THE EFFECT OF QUESTION-ANSWER RELATIONSHIP ON THE READING COMPREHENSION SCORE OF THE FIRST GRADERS OF SMK

Lilla Roosantie [4]

Abstract.
   The purpose of this study is to investigate the effect of applying Question Answer Relationship (QAR) in reading comprehension achievement This study is quasi experimental study with non-random assignment. Two groups (experimental and control) taken from two classes of Computer -Networking specialization were involved each group consists of 32 students. To control the internal threat the researcher put into consideration to sample selection, instrument and pre-testing. The data was collected based on the data collection procedure: selection the sample, preparing lesson plan, preparing instrument administering the pre-test, carrying out treatment, and administering the pot-test. The researcher compared and tested the mean score at the .05 level of significance determine whether the effect of the treatment was significant. The result of this research leads to a conclusion that the students taught using QAR achieved better scores in reading comprehension. In other words, QAR improves the students reading comprehension.

Keywords: reading comprehension

Introduction

   Language is one of communication tools used to understand and to express information, thought and feeling. It is also a media for developing science and technology. Teaching English in Indonesian schools deal with English as a foreign language. There are four skills in teaching language, namely; listening, speaking, reading and writing. Reading is one of language skills that should be mastered by students because there are many supplemented any books written in English.

   The syllabus for SMKN 1 Pungging stated that the purpose of reading is to search for information of what students read. The students are expected to comprehend the text books or passages written in English to underpin the material of their subjects. The expertise programs (computer net working, multimedia, machinery, welding and automotive) use many books as references to support the knowledge and skills related to technology development.

   Reading comprehension is such a process of constructing meaning from the text (Goeke, 2009) that will help students develop the

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knowledge, skills and strategies. They become proficient and independent readers. Students have difficulties on their reading comprehension because they do not know the process to find the information in the text. Additionally, Duffy, (2003: 9) argues that the lack of information about what to do and how to do will make students struggle with reading.

Raphael (1982) argues that teachers often assume that the students who have difficulties in answering question is because they do not read the passages carefully. They need to be taught how to analyze a question to find the correct answer. Therefore, they need to know how reading works. In the same thought, Swan, (2003) proposes that they must be taught strategy or the way how to sense of what they read to gain conceptual knowledge.

Students are reluctant during the reading comprehension class; they perceive reading as annoying, boring, or even painful learning activities. The others problems are that the students have some difficulties to figure out how to answer questions that need explicitly or implicitly stated information in the text as the answer and they do not spontaneously get detailed information to prop up their answers because they do not make sense or connection between what they know and the new information in the text. It is theoretically stated that background knowledge helps students confirm or reject the prediction about the topic of the reading.(G.Duffy, 2003; Birch, 2007).

This study purposes to determine whether QAR increases the teaching reading comprehension achievement of the tenth graders 0f SMKN 1 Pungging better than the RQO technique.

Question-Answer Relationship Overview

The Nature of QAR

The Question-Answer Relationship (QAR) is an instructional activity designed to help students work with a standard feature of reading: answering questions based on a text.he first categorization of question is text implicit. In this category, the information to answer the question is located in a single place in the text. The second one is text explicit. The information necessary to answer the question in the text, on the other hand the reader would need to engage in inferential thinking or make intertextual connection. The last category is script implicit. The answers in this type come from the reader's schemata. QAR strategy is comprehension strategies developed by Raphael in 1986.The purpose of QAR strategy is to increase the students' awareness of the necessary information to answer reading comprehension questions can be found. The QAR strategy helps students building schema on how to answer reading comprehension questions by providing an organizational framework that helps   visualize whether the answers can be found in the text or in their head.

The Research Design

The research design applied to this study is quasi experimental research with non-random assignment this design was selected under consideration that the study involves the available classes without grouping them randomly before. It was impossible for the researcher to randomize the groups because of the administrative problem; the school had a fixed schedule. It denoted that the researcher cannot restructure the class to accommodate the researcher's study.

There were two groups, namely experimental and control group. Both of groups were treated differently. The experimental group was taught QAR and the control one was taught Reading-Question only.

Pre-test was administered to both the experimental and control groups before the treatment was given. The pre-test was concerned with reading comprehension. It became starting point of collecting data. The treatment followed the pre-test. Post-test was the final stage of the data; it was administrated to both groups after applying treatment. The researcher compared and tested their mean scores at the, 05 level of significance to determine the effect of the treatment.

The following is the structure of the research design as suggested by (Fraenkel,Wallen, 2007)

Table 1
The Research Design

Group	Pre-test	Treatment	Post-test
Experimental Group	Y 1	A	Y 2
Control Group	Y 1	B	Y 2

Notes:

The experimental group is a group consists of students who are taught reading using QAR.

The control group is a group consists of students who are taught reading using Reading-Question Only or currently used teaching reading. The students were asked to read a text and answer a series of questions as a follow up.

