

The effect of maritime English vocabulary for beginners Module on the vocabulary learning outcomes

Mochamad Abduh, Juliandri Hasnur, Syafni Yelvi Siska *

Universitas Negeri Padang, Indonesia.

* Corresponding Author. Email: siska.gusrial.4014@gmail.com

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ABSTRACT

This research started from the problem of the current Covid-19 pandemic condition and situation, which makes cadets have to study online and most by themselves. In addition, it is based on the fact that there has been no specific module discussing basic terms or maritime English vocabulary specifically for each department. The purpose of this study is to reveal whether there is an effect of using the maritime English vocabulary for beginners module on the vocabulary learning outcomes and how effective the use of the module is for cadets of Batch V Nautical Department, Shipping Polytechnic, West Sumatra. This type of research is experimental with the one-group pre-test and post-test design (pre-experimental design). This research was carried out in all classes of the nautical department Batch V, which consisted of 3 categories; Nautical A, Nautical B, and Nautical C. The sample used purposive sampling in this research, so the writer only took cadets in nautical majors, with a total sample of 60 persons. Based on the results, it was found that there was an effect of using the maritime English vocabulary for beginners module on the learning outcomes of maritime English vocabulary for Nautical Department cadets Batch V. Furthermore, from the results of questionnaire data processing, it can be concluded that the use of maritime English vocabulary for beginners module in maritime English vocabulary learning is effective for Nautical Department cadets Batch V in West Sumatra Merchant Marine Polytechnic in 2021.



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INTRODUCTION

The teaching and learning process is the main activity in running a system in every educational institution. Learning activities must be organized and directed so that the teaching and learning process occurs optimally, effectively, and efficiently and provides reciprocity between cadets and lecturers. Before the teaching and learning process begins in the classroom, a lecturer or educator must organize the learning content to be taught, learning aids, learning objectives, and other learning tools. The preparation from the lecturer benefits not only the lecturer but also the students. Masruddin (2018) mentioned that material development help students and the lecturer conduct teaching and learning process in the classroom. The preparation of materials strengthens students' motivation in the learning process and supports any learning activity.

One of the essential things that an educator must prepare for the success of the learning process is effective and efficient learning media. Learning media are all tools and intermediaries in delivering teaching materials from educators to students. This learning media must be developed and

used by the times, conditions, and situations. In addition to assisting educators in delivering information and learning materials, learning media must also be by students' characteristics, interests, and performance levels. So, the students can use learning media either with the help of their lecturers or without guidance or study independently. Learning media will also support the learning outcomes of students or students later. According to [Thang and Koh \(2017\)](#), students' learning outcomes expected in this twenty-first century include critical thinking, creativity, teamwork, authentic problem-solving, and self-directed learning. These learning outcomes will make the students become effective future workers. So, it is essential to understand how students transfer and implement their knowledge and competencies beyond the lesson context. One of the ways is through effective learning media.

Regarding the current Covid-19 pandemic situation, educators and students must always be ready for all offline and online learning conditions. A teacher or educator's responsibility is to prepare effective learning media for students, meaning that they can be used with or without teacher assistance. This is because one of the efforts teachers can carry out as learning facilitators are providing opportunities for students to learn individually inside and outside school hours. To achieve this, we need media to convey subject matter to students and help them construct their knowledge/understanding. This media can be made by the teacher or by asking for help from a third party outside the learning system. Media that can meet the learning needs of students individually is a module. [Sawarynski and Baxa \(2019\)](#) explain that the module is an educational response to offer best practices in the dimensions of learning, both online and offline, and in the cognitive, affective and psychomotor aspects.

The module is one of the learning media, or educators write teaching materials to make it easier for students to learn the material independently, either through electronic modules or print modules. [Yulastri et al. \(2018\)](#) stated that a module is a specific unit of teaching materials that contains a lesson that the students should know. A module is a stand-alone that can be made by the teacher or educator based on the curriculum or syllabus and the use of the module in the teaching and learning programs aimed to achieve an educational goal. A module is suitable for all students levels because it makes it easier for students to understand the lesson.

