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,786a	,617	,606	2,208

a. Predictors: (Constant), X2

Ssource: Primary data processed by SPSS Ver 25 Software, 2021

3.19. X3 and Y . Variable Correlation Test

The results of the correlation test between the variables X3 and Y are as shown in table 17. From the

table it can be seen that between the variables X3 and Y there is a positive correlation with an R value (correlation coefficient) of 0.891 and a termination coefficient (R2) of 0.794 or 79.4%.

Table 17. Correlation Test Results for X3 and Y . Variables

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,891a	,794	,789	1.618

a. Predictors: (Constant), X3

Source: Primary data processed by SPSS Ver 25 Software, 2021

3.20. Multiple Correlation Test

The results of the correlation test between the variables X1, X2 and X3 and Y are as in table 18. From

the table it can be seen that between the variables X and Y there is a positive correlation with an R value (correlation coefficient) of 0.945 and a termination coefficient (R2) of 0.893 or 89,3%

Table 18. Multiple Correlation Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,945a	,893	,884	1,201

a. Predictors: (Constant), X3, X2, X1

Source: Primary data processed by SPSS Ver 25 Software, 2021

4. CONCLUSIONS

Based on the results of research and discussion that have been stated in the previous chapter, the conclusions generated in this study are as follows:

a. Based on the research results, the ship control exercise variable (X1) has a positive and significant effect on ship control skills (Y). The R value of 0.877 indicates that there is a positive correlation/relationship, where the ship control training variable (X1) has a strong influence on the ship control skill variable (Y). If the ship control training variable (X1) has increased, it will also be followed by an increase in the ship control skill variable (Y). While the value of the termination coefficient (R2) is 0.769 or

76.9%. This shows that the ship control training variable (X1) has a contribution of 76.9% to the ship control skill variable (Y), while 32% (100%-68%) is influenced by other variables.

b. Based on the results of the research, the ship control practice variable (X2) has a positive and significant effect on ship control skills (Y). The R value of 0.786 indicates that there is a positive correlation/relationship, where the ship control practice variable (X2) has a strong influence on the ship control skill variable (Y). If the ship control practice variable (X2) has increased, it will also be followed by an increase in the ship control skill variable (Y). While the value of the termination coefficient (R2) is 0.617 or

61.7%. This shows that the ship control practice variable (X2) has a contribution of 61.7% to the ship control skill variable (Y), while 38.3.8% (100%-61.7%) is influenced by other variables.

c. Based on the results of the study, the variable use of navigation tools (X3) has a positive and significant effect on navigation skills (Y). The R value of 0.891 indicates that there is a positive correlation/relationship, where the variable of the use of ship control tools (X3) has a strong influence on the variable of ship control expertise (Y). If the variable of the use of ship control equipment (X3) has increased, it will also be followed by an increase in the variable of ship control expertise (Y). While the value of the termination coefficient (R²) is 0.794 or 79.4%. This shows that the variable use of ship control equipment (X3) has a contribution of 79.4% to the variable of ship control expertise (Y), while 20.6% (100%-79.4%) is influenced by other variables.

d. Based on the results of the research on ship control exercises (X1), ship control practices (X2) and the use of ship control tools (X3) have a positive and significant effect on ship control skills (Y). The R value of 0.945 indicates that there is a positive correlation/relationship, where the three independent variables (X1, X2 and X3) have a strong influence on the dependent variable, namely ship control skills (Y). If the three independent variables have increased, it will also be followed by an increase in the dependent variable of ship control skills (Y). While the coefficient of determination (R²) is 0.893 or 89.3%. This shows that the variables of ship control training (X1), ship control practices (X2) and the use of ship control tools (X3) have a contribution of 89, 3% of the variable Ship Control Skills (Y), while 11.9% (100%-88.1%) is influenced by other variables outside the variables X1, X2 and X3. To determine the effect of other variables of 11.9%, further research needs to be carried out.

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