Y 1 is the pre-test given before treatment

Y 2 is the post-test given after the treatment

The Treatment

The treatment or experimental group (n=32) of this study was taught using Question Answer Relationship strategy in reading comprehension activities. On the other hand, the control (n=32) group was exposed to Reading - Question Only technique as the regular classroom reading activity.

Table 2
The Differences between QAR and the Reading-Question Only in Teaching Reading

Aspects	QAR	Reading-Question Only
Reading Cycles	Before During After	After
Questions type	The questions can be generated both by teacher or students. There are four types of questions based on the location of information. 1. On My Own 2. Author and Me 3. Right There 4. Think and Search	The series of questions provided by the book without considering the level of comprehension.
Questions generating	Teacher and students	Teacher
Purpose of Reading	- To locate the information asked. - To know students' comprehension	To know students' comprehension

The Teachers

The researcher asked two English teachers to collaborate to this study. Both of them have taught English for five years. They graduated from the same University.

The Instructional Reading Materials in the Treatment

The two-groups were provided the same material in teaching reading comprehension. Consequently, 14 passages were used in this study. The-two groups were controlled by Lesson Plan arranged by the researcher. The Lesson Plan consists of the same reading materials but different teaching technique of reading.

Population and Sample

The population of the study was the first graders of Computer Networking specialization. There were 3 classes. The samples were X TKJ 1 class and X TKJ 2 class. Each of the class consists of 32 students.

Controlling Internal Treats

The selection of the sample

In term of sample selection, both groups were chosen from the same computer net working specialization had been listed first and had to full fill some requirements needed before they were determined to join computer networking program.

Instrumentation and Pre testing

The researcher applied the different Lesson Plan to both groups to avoid unplanned events during the research process. The Lesson Plan applied to the experimental group described teaching reading comprehension using QAR. But, for the control group, the researcher applied Lesson Plan teaching reading comprehension using RQO as current teaching technique.

Dealing with the test, the researcher constructed the same test for both pre-test and post-test administered to both experimental and control group. The test had been tried out before it was tested to both groups to check its validity and reliability of the test.

The Research Instrument

The reading comprehension test was divided into two sections; they were multiple choice and essay-typed items. The multiple-typed item consists of four options with one correct answer. This pre test and post test asked students to read silently a series of short passage and respond to written Multiple Choice reading comprehension question for each passage. The researcher also provided the scoring for essay type test and generating question.

Data Analysis Technique

The writer compared the gain score of the experimental and control group. The T-test formula was used to find out whether there were a significant difference or not of both groups. The calculation was applied to both to know the students' reading achievement and students' generating skill.

Data Presentation

Table 4
The Mean and Standard Deviation of Pre-Test and Post Test of Experimental and Control Group

Group	N	Mean		Standard Deviation	
		Pre-Test	Post-Test	Pre-Test	Post-Test
Experimental	32	61.56	83.98	10.697	6.119
Group	32	61.64	62.66	14.193	12.778

From the table above, it can be seen that the mean of the pre-test of experimental was lower than the control group. The mean of pre-test scores in both groups were almost the same, with the difference only 0.08. It became the basis of the use of t-test to analyze the data or to test the null hypothesis. To prove that there is no significantly difference between the means of pre-test between the experimental and control group, the statistical computation was done by using t-tests as well. The result calculated by SPSS Statistics 17.0 showed that the Sig. (2 tailed) value is 0.980 .This value is greater than 0.05. It means that the students; QAR was taught to the experimental group while RQO was taught to the control group.

Meanwhile, the means of the post-test obtained after the treatment between the two groups based on the table above are different. The mean of the experimental group in the post-test is 21.32 higher than means of control group. To test the hypothesis and answer the research question, the statistical calculation was done and the result is further discussed in Hypothesis Testing.

Hypothesis Testing

Hypothesis testing was done to find out whether the null hypothesis had to be accepted or rejected. The students of experimental group achieved better score if result of t-test is higher than the table t-test on the level of significance of 0.05 or 5%. To test the null hypothesis, the t-test was computed using SPSS Statistics 17.0 and its result could be presented in the following table:

Table 5
The Result of t-test using SPSS Statistic 17.0

Group	N	Mean		Standard Deviation		t-value	t.05
		Pre-test	Post-test	Pre-test	Post-test		
Experimental	**32**	61.56	83.98	10.697	6.119	10.083	1.684
Control	**32**	62.64	62.64	14.193	12.778		

Based on the table above, the t-value of the experimental and the control group showed 10.083 which reflects that the t-value is higher than the t-table with level of significance 5%. The null hypothesis was rejected. Consequently, the alternative hypothesis was accepted. It means that the use of QAR as reading strategy could help the students to achieve better score.