The West Sumatra Merchant Marine Polytechnic, better known as the Politeknik Pelayaran Sumatera Barat, is one of the state vocational higher education institutions in the shipping sector under the auspices of the Ministry of Transportation, which is a higher education institution that produces ready-to-use workers. As a vocational education institution, its education system emphasizes practice rather than theory. The learning system in class is 60% practical and 40% theory with the hope that graduates have the provision of work skills by their fields and majors as well as the demands of the industry in which they work. [Hamid et al. \(2020\)](#) agree that vocational education's focus is on improving the technical competence of students and making students have skills that cannot be replaced by technology. Vocational education is needed in this era since students with skills which is required in the job market.

One of its visions and missions is to be able to produce internationally competitive graduates. The West Sumatra Merchant Marine Polytechnic is committed and tries its best to realize its vision and mission. Many things have been done by the West Sumatra Merchant Marine Polytechnic educational institution to realize its vision and mission. One of them is encouraging lecturers to develop teaching materials in the form of modules for each subject they teach. Using teaching materials or modules is expected to solve some of the problems that have occurred so far in each subject's teaching and learning process. [Papadopoulou \(2021\)](#) assumes that a module aims to facilitate students' critical engagement and technical and practical skills.

One of the compulsory subjects for cadets of the West Sumatra Merchant Marine Polytechnic is Maritime English. Maritime English is one of the ESP (English for Specific Purposes) which discusses specific material in the maritime, shipping, and marine fields. Because it belongs to ESP, Maritime English learning for cadets must start from the basics, such as learning terms or vocabulary. This is because cadets must understand and master the words and language widely used in this field before learning practical communication skills related to shipping.

[Sofa and Dewi \(2020\)](#) indicated that English for Specific Purposes (ESP) courses are made to help students master English to use English effectively in their professional field or workplace later on. Teaching and learning components in ESP involve instructional goals, the role of the

instructors and students, learning methods and strategies, learning materials, learning media, and an evaluation system. The communication standards used in shipping are also based on the SMCP (Standard Marine Communication Phrases), which uses maritime English. To be able to communicate effectively in the shipping world, the cadets must first be able to master English terms and vocabulary in the shipping field.

Regarding the importance of maritime English skills for West Sumatra Merchant Marine Polytechnic cadets, maritime English learning must be carried out effectively. Effective learning does not depend on time and conditions. This means that cadets as learners can learn with or without the help of lecturers and can learn in any conditions and situations, both inside and outside the classroom, either directly (face to face) or online learning. One way to implement effective learning is to provide modules as learning media. Cadets can maximize their role in SCL (students-centered learning) learning by using the module.

The use of modules in maritime English learning is also based on several things. First, the current condition and situation of the Covid-19 pandemic make cadets have to study outside the campus, namely online (in the network) from their respective residences. Under these conditions, using modules will help the lecturers deliver materials and assignment lessons. It will also help the cadets understand the material well because they have their learning materials. Second, no module has discussed basic terms or maritime English vocabulary specifically for each department. Learning materials commonly used by cadets of the West Sumatra Merchant Marine Polytechnic are in the form of a printed book, "English for Mariners," by Tony Grice, which contains general material for all majors. Other learning materials are in the form of assignment sheets and printouts of material from the internet. So, the module will help cadets understand and master maritime English terms and vocabulary well.

Vocabulary is the main element in language skills. The ideas and quality of a person's language skills depend on the quantity and quality of vocabulary. Wilkins in [Thornbury \(2002\)](#) states that without grammar very little can be conveyed, without vocabulary nothing can be conveyed. It means that without vocabulary, there is nothing that someone in a language can get. Mastery of a person's vocabulary cannot be obtained from a dictionary alone, like the way students studied in ancient times. With the development of the times and science and technology in education, vocabulary teaching will be more interesting if using pictures or pointing at objects directly.

Therefore, the use of the maritime English vocabulary for beginners module is considered essential to apply to cadets. The maritime English vocabulary for beginners module is a maritime English module that explicitly explains basic terms and vocabulary that cadets in the shipping sector must know. This module is a printed module also available in an e-module that contains photographs and vocabulary that refers to the photograph. This module is done according to each department, namely the module for the nautical department and nautical technology. The maritime English vocabulary for beginners module is designed excitingly to explain vocabulary and terms according to pictures or objects. This will make it easier for cadets to remember and memorize words on board using maritime English.