In addition, the result of the investigation of generating question deals with the mean score of pre-test in generating question which is 11. 437 and the mean score of the post-test is 22.256. This study proved that the mean score of post-test in generating question in reading comprehension is 11.437 higher than pre-test mean score. Therefore, the

null hypothesis was rejected. Consequently, the alternative hypothesis was accepted. It means that the use of QAR as reading strategy could help the students to perform better in generating question.

Discussion

Based on the complete t-test calculation, the result of the study had proved that the null hypothesis was rejected. It could answer the research question that QAR increased the reading comprehension achievement better than the RQO. In other words, the use of QAR as a reading strategy gives significant improvement on the tenth graders reading comprehension achievement.

The reason why the experimental group got higher score in post-test; it is as the result of the effect of treatment which the control group did not experience. The result of this study proved that the difference of the gain between pre-test and post-test of experimental group is significant.

Moreover it referred to the calculation result in comparing mean score of pre-test and post-test in generating questions, the result of the study had proved that the null hypothesis was rejected, and it could answer the research question that QAR promotes better the reading comprehension questions generating skill than the RQO. In other words, the use of QAR as a reading strategy gives significant improvement on the tenth graders generating question skill.

As a final point, the control group was not asked to generate questions related to the reading comprehension activity. (G.Duffy, 2003) claimed that generate questions not only helps proficient readers deepen their understanding of the text but also help them to learn how to learn. Questioning is a process of talking to oneself about whether the meaning makes sense or not.

Conclusion

The conclusions present to research questions. It concludes that the findings of the research question whether QAR increase the reading comprehension achievement than the RQO. The hypothesis testing proved that the null hypothesis was rejected. It means that the tenth graders taught QAR achieve better score than those taught RQO. It was proven by the result of the statistical computation of t-test calculated by SPSS Statistic 17.0. It was found that the result of t-value (10.083) was greater than the t-table (1.684). This result shows that the null hypothesis was rejected since t-data > t-data.

It can be concluded that the alternative hypothesis was accepted and null hypothesis was rejected. In other words, the tenth graders taught QAR achieve better score in reading comprehension than those taught Reading Question Only. QAR, as reading strategy, is effective to improve the students' reading comprehension achievement.

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THE EFFECTS OF VOCABULARY MASTERY
ON COMPREHENDING MARITIME ENGLISH TEXTS:
A CASE STUDY OF SEAFARERS OF NAUTICAL CLASS

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Abstract.

   To comprehend the larger units of text such paragraphs and stories, the seafarers have to understand first Maritime English (ME) vocabulary. The types of ME vocabulary can be divided into core vocabulary type, semi-technical vocabulary type, and maritime and/or technical vocabulary type. This case study involves eight (8) seafarers of nautical class at Merchant Marine Academy who were investigated in around six sessions of meeting. Maritime Vocabulary Mastery Test, classroom observation, questionnaire, interview and reading comprehension texts were the techniques to gather data to answer the research questions. The result found that the seafarers who had mastered the three vocabulary types indicated that they could perform better in comprehending ME texts than those who only mastered semi-technical and core vocabulary type. While, those who had only mastered core vocabulary type and those who had not mastered the three vocabulary type encountered more difficulties in comprehending ME texts because understanding ME texts requires both specific and general meaning of words. The more seafarers have mastery on the three types of maritime vocabulary, the less they encounter difficulties in comprehending ME texts.

Keywords: vocabulary mastery, reading strategy, maritime English texts, seafarers, case study.

Introduction

   The fast growing shipping industry increases the need of the numbers of seafarers. One of the qualifications to be a qualified seafarer is having capability in language. The International Maritime Organisation (IMO) has officially promoted English as the language of the sea in the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW 78/95 Convention and Code). It means seafarers especially those who work in multinational working environment are expected to master the language, that is Maritime English (ME), which is the language used on board (sea speak). To be able to master ME, the seafarers especially those who are working for the Deck Department should encounter a large amount of subject-specific core vocabulary. One of the important skills that the seafarers need here is

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the ability to read comprehensively the information text, including the Maritime English texts. However, many seafarers still encounter difficulty on comprehending such texts. Students and instructors' report showed that the student officers had difficulty with their comprehension such as understanding written instructions on everyday shipboard activities.

The knowledge to solve any reading comprehension of maritime English texts here demands the decoding of linguistic signals which is called *linguistic schemata* (Ostrowska and Ryan, 2009), which includes the learner's knowledge of vocabulary. The seafarers should know all the types of vocabulary because the knowledge of these vocabulary types may have great influence to the seafarers' comprehension to the texts and to use the language appropriately. In fact, most of seafarers have different ability in comprehending maritime English texts because of their different mastery on Maritime vocabulary types.

Nation (1983) states that vocabulary knowledge can be used as an important indicator to predict learners' overall readability, the result of which may reveal that the increase of lexical familiarity (vocabulary mastery) could improve one's reading performance. It can be said that weak vocabulary knowledge may handicap one's reading comprehension. That statement is supported by Hancock (1998, p. 69 in Ming Chou, P.T. 2011), who believes that in reading, "Comprehension involves understanding the vocabulary, seeing relationships among words and concepts, organizing ideas, recognizing the author's purpose, evaluating the context, and making judgments." In other word, the knowledge of vocabulary plays the essential role in reading. When seafarers posses the knowledge of vocabulary, they may be more aware of the register of the word (e.g. being able to differentiating the general English words from the Maritime one). Also, it can be concluded that the seafarers with large vocabularies are more proficient than those with limited vocabularies.

When a person wants to comprehend reading, s/he should have vocabulary mastery which means s/he has a large amount of knowledge of vocabulary. A recent study by Ratnawati (2006) showed that the coefficient correlation between vocabulary mastery and reading comprehension is 0.417. It means that there is a significant correlation between the vocabulary mastery and reading comprehension. She also suggested that to have a good mastery of reading comprehension, a learner should have a good mastery of vocabulary. In this sense, the researcher believes that when seafarers are able to master all types of maritime vocabulary well, they will have a great possibility to comprehend reading of maritime English texts well.

Statement of the Problems

In connection with the title and the background of this study, two research questions are raised as follows:
1. What types of maritime vocabulary have the seafarers mastered?
2. How does the vocabulary type mastery affect the seafarers in comprehending maritime English texts?
3. How is the seafarers' comprehension on the maritime English texts?

Research Methodology

The Subjects

The subjects of this study were the seafarers of nautical class who took three months study on level V in Merchant Marine Academy in Surabaya for upgrading education. One class was chosen randomly among five classes of the same level in Merchant Marine Academy. Two persons from each level of mastery on vocabulary types were chosen randomly based on their result on vocabulary size test. The subjects were in the age ranging from 20 to 45 years old and had different background of education (some graduated from senior high school and some other from junior high). All the subjects were also male.

The Research Data

To answer the first research question, the information about what type of vocabulary that the seafarers had mastered were called from the result of Vocabulary Mastery Test. To answer the second research question, the information about how the vocabulary mastery affects the seafarers on comprehending reading are called for the soft data, that is the information collected from the result of interview and classroom observation, and the printed data, that is the scale of questionnaire of reading strategy. Then, to answer the third research question, the information about the effects of seafarers' vocabulary in their reading comprehension of maritime English texts were called for the soft data, that is the information collected from the result of interview and classroom, and the printed data, that is the scale of questionnaire of reading strategy.

The Research Instrument

Maritime Vocabulary Test

The Maritime vocabulary mastery test used was made by the researcher which the format was adapted from the format test of Nation (1983) and originally called as Vocabulary Levels Test. In this study, the test was divided into three types, namely the core-vocabulary type, the semi-technical vocabulary type, and the technical or maritime vocabulary type. Each type consisted of 18 words. The test of the three types of maritime vocabulary also consisted of more than 40 comprising maritime

words that were suited with the four categories: high frequency words, academic words, technical words, and low frequency words. All the words on vocabulary level tests were taken based on Maritime English words used as teaching material and navigational tasks. While the form of the test was divided into three section.

Reading Comprehension Texts

Reading comprehension text was constructed by the researcher and tried-out 2 (two) weeks before it was administered to the students. The text contains some items of multiple choice-test (consisting of 5 questions) and answering questions test (consisting of 5 questions) for each text based on the content of the maritime English material on the standard book of maritime education and the syllabus. Four descriptive texts entitled "*The General Cargo Ship*", "*The Bulk Carrier*", "*The Container Ship*", "*The RORO Vessel*", taken from the software of Maritime English materials (MarEng Learning Tools) were chosen for reading comprehension test because the texts contained some sets of maritime vocabulary and the text demanded the subjects to identify the main ideas of paragraph, the detailed information and the meaning of unfamiliar words, and infer the text and interpret the sentences in the text.

The reading comprehension texts contained both objectives and essay type items, under consideration that the subjective items have the advantage of measuring language skill naturally (Madsen, 1983, p.8 in Ekowati, 2013) and the objective items can be scored quickly and consistently (Hughed, 2002 in Ekowati, 2013).

Questionnaire

The questionnaire developed by Kouder Mokhtari and Ravi Sheoray (2002) was adopted with some modifications. This SORS (Survey of Reading Strategy) is used to collect the data concerning the subjects' reading strategies when comprehending texts. This SORS was taken because it emphasized the importance of cognitive and metacognitive awareness in L2 reading (Sheoray and Mochtary, 2001). A thirty-items statements from questionnaire was administered for 30 - 45 minutes.

Interview Guide

The interview guide consisted of guiding questions; seven main questions and some supporting questions for probing. The questions of the interview were adapted from Qian's (1998) questions. Any other questions will be suited for the participants.