There are several advantages of teaching maritime English vocabulary using the maritime English vocabulary for beginners module. First, with pictures, vocabulary learning will be more interesting for cadets and make it easier for them to understand knowledge. Second, learning to use this module is a shortcut for cadets in understanding terms and vocabulary in the shipping sector. By getting accustomed to seeing photographs according to natural things, cadets will be able to recognize the object's name well without needing to use a dictionary again. Third, cadets do not need to translate every vocabulary or term into Indonesian. They look at the picture and memorize the name because the words or language used in this module are those used on ships.

In addition, very few maritime English books and modules are circulating in the market, even though there is a level or level of readability classified for the ability of intermediate and above students (middle). Meanwhile, the English skills of cadets at the Shipping Polytechnic of West Sumatra are only classified as basic skills (basic/beginner). Therefore, the maritime English vocabulary for beginners module is a solution for solving this problem that will help cadets improve their understanding and learning outcomes of Maritime English vocabulary.

Learning media cannot be said to be good if it cannot be used by teachers and students and influences learning outcomes. Therefore, the level of usability (usefulness) and significance was analyzed in student learning outcomes. Usefulness refers to the condition of the learning modules developed that can be easily used by students so that the learning carried out is meaningful, interesting, fun, valuable for students' lives, and can increase their creativity in education and have a degree of effectiveness on student learning outcomes. While the point of the module is a test carried out on products that have been developed by involving potential product users. The effectiveness test of the maritime English vocabulary for beginners module in this study was obtained, improving cadets' learning outcomes.

Furthermore, the effect of the maritime English vocabulary for beginners module needs to be seen as a follow-up step from the initial development and as an effort to develop better learning modules in the future. The principle of creating the maritime English vocabulary for beginners module using ADDIE consists of five stages, namely: analysis, design, development, implementation, and evaluation. So, this module has only arrived at the third stage, namely development, while research using this module embodies the fourth step of the module development process, namely implementation. Furthermore, the results of this research will be able to realize the final module development step, namely evaluation.

The results of research from [Sukra and Handayani \(2015\)](#) showed that modules significantly influence learning outcomes, especially in learning English. A module can help optimize learning objectives. Before being used or used as a handbook, lecturers should first study whether the teaching materials can improve student learning outcomes or not. Before being distributed to students or published, it is necessary to research modules or teaching materials in their influence on student learning outcomes.

Based on the description above, the researcher is interested in conducting a study entitled The Effect of the maritime English vocabulary for beginners module on maritime English vocabulary learning outcomes. The purpose of this study is to reveal: 1.) The effect of using the maritime English vocabulary for beginners module on the learning outcomes of maritime English vocabulary for cadets in Batch V, Nautical Department, West Sumatra Merchant Marine Polytechnic in 2021; and 2.) The effectiveness of using the maritime English vocabulary for beginners module for cadets Batch V, Nautical Department, West Sumatra Merchant Marine Polytechnic in 2021.

In this research, the readers will know the effect of the maritime English vocabulary for beginners module. Then, the readers will know how effective the maritime English vocabulary for beginners module is for the cadets by reading the cadets' perception percentage. With a significant effect and cadets' good perception of the maritime English vocabulary for beginners module, this module can properly use by the cadets as one of the sources in learning maritime English vocabulary.

RESEARCH METHOD

This type of research is experimental with the one-group pretest-posttest design (pre-experimental design). Creswell in [King \(1991\)](#) states that there are four types of empirical research, pre-experimental designs, true experiments, quasi-experiments and single-subject designs. This type of research is pre-experimental, also known as the one-group pretest-posttest design, in which researchers study one group and provide intervention during the action or treatment. This type of research does not require a control class compared to acting classes. The design of this research can be seen in [Figure 1](#).



[Figure 1](#). Research Design

In this design, observations were made two times, namely before and after the investigation. The statements made before the experiment (O₁) are called the pretest, and the comments made after

the investigation (O2) are called the post-test. Based on the description of the type of research above, in this study, the researcher used a group with the same major, namely the nautical department.

This research was carried out in all classes of the nautical department Batch V in West Sumatra Merchant Marine Polytechnic in 2021, which consisted of 3 types: Nautical A, Nautical B, and Nautical C. This research was conducted online (virtual). The population of this research is cadets in Batch V of the West Sumatra Merchant Marine Polytechnic in 2021. The total population in each department is described in Table 1.