Observation guide

There was observation guide consisted of sixteen items to guide the check list of what happened in the classroom and note taking for the unpredictable events done by the participants. In the observation, the researcher sat in front of the class to observe and record the reading process. This direct observation was expected to provide the data that may not be found through test or interview such as the seafarers' attitudes and how they behave on comprehending ME texts.

Data Collection Procedure

The main framework of research design was the combination of quantitative and qualitative methods, relying on a case study. The data for this study were collected on the basis of the subjects' performance on vocabulary mastery test, observation, questionnaire, interview and reading comprehension task. The quantitative data which were elicited through Maritime vocabulary test and reading comprehension text were designed to evaluate the causal effect and offers the information of what the participants knew and did not know of the related words. In this study, the researcher used one and a half months (around six meetings) to know the seafarers' difficulty and how they used their vocabulary mastery on the process of ME texts comprehension.

To answer the first research question, vocabulary mastery test was administered. The test was used to identify the Maritime Vocabulary type the seafarers had mastered. To answer the second research question, the data were collected after the subjects finished the reading comprehension task. The subjects were asked to fill questionnaire by choosing the most suitable answer which represented what they actually did during the comprehension process. The researcher helped the subjects by translating the items of questionnaire. To gain the deeper information about the understandings on how the subjects used their vocabulary knowledge, strategy and the sources of knowledge they use in the process of comprehending the texts, the interview session was conducted. The data from the interview session was also meant to know the effects of mastering vocabulary on comprehending maritime English texts from the participants' perspective for each vocabulary type. Besides, the purpose of conducting interview was to know how the seafarers used their vocabulary mastery on comprehending ME. To answer the third research question, the data were collected after the researcher observed the process of reading comprehension of ME texts in the classroom. The researcher instructed the seafarers about their processs of comprehending ME texts. To know the effects of seafarers' vocabulary mastery in their reading comprehension of maritime English texts from the participants' perspective for each vocabulary type, the result of questionnaire, observation, interview and reading comprehension task were collected.

Finding and Discussion

Vocabulary Mastery

A test was administered to students under study to classify their mastery on vocabulary types. For each vocabulary types, the students had to score at least 12 correct answers of 18 items or 70% of 54 points for all the three vocabulary types. If the students scored 12 or even less, it was an indication that this vocabulary type had not been mastered.

From those three types of vocabulary, two students from each vocabulary types along with the other two students who had not mastered the three vocabulary types were chosen as the subjects of this study. They were chosen to be selected and interviewed under consideration that their score on vocabulary mastery test could represent the seafarers' mastery on each vocabulary type. Moreover, there were only eight of 30 students as the subjects because it was not possible for the researcher to observe all the 30 students at the same time.

Figure 1
Students' Percentage on Vocabulary Type
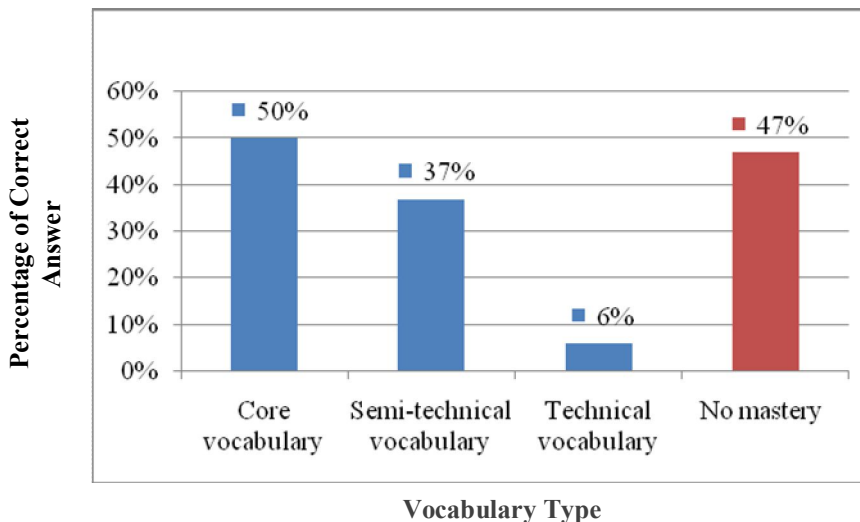
Based on the description above and the percentage of students on vocabulary type in figure 1, it can be concluded that core vocabulary type had been mastered by 50% students or 15 of 30 students, semi-technical vocabulary type had been mastered by 37% students (11 of 30 students), and technical/ maritime vocabulary type had been mastered by 6% (two of 30 students). While 30% students or 10 of 30 students were considered to have mastery both on core vocabulary and semi-technical vocabulary, and 47% students (14 of 30 students) were considered to have no mastery on the three vocabulary types. Since the study was qualitative case study, random sampling was not practically possible in its real sense.