Table 1. Research Population

No.	Major	Male	Female	Total
1	Nautical	48	12	60
2	Technology nautical	58	1	59
3	Sea transportation	27	13	40
Total				159

The sample is part of the population and the characteristics of the people. In this research, the writer chose the selection using purposive sampling (Creswell & Creswell, 2017). Because the writer aims to see the effect of using the maritime English vocabulary for beginners module for the deck department on the results of maritime English vocabulary learning for cadets, the writer only took cadets majoring in nautical in this research. The marine department consists of three categories: Nautical A, Nautical B, and Nautical C, with 60 persons.

The research instrument was used to obtain research data. The research instruments used in this study were tests and questionnaires (questionnaires). In this study, the researcher conducted a test validity test based on content and construct validity. Content validity, namely the accuracy of an instrument in terms of the material being tested. Construct validity, namely the validity obtained through rational analysis of the test according to the field being tested, namely the content of the test (Mahrens & Lehmann, 1984).

After the instrument is constructed based on specific theories' measured aspects, it is consulted with experts. This is called expert judgment. To carry out content and construct validity, the researcher asked for the help of 2 validators according to the field of this research. An instrument is considered reliable if it can measure accurately and consistently from time to time. The reliability test is carried out using the Alpha coefficient formula.

To determine the effectiveness of the learning module, the researcher used additional instruments in the form of a questionnaire or questionnaire. In this study, the researcher used a questionnaire containing questions about the knowledge and experience of the respondents after the action was taken. Researchers used a questionnaire with a Guttman scale. The Guttman scale is a scale used to get firm answers from respondents; namely, there are only two intervals such as agree-disagree, yes-no, true-false, positive-negative, ever-never, and so on.

Answers from respondents can be made with the highest score, "one," and the lowest score, "zero." For alternative answers in this questionnaire or questionnaire, the researcher sets an assessment category for yes = one and no = 0. The grid or question indicator in the questionnaire is based on the grid of a module comprised of 3 types: the feasibility of exhibit and production, growing cadets' experience, and increasing motivation for cadets to learn.

The researcher used specialist judgment to assess the validity of the questionnaire instrument. After the device is made about the aspects to be measured based on a particular theory, it is consulted with experts. Experts were asked for their opinions about the instruments that had been made. Perhaps the experts will decide: the tool can be used without repair, there are repairs, and maybe a complete overhaul. In this study, the researcher will conduct validity using expert judgment with two validators who are experts in their fields.

Research data analysis tests whether the proposed hypothesis is accepted or rejected. SPSS will be used to test the hypothesis using the paired sample t-test. Paired sample t-test on pretest and posttest is used to compare the difference between two means of two paired samples with the assumption that the data are usually distributed. Paired samples come from the same subject, and each variable is taken in different situations and circumstances. The criteria for testing the hypotheses

are: (1) Accept H1 if the significance value (2-tailed) < 0.05 , which indicates a significant difference between the initial variable and the final variable, and (2) Reject H1 if the Significance Value (2-tailed) > 0.05 which indicates there is no significant difference between the initial variable and the final variable.

The data analysis for the questionnaire means simplifying data into a form that is easier to read and implement. Data analysis was carried out to ensure that the information collected would be clear and explicit. By the type of additional instrument, namely a questionnaire, the data analysis technique used to analyze the data in this study is quantitative descriptive analysis. After the quantitative data is collected, the data analysis technique in this study refers to the opinion of [Creswell and Creswell \(2017\)](#), which is as follows: 1.) Editing, the writer checks the answers given by the respondents so that they get clear guidelines about the data; 2.) Coding, the answers of the respondents are classified by marking or code on each answer; and 3.) Tabulation/tally is to carry out calculations as well as insert them into the table.

RESULT AND DISCUSSION

The results of the study are presented to answer the research objectives, namely to see whether there is an effect of using the maritime English vocabulary for beginners module on the learning outcomes of maritime English vocabulary for cadets in Batch V of the Nautical Department, West Sumatra Merchant Marine Polytechnic in 2021. Furthermore, the effectiveness of using the maritime English vocabulary for beginners module for cadets in Batch V of the Nautical Department in West Sumatra Merchant Marine Polytechnic in 2021.