Table 1
Students' Mastery on Each Vocabulary Type

Vocabulary Type	Students' Number 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Core-Vocabulary	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
Semi-Technical	■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ■
Maritime vocabulary	■ ■

Referring to the Table 1 above, it seems that such vocabulary types had not been mastered well by most students. The numbers of students who had mastered the three types of vocabulary were far less than the students who had not mastered the three types of vocabulary. Whereas, these types of vocabulary are the essential part that are really needed by the students to comprehend texts, especially maritime English texts. Having sufficient L2 vocabulary is an essential component for successful second language learning (Hsueh-Chao & Nation, 2000).

The Process of Comprehending Maritime English Tests

Seafarers' Reading Strategies

Referring to the result of reading strategies used by the subjects, the researcher found that the subjects who had mastered the three types of maritime vocabulary differently had different reading strategies. The findings indicated that students who had mastered technical vocabulary type tended to use global strategy than problem solving and support strategy. It was shown that the overall score was high, up to 3.5. Based on the score on Reading Strategy Questionnaire, the score up to 3.4 is considered high, 2.4 up to 3.4 is considered moderate and score 2.4 or lower is considered low. It means the subjects used the strategies more often to understand the information of the texts in comprehending the maritime English texts.

The findings also indicated that subjects who had mastered semi-technical vocabulary type tended to use global strategy and problem solving strategy more often than support strategy. The subjects who had only mastered core vocabulary type tended to use problem solving strategy more often than global strategy and support strategy when comprehending maritime English texts. While the subjects who had not mastered the three types of vocabulary only used support strategy to help them understood the content of readings.

During the process in comprehending texts, the subjects needed strategy to understand the texts. Reading strategy influences the readers' reading process of how they manage their cognitive activities and

linguistic resources to achieve comprehension before, during, and after reading, especially when encountering comprehension problems (Maghsoudi, et al, 2008). Based on the result of reading strategy questionnaire above, together with the result of observation and interview, the subjects' strategies on comprehending ME can be classified as follow:

a. Global Strategy

The strategies used by subjects during comprehending ME texts can be classified into global strategy as: reading with a purpose, taking overall view, deciding what to read closely and what to ignore, using context clues and typographical features, checking understanding, and guessing the content of the text.

b. Problem Solving Strategy

The strategies used by subjects during comprehending ME texts which can be classified into problem solving strategy are: reading the text slowly and carefully, trying to get back on track, and guessing the meaning of unknown words or phrases.

c. Support Strategy

The strategies used by subjects during comprehending ME texts which can be classified into support strategy are: taking notes while reading, reading aloud the text, using reference materials, and paraphrasing or restating.

Subjects' Difficulties in Comprehending Maritime English Text

There were two typical areas of subjects' reading difficulty:

1. The factors that influence the students' difficulty and knowledge of Maritime world, namely: low motivation, memory of vocabulary, insufficient vocabulary knowledge of general English, and learners' age.

2. The subjects' difficulty during the process of comprehension maritime texts

The result of present study indicated that the breadth and the depth of vocabulary (Anderson and Freebody, 1981), were part of subjects' difficulties in comprehending Maritime English (ME). Those subjects' difficulties on comprehending maritime English texts can also be identified based on items: (a) unfamiliar words, (b) lack of vocabulary knowledge, and (c) polysemy.

Seafarers' Comprehension on the Maritime English Texts

I. The Seafarers' Vocabulary Mastery on Maritime English Texts

a. Subjects who had Mastered Technical Vocabulary Type

Subjects who had mastered technical vocabulary type tended to master semi-technical vocabulary type and core vocabulary type. This made them encounter more vocabulary knowledge that might help them much when they needed to recall it. In pre-reading activity, these subjects used to set up a purpose of reading or decide what to read closely or to

ignore. They also easily decided to attend the text from the overall meanings (top down strategy) or from the smaller unit of text, that was word or phrase (bottom up strategy).

The result of classroom observation and interview indicated that they were able to perform significantly faster and more accurately on the response-time questions. The more vocabulary type the subjects had, the more they took advantages during comprehending ME texts. Therefore, these subjects were found to easily translate and know the meaning of words in the text. With their vocabulary mastery, they: 1) were more aware of the register of word, either general English or maritime English, 2) knew how word changed its form, and 3) were able to differentiate the specific meaning from the general one which could be used in several contexts. They also had better score after the reading task. Moreover, they thought that there was positive washback effect of reading comprehension.

b. *Subjects who had Mastered Semi-Technical Vocabulary Type*

Subjects who were considered to have mastered semi-core vocabulary type performed better in reading comprehension maritime English texts than those who had mastered core vocabulary type or those who had not mastered the three vocabulary type, but they could not perform better than those who had mastered technical vocabulary type. In pre-reading activity, these subjects were also able to set up a purpose of reading or decide what to read closely or to ignore. They also easily decided to attend the text by the top down strategy or the bottom up strategy. However, because they had not mastered the technical vocabulary, they often met difficulties, especially those related to technical vocabulary.

During the reading, the text could be difficult for them. The subjects considered that the texts contained long sentences in which the subordinates or embedded clauses tend to be less intelligible. Those who had less mastery on the three vocabulary types encountered more difficulties because they had to struggle with many unknown words in those long sentences.

Sometimes the subjects who had mastered semi-technical vocabulary type encountered less difficulty in comprehending texts because of their vocabulary knowledge, but they still encountered problem in comprehending texts. The subjects might decode most words in the sentence accurately but they did not know what the words actually meant because of their poor comprehension. Comprehending requires comprehensive knowledge of English and its vocabulary to be applied to any specific context. In example of the interview transcript below shows that the subject who had mastered semi-technical vocabulary type had difficulty on comprehending the sentence although he knew most of the meaning of words.

(Text: RORO ships have huge stern (or bow) doors which are lowered to make a bridge from the ship to the wharf.)

Y2 : Ehh…the rooms have… eh..doors..front doors…to make longitudinal strength on the front part of ship. Ehh..I mean here that the RoRo vessel has some big doors on the front part of ship. No…the doors are in the place of the ship steered from. And can be lowered. (Transcript 1)

The result of classroom observation indicated that subjects who had mastered semi-technical vocabulary type almost did the same things of the sixteen items on checklist as the subjects who had mastered technical vocabulary type. During the reading comprehension, they read the direction first, finished the reading first before taking note, demonstrated smooth and clear oral reading, and paid attention to the reading material. They neither consulted dictionary or notes for the difficult words nor asked their friends, but they preferred to ask the unknown words to the related instructor. They also did not look confused before and during the process of reading comprehension. Compare to those who had mastered technical vocabulary type, these subjects who had mastered semi-technical vocabulary type took notes more often during reading comprehension.

c. *Subjects who had Mastered Core Vocabulary Type*

During pre-reading activity, the subjects who had mastered core vocabulary type encountered more difficulty than those who had mastered semi-technical and technical vocabulary type because of the lack of vocabulary knowledge. They seemed to look confused before doing the reading.

During reading, readers should be able to read with maximum speed they have. These subjects had difficulty in deciding the main idea of paragraph. It was because they did not know the meaning of many words. Also, from the classroom observation it was found that these subjects did not scan the text. When starting to answer questions based on the text, the subjects read the whole sentences, from the first paragraph to the last. They read the text more than once before going to the questions. Then when they tried to answer the questions, they read the text again and again because they could not find the main points of the sentences. They tended to do the reading task slowly because they had to stop from time to time to think the unknown words. The result of classroom observation and interview also indicated that they performed less accurately on the response-time questions. As a result, after the reading they could not reach more than 50% of correct items.

d. Subjects who had not Mastered the Three Vocabulary Type

The subjects who had not mastered the three types of maritime vocabulary did almost similar things with those who had only mastered core vocabulary type. On pre-reading activity, they seemed looked anxious and confused before and during conducting reading comprehension of maritime English texts. While on the process of reading, they tended to do the reading task slowly. When they met unknown words or texts became difficult, they tended to restate them into Indonesian. They frequently consulted dictionary or notes when they met difficult words but they never took notes on the reading. They also frequently asked friends for the difficult words or sentences and the answer of questions. Therefore, they paid less attention to the reading material because they encountered many unknown words. Example below indicates how the subject did his task:

T14 : Ehm. I stopped reading when I found the difficult words.
R15 : Why was that?
T15 : To understand what I read, Ma'am. Sometimes if I didn't get the
            Information I repeated reading. (Transcript 4)

Moreover, those subjects would feel bored easily than those who had mastered the vocabulary type. They had to struggle a lot on comprehending reading. They felt that the material was too hard because their vocabulary knowledge was not sufficient yet to comprehend the texts.

As the learners who had mastered core vocabulary type, the subjects who had not mastered the three vocabulary type also had difficulty in identifying the main idea of paragraph during reading comprehension process. It was because they did not know the meaning of many words. From the classroom observation it was also found that these subjects did not scan the text. When starting to answer questions based on the text, the subjects read the whole sentences, from the first paragraph to the last. They read the text more than once before going to the questions. Then when they tried to answer the questions, they read the text again and again. The result of classroom observation and interview also indicated that they performed significantly slower and less accurately than those who had mastered core vocabulary type on the response-time questions.

The result of interview and observation indicated that they were weak in memorizing new words. This might reduce the use of new vocabulary in situation outside of the Maritime English lesson, so that there was no positive 'washback effect' as the leading factor in comprehending Maritime English texts or other texts. Moreover, after the reading they could not reach more than 50% of correct items in reading comprehension texts.

II. The Seafarers' Comprehension on Maritime English Texts

The result of students' performance on reading comprehension texts are presented in Table 2 below.