Description of Research Data

The data description describes the pre-test and post-test results from cadets Batch V of the Nautical Department in West Sumatra Merchant Marine Polytechnic. After conducting the pre-test at the beginning to see the initial abilities of the cadets, the researchers held learning meetings four times. The cadets are taught using the maritime English vocabulary for beginners module. After learning for four sessions is completed, the cadets of Batch V of the Nautical Department, consisting of 3 categories, namely Nautical A, Nautical B, and Nautical C, are given a final test or Post-test to see the results of learning Maritime English vocabulary.

Pre-Test Results

The pre-test or initial test is helpful to see the initial abilities of cadets majoring in nautical before being taught using the maritime English vocabulary for beginners module. The results of the pre-test of 60 cadets are presented in [Table 2](#).

Table 2. Pre-test Result

Data	Nautical A	Nautical B	Nautical C
Highest Score	33.89	31.8	33.05
Lowest Score	12.97	5.439	14.23
Mean	25.1	22.1	23
Median	25.1	24.3	21.5
Mode	18	27.6	15.1

Based on [Table 2](#), it can be concluded that the mean or class average value in the three nautical categories above is not too different, namely Nautical A 25.1, Nautical B 22.1 and Nautical C 23. This explains that the initial abilities of cadets are almost the same.

Post-Test Results

The post-test or final test is intended to see the results of learning maritime English vocabulary for cadets majoring in nautical after being taught using the maritime English vocabulary for beginners module. From pre-test results, 60 cadets were divided into three classes: Nautical A, Nautical B, and Nautical C. The data were obtained in [Table 3](#).

Table 3. Post-test Result

Data	Nautical A	Nautical B	Nautical C
Highest Score	85.77	88.7	92.89
Lowest Score	34.6	40.17	40.17
Mean	62.7	60.4	68.8
Median	64.9	60.5	68.2
Mode	66.9	64.4	62

Based on Table 3, it can be concluded that the mean or average value of the classes in the three nautical types above has increased from the pre-test and post-test, namely Nautical A from 25.1 to 62.7, Nautical B, which was initially 22.1 to 60.4 and Nautical C from the beginning 23 becomes 68.8. This explains that the results of maritime English vocabulary for cadets majoring in nautical after being taught using the maritime English vocabulary for beginners module are good. The difference in the results of Maritime English vocabulary learning for cadets from the Nautical Department in the Pre-test and Post-test can be seen in Figure 2.

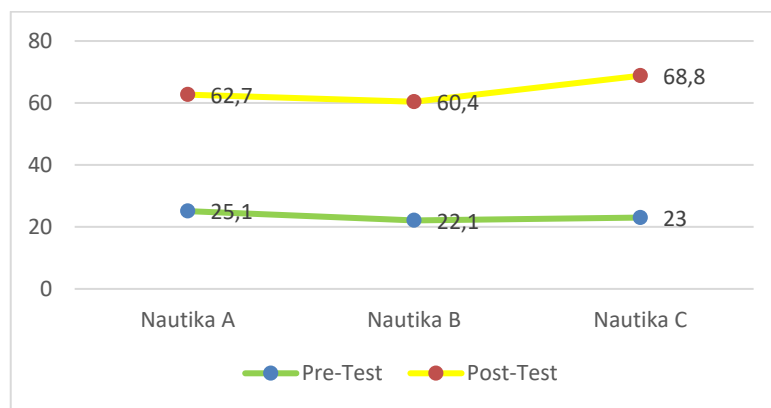


Figure 1. Average Score in the Pre-test and Post-test

From Figure 1, it can be concluded that there is a difference in the pre-test and post-test scores of cadets in Batch V in the Nautical Department. The cadets' Post-Test scores have increased from the Pre-Test scores. This means that the results of learning maritime English vocabulary for Nautical cadets using the maritime English vocabulary for beginners module can be said well.

Hypothesis Testing (T-Test)

The hypothesis tested in this study was whether using the maritime English vocabulary for beginners module affected the learning outcomes of Maritime English vocabulary for cadets in Batch V Nautical Department at West Sumatra Merchant Marine Polytechnic in 2021. Hypothesis testing in this study used a T-test through SPSS assistance using the Paired Sample T-Test. The T-test is a test that aims to determine whether cadets have a difference in learning outcomes before being taught using the maritime English vocabulary for beginners module and after being prepared using the maritime English vocabulary for beginners module. The T-Test was carried out on the Pre-Test and Post-Test scores of cadets in one group of 60 persons. The test calculation is assisted by using SPSS. The test results can be seen in Table 4.

The results of the calculation of the SPSS statistical data in Table 4 are the Paired Sample T-Test conducted in the Marine Department Batch V, divided into three classes: Nautical A, Nautical B, and Nautical C, with a total of 60 cadets. This T-test aims to see the difference in the average scores on the Pre-Test and Post-Test. The criterion for testing the hypothesis is that if the significance value (2-tailed) is less than or less than 0.05, then H1 is accepted, which means that there is an effect of using the maritime English vocabulary for beginners module on the learning outcomes of maritime English vocabulary cadets in the Nautical Department Batch V, West Sumatra Merchant Marine Polytechnic in 2021. However, suppose the significance value (2-tailed) is more significant than

0.05. In that case, H1 is rejected, and H0 is accepted, which means no effect of using the maritime English vocabulary for beginners module on maritime English vocabulary learning outcomes cadets Batch V Nautical Department of the West Sumatra Merchant Marine Polytechnic in 2021.

Table 4. T-Test Pre-Test and Post-Test of the Nautical Department, Batch V

Data	Score
Mean	-40.60669
Std. Deviation	13.78493
Std. Error Mean	1.77963
t	-22.818
df	59
One-sided p	<.001
Two sided p	<.001

Based on the calculation results of the T-Test Paired Sample T-Test using SPSS above, it is known that the difference in the mean Pre-Test and Post-Test cadets in the Department of Nautical is 40,60669. The significance value of the pre-test and post-test data for nautical cadets is 0.001, which means it is smaller or less than 0.05 ($0.001 < 0.05$), then H1 is accepted, which means that there is an effect of using the maritime English vocabulary for beginners module on the results of learning English vocabulary maritime cadets Batch V Nautical Department of West Sumatra Merchant Marine Polytechnic in 2021.

Description of Research Questionnaire

Filling out the questionnaire was carried out by all cadets of the Nautical Department Batch V of the West Sumatra Merchant Marine Polytechnic in 2021, with the total number of respondents being 60 persons. The results of filling out the questionnaire can be presented in [Table 5](#).

Table 5. Questionnaire Results

Questions	Percentage	
	Yes	No
Do you understand the language used in the “Maritime English Vocabulary for Beginners” module?	85%	15%
Are you interested in the appearance of this module?	88.33%	11.67%
Are you interested in this module’s design (cover, text, image, print, paper quality)?	88.33%	11.67%
Does this module’s material design (text and images) help you improve and widen your maritime English knowledge?	88.33%	11.67%
Did the material design of this module make you want to learn more about the material?	85%	15%
Is the “Maritime English Vocabulary for Beginners” module useful in learning maritime English?	88.33%	11.67%
Did this module help you understand maritime English concepts and terminology?	85%	15%
Is it easy to remember maritime English vocabulary using this module?	88.33%	11.67%
Is it easier to understand the lecturer's explanation when learning using this module?	88.33%	11.67%
Is it easy to do assignments using this module?	85%	15%
Do you enjoy learning maritime English using modules?	86.67%	13.33%
Do you have high motivation to learn by using this module?	85%	15%
Is maritime English learning more effective by using modules?	81.67%	18.33%
Are you burdened and find it challenging to use this module?	33.33%	66.67%
Do you agree that this module should be further developed as a media for learning maritime English?	85%	15%

Based on the questionnaire results above, it can be concluded that 85% of cadets in the Nautical Department can understand the language used in the maritime English vocabulary for beginners module. Then, 88.33% of cadets were interested in the appearance of this module,

interested in the design (cover, writing, pictures, prints, paper quality) of the module, and the material design (text and images) presented in this module helped the cadets improve and wider maritime English knowledge.

Furthermore, 85% of cadets stated that the material design of this module made them want to study the material further, and this module helped them understand maritime English concepts and terminology. Also, 88.33% of cadets revealed that using the maritime English vocabulary for the beginner's module helped them learn maritime English. It was easy to remember nautical English vocabulary using this module, and it was easier to understand the lecturer's explanation when learning using this module.