Table 2
Subjects' Performance on Maritime English Texts

Student Number	Student's Mastery	Total Correct Items							
		Text 1		Text 2		Text 3		Text 4	
		O	*S*	*O*	*S*	*O*	*S*	*O*	*S*
4	Technical vocabulary	4	4	4	5	3	4	1	5
27		5	4	4	2	3	3	2	4
1	Semi-Technical Voc.	2	5	3	2	2	4	4	3
9		3	5	4	3	3	3	2	3
20	Core Vocabulary	4	4	2	3	2	3	0	2
29		2	3	4	1	2	4	2	3
11	No mastery	1	2	1	3	2	3	1	4
12		3	1	1	0	2	2	2	2

Note: O = total correct answers of objective type items
 S = total correct answers of subjective type items

Table 2 above shows that the subjects who had mastery on technical vocabulary or semi-technical vocabulary type had more correct items on reading comprehension text than those who only had mastery on core vocabulary type. However, when the technical vocabulary type, semi-technical vocabulary type and core vocabulary type had been mastered by the subjects (student number 4 and 27), they could have better score. In other word, they had more correct items. In contrast, the students who had not mastered the three types of vocabulary had fewer correct items.

If the students had mastered the three types of vocabulary, they could have better understanding in reading comprehension. The subjects had better comprehension in answering the questions based on Maritime English texts. It is showed by the total correct items they got in each Maritime English text. The subjects were able to score more than 50% points of the correct items or more than 5 of 10 items constantly on four Maritime English texts. While those who had mastered semi-technical and core vocabulary type had less stable scores. Those subjects got more than 50% of correct items for one or two texts but for the rest of the texts they got less than 50% of correct items.

Conclusion and Suggestion
Conclusion

The primary concern of this case study was to investigate the types of vocabulary mastered by the seafarers, how the vocabulary type mastery affected them on comprehending Maritime English texts, and the seafarers' comprehension on maritime English texts. In short, seafarers who had mastered the three vocabulary types -technical, semi-technical and core vocabulary type - indicated that they could perform better in

comprehending maritime English texts than those who only mastered semi-technical and core vocabulary type. As Schmitt (2000) said: "One of the keys in learning a foreign language is mastering the second language's vocabulary." Even in the reading, a person still can read although they have limited grammar and schemata, not when they have limited vocabulary. So, it would be impossible if a person learns a language without mastering vocabulary.

Those who had only mastered core vocabulary type and those who had not mastered the three vocabulary type encountered more difficulties in comprehending ME texts because understanding ME texts requires both specific and general meaning of words. Nation (1993: p. 120) said: "In order to be successful in academic studies, it is necessary to be familiar not only with the high frequency words of English but also with the general academic vocabulary that is common to many academic disciplines". It means that reading comprehension is also dependent upon vocabulary size. If the seafarers mastered the three vocabulary types, they would not experience difficulties in comprehending the message or information from ME texts. Thus, the more seafarers have mastery on the three types of maritime vocabulary, the less they encounter difficulties in comprehending ME texts.

Therefore, the seafarers need to read some maritime texts more inside and outside the lesson, choose and use the effective strategy which can improve the comprehension in reading ME texts. They should improve their vocabulary knowledge and have mastery on the three types of vocabulary on maritime vocabulary. While the maritime English instructors should develop insights of how students use vocabulary to comprehend the texts by having better understanding of some difficulties that students might encounter during the process of vocabulary use. They should know the Maritime terminology, terms related to vessel, how to distinguish the different types of vocabulary items, and to select the words which have to be focused more in teaching. Also, they are expected to have ability in selecting suitable methods and media in teaching Maritime vocabulary. The syllabus used should provide enough academic hours so that the seafarers can obtain more competence in maritime English vocabulary in the long term. The syllabus should also provide sufficient vocabulary knowledge that suits the learners' needs so that they can comprehend maritime English texts well. Matriculation should also be conducted before the student officers attend class sessions to provide sufficient background knowledge of the target maritime vocabulary. This matriculation is also meant to make the student officers who are of different educational background be in the same level of knowledge on maritime English so that they know and are able to differentiate the three vocabulary types.

However, this study could not identify all relevant factors in maritime vocabulary mastery and reading comprehension process. Therefore, for the future researchers who plan to conduct the study on

vocabulary mastery on maritime vocabulary and reading comprehension need to review more theoretical explorations to support their studies. The future researchers need to elicit not only quantitative but also qualitative data in their researches since vocabulary mastery and the process of reading need metacognitive and cognitive activity. They also need to pick up more words in term of their type and features since the words brought in this study were only a small numbers of maritime vocabulary and selected based on the texts used. Finally, unlike this study which only involved eight students of nautical class at Merchant Marine Academy, further studies should involve bigger samples to enable their finding generalizable.

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