As many as 85% of cadets find it easy to do assignments using this module. They are highly motivated to learn by using it and agree that this module is developed further as a medium for learning maritime English. Then, 86.67% of cadets said they were happy if they learned marine English using the module. 81.67% said that learning maritime English was more effective using this module. Finally, 66.67% of cadets in the Nautical Department felt that they were not burdened and found it not difficult to use this module.

Based on the description of the questionnaire result, it can be concluded that the use of the maritime English vocabulary for beginners module is adequate for cadets in Batch V of the Nautical Department at the West Sumatra Merchant Marine Polytechnic. In addition to short answers in the questionnaire questions about the effectiveness of using the module, the researcher also asked questions in the form of a brief description of the cadets' opinions on the development of this Maritime English learning module.

The question is, "Which part do you think needs to be developed about this module?". The cadets' responses to these questions vary. Still, in general, they thought that the appearance and content of the module were very good, easy to understand, and attracted their interest in learning. However, to develop a better and more practical module in the future, the cadets gave some opinions about the parts that need to be developed. Some cadets think the module should present a more diverse image design.

Furthermore, they stated that modules like this exist in the form of learning applications via smartphones or e-learning modules. They can be used anywhere, especially when online learning (virtual) due to the current covid-19 pandemic. In this module, further discussion of images is added on each part of the ship, the image is bigger, and the description of the functions and uses of its features is added. There is additional information on each sub-heading of the ship. Furthermore, this module adds the meaning of Indonesian vocabulary to make it easier for novice learners to understand.

Discussion

Based on the results of data processing, it was found that the significance value of the pre-test and post-test data for Nautical Department cadets was 0.001, which means it is smaller or less than 0.05 ($0.001 < 0.05$), then H_1 is accepted, which means that there is an effect of using the module maritime English vocabulary for beginners on the results of maritime English vocabulary learning for cadets Batch V in the Nautical Department of West Sumatra Merchant Marine Polytechnic in 2021. This proves that learning modules can support the success of cadets' learning.

[Syafriyeti et al. \(2020\)](#) assume that the module is a learning guide that will direct all lecturer activities in the learning process and a substance of competence that should be taught to students. Suitable teaching materials are all forms of materials that can help organize a learning interaction. Modules, in this case, are teaching materials that are systematically arranged in language that is easily understood by students, according to their age and level of knowledge, so that they can study independently with minimal guidance from educators.

The use of modules in learning in higher education, as implemented at the West Sumatra Merchant Marine Polytechnic, aims to enable cadets to study independently without or with lecturers. So, lecturers act as facilitators, while cadets can maximize their competence to be active in learning. The maritime English vocabulary for beginners module can improve the results of cadets' maritime English vocabulary learning because it contains core vocabulary or core material that cadets must

master in the shipping field, especially in the Nautical Department. This is supported by the opinion of Afrila (2019) which reveals that the benefits of making teaching materials or modules can be felt both by educators and students. The benefits of the module for educators include: (1) assisting in the implementation of learning activities, (2) it can be submitted as an assessed work to increase educator credit scores for promotion purposes, and (3) increasing income for educators if their work is published. While the benefits of the module for students include: learning activities are more interesting and students get more opportunities to study independently with the guidance of educators.

The existence of the influence of the use of the maritime English vocabulary for beginners module on the learning outcomes of maritime English vocabulary for cadets in Batch V of the Nautical Department West Sumatra Merchant Marine Polytechnic in 2021 as seen from the results of the significance of the pre-test and post-test scores proves that the module is one of the teaching and learning materials that are suitable for use in maritime English courses. The cadets' vocabulary learning outcomes increase because they can learn on their own through the module and are more focused after being guided by the lecturer. This kind of learning is called the new paradigm of knowledge, which is student-centered.

Muhsin (2018) revealed that the paradigm of education and teaching has shifted from the old paradigm (teacher-oriented) to a new paradigm (student-oriented and integrated) which requires a change in the pattern of learning approaches, especially in English and English subjects. Generally, in language lessons, in the old method, the path to mastery of the field of science is oriented to the content of learning. At the same time, current learners emphasize the development of cognition, affection, and skills. Teachers are no longer just giving material but are more assigned as facilitators, motivators, and dynamic actors for students' academic and social development.

From the results of the research questionnaire, it can be explained that the maritime English vocabulary for beginners module is effective in the results of maritime English vocabulary learning for cadets. This is because the language and speech in the module are easy to understand, so cadets are increasingly interested in learning. This is in line with the opinion of Sawitri et al. (2017), which states that the language in the module is a communication tool to convey textbook material from textbook developers to students. Language determines the success of delivering the message. The correct language can facilitate understanding and cause or increase learning motivation.

The results of the research questionnaire analysis also concluded that the maritime English vocabulary for beginners module could motivate cadets to learn independently without the help of a lecturer because the vocabulary material presented has been grouped based on more specific units. According to Wahyuningrum (2019), the module must contain self-instructional characteristics, which means that a person or learning participant can teach themselves, not depending on other parties. To fulfill the self-instructional character, the module must; contains formulated objectives, contains learning materials that are packaged into small or specific units to facilitate complete learning; provide examples and illustrations that support the clarity of the presentation of learning materials; and contextual, namely the materials presented related to the atmosphere or context of the task and the user's environment; and use simple and communicative language.

Hasanah (2016) explains that learning will be effective if there is a process of construction and reconstruction of cognitive structures. This principle is in line with the thoughts reconstructed by students. The use of the maritime English vocabulary for beginners module in maritime English vocabulary learning explicitly refers to the process of cognitive rebuilding structures through the learning steps of clarifying the main concepts, namely the idea of learning Maritime English vocabulary, ship parts, steps for deepening the material which is structured and continued. by memorizing or practicing the language in each part of the ship to strengthen the cognitive organization.

Furthermore, learning will be effective if using the system. Learning is a systematic process through design, implementation, and evaluation stages. Three central components interact in this learning: lecturers, cadets, and learning materials through the maritime English vocabulary for beginners module.

The result of this research is that there is a significant effect of using modules in maritime English vocabulary learning. The positive response of cadets or I to the use of the maritime English

vocabulary for beginners module in maritime English vocabulary learning is also shown by Pathoni's et al. (2017) research results which show that the use of modules in physics learning is quite effective with an excellent category. This is because the modules used are by the competencies expected from the physics education study program curriculum. This is important to achieve the targets of lectures so that the quality of student learning can be improved.

Furthermore, the results of research from Lokaria (2016) explain that using modules in education can improve student learning outcomes in Biochemistry learning. There is a difference in the value of students who are taught using a module with students who are without a module. Furthermore, the activeness of students who were taught using the module was categorized as good, while students who were not taught using the module were categorized as moderate. So, the maritime English vocabulary for beginners module can also be said to be effective in learning English vocabulary because it can improve cadets' vocabulary learning outcomes.

CONCLUSION

Based on the study's results, it was found that the maritime English vocabulary for beginners module affected the learning outcomes of maritime English vocabulary for cadets in Batch V Nautical Department at West Sumatra Merchant Marine Polytechnic in 2021. Furthermore, from the results of questionnaire data processing, it can be concluded that using the module maritime English vocabulary for beginners in maritime English vocabulary learning is effective for cadets of the Batch V Nautical Department of the West Sumatra Merchant Marine Polytechnic in 2021. This research was carried out on Batch V Nautical Department cadets of the West Sumatra Merchant Marine Polytechnic. Based on this research, some suggestions that are appropriate from the results of the study can be put forward: The Head of Study Program at the West Sumatra Merchant Marine Polytechnic should direct each lecturer to do learning modules and develop learning modules such as learning modules in the Maritime English course that has been used in this research, namely the maritime English vocabulary for beginners module. This aims to make it easier for lecturers to deliver learning materials and make it easier for students to study independently at the home of the learning conditions due to the current Covid-19 pandemic. Then, other researchers who wish to research the use of modules in the teaching and learning process are expected to review existing research so that the aspects and preparation of the questionnaires are more relevant. Because in this research instrument, the researcher only focuses on the efficacy of using the module in general but has not explored in detail and depth how the level of point of a module is. So that assessing the effectiveness of a learning module can be a basis for analysis to conduct research and development of a module for the future.

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