The Effectiveness of Learning Models and Achievement Motivation for Students’ English Reading Comprehension in a State University in Medan

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This study aims to determine: the effectiveness of learning models and achievement motivation for English reading comprehension. This research was conducted on PGSD FIP UNIMED students at the Jln. William Iskandar Pasar V Medan Estate. The instrument used in this study was a test and observation. Samples were taken from two classes totalling 78 students. The research method was using quasi experiment with 2x2 factorial design, data analysis technique was using Anava 2 paths. The results of the study are as follows: 1) English reading comprehension of students who are given a PQ4R learning model is higher than the SQ3R learning model; 2) There is a significant influence between reading comprehension of students who have low and high achievement motivation. 3) There is no interaction between PQ4R and SQ3R Models and Motivation having achievements in understanding students' English texts.

Key words: Learning model, PQ4R, achievement motivation, English.

Introduction

The development of information and communication technology has opened the way for everyone to be able to communicate with anyone from various parts of the world. The readiness of the people using technology usually is supported by their understanding of English (Panday & Purba, 2015). Therefore, mastering English is one way to deal with
developments in the international world. Mastery of English is very important because almost all global sources of information in various aspects of life use English (Durand & Barlow, 2003). In the globalisation era, the government realises the important role of English and human resources who have the ability to communicate in English. Human development is done through education and training, by using technologies in the form of competency improvement of the competencies and skills of teachers and also of the students and other education staff inside the institution (Purba & Panday, 2015).

Language is something that is very important for human life. Language means communicating, and without language a person cannot communicate with others. In the globalisation era, English is very important skill that must be possessed by students and professionals, because English is an international language. In the era of globalisation, most quality manuscripts and literature use English. To achieve this goal, language has an important role because language enables humans to interact and communicate, share experiences, learn from others, and improve intellectual abilities. Language has a central role in the intellectual, social, and emotional learning, And supports success in learning in all fields of study. Language learning is expected to help students know themselves, their culture, and the culture of others.

Language learning in schools has experienced a lot of information on strategies, methods, techniques, and various approaches that aim to improve the quality of English learning. English is a tool to communicate verbally and in writing. Communicating is understanding and expressing information, thoughts, feelings, and developing science, technology, and culture. The ability to communicate in the fullest sense of discourse is ability, namely the ability to understand and produce oral or written texts that are realised in four language skills, namely; listening, speaking, reading and writing. The focus of this research is reading. Reading is an activity to understand ideas, expressed or implied in reading that involves the collaboration of several components of language skills (Ahmad, 2010). The most important thing in reading is the ability of a person to comprehend the meaning of reading as a whole, which is called reading comprehension ability. In the opinion of (Sumardoyo, 2011) reading comprehension is a process of acquiring meaning that actively involves the knowledge and experience that is owned by the reader and is related to the content of the reading. In reality, especially in PGSD, FIP UNIMED, learning English, especially reading comprehension, is still low. Thus, research is needed to improve students' reading comprehension. The success of student learning processes needs to be improved by using interesting methods so that learning English is not boring.
Literature Review

Understanding of Reading Comprehension

Reading is a cognitive process, (Rahim, 2008) stated that reading is an intended processing of information from text, and the knowledge possessed by the reader has a major role in shaping meaning (Krisna, 2016). Reading is one of the four aspects of language skills namely listening, speaking, reading, and writing. Reading as a process because one of the essential steps is in spoken language (Dalman, 2013). Reading comprehension is the highest ranking skill. Reading comprehension is reading to understand. Therefore, after reading the text, the reader is expected to be able to convey the results of their reading comprehension by making a summary of the contents of the reading using their own language skills and conveying it both orally and in writing. Reading comprehension is a complex thought process for building a certain amount of knowledge (Adawiyah, et al, 2013). Successful readers can comprehend the text well if they are able to: 1) recognise words quickly, 2) analyse unfamiliar words, 3) read for meaning, concentrate or constructing meaning, 3) guess about the meaning of text, 4) distinguish the main ideas of the text (Shih, Aebersold, & Field, 1997).

Reading comprehension as a thought process through which readers become aware of an idea, understand it in terms of their experiential background, and interpret it in relation to their own needs and purposes, means that successful readers can understand the text well if they are able to four parts of reading. These four parts are: 1) recognising words quickly, 2) analysing foreign words, 3) reading for meaning, concentrating or constructing meaning, 3) guessing about the meaning of the text, 4) distinguishing the main ideas of the text (Kennedy, 1997). Reading as an active skill that constantly involves guessing, predicting, and asking oneself question. Good reading requires good thinking. Reading is not only pronouncing the printed letters but it uses cognitive process for obtaining its meaning (Grellet, 1992).

Reading not only recites printed letters but uses cognitive processes to obtain reason. It is suggested teachers often struggle with teaching comprehension strategies due to the complexity of designing purposeful comprehension strategy instructions. It is further stated that the amount of time that is required to learn and implement explicit instruction is overwhelming for some (Adawiyah, et al, 2016). Reading is what happens when people look at a text and assign meaning to the written text (Shih, Aebersold, & Field, 1994). They add that the text and the reader are two elements in making reading feel reasonable.

Reading is a complex activity that includes physical and mental activity. Physical activity associated with reading is eye movement and visual acuity. Mental activities include memory and understanding (Mulyono, 2003). Improving Students’ Reading Comprehension Achievement by using the K-W-L Strategy”, reading is one of the skills in English which is
needed in the process of interpretation of graphic symbols and written symbols. We can give response about the content of reading materials we have read, we can also get the message from the reading materials (Sinambela & Pangaribuan, 2015).

Reading is interaction between the reader and meaning, that reading is the interaction between the reader and the text considered as complex information processing skills to create meaningful discourse. (Silberstein, 1997). Reading comprehension is a process of encoding and decoding, as opposed to speaking and writing which actually involves encoding. (Anderson, 2001). A reader is said to understand the reading material as well as possible if: 1) they recognise the words or sentences that are in the reading and know their meaning; 2) able to the linking the meaning of the experience possessed by the meaning that is in the reading; 3) understanding all the meaning contextually; 4) make consideration of the value of reading content based on reading experience (Sumardoyo, 2011). Based on the above opinion, that reading comprehension is a process of obtaining meaning that actively involves the knowledge and experience that is owned by the reader and is related to the reading content.

**Definition of PQ4R**

The PQ4R learning model is one part of the elaboration strategy. The elaboration strategy is the process of adding details so that new information will become more meaningful, because it makes coding easier and more certain. This strategy helps the transfer of new information from short-term memory to long-term memory, through the creation of a combination and relationship between new information and what is already known. This strategy consists of, (1) making notes; (2) the use of analogies, (3) the PQ4R model (Pratiwi, 2008).

The Steps in Learning the PQ4R Model:

1. **Preview**
The first step is intended for students, read quickly before starting to read reading material that contains learning material and its interactions. Students can start by reading topics, sub topics, headings and subtitles, beginning or ending sentences of a paragraph, or summary at the end of a chapter. If that is not available, students can check each page quickly, read one or two sentences so that a little overview is obtained about what will be learned. Pay attention to the main ideas that will be the core of the discussion in student reading material. With this main idea, it will be easier for them to give the whole idea.

2. **Question**
The second step is to ask yourself questions for each reading material, use "headings and subtitles or main topics and sub topics," Begin the question by using the words "what, who,
why, and how." If at the end of the chapter there is a list of questions made by the author, please read first.

3. Read
Read the reading material actively i.e. the way the students mind must react to what they read. Don't make long notes. Try to find answers to all the questions asked before.

4. Reflect
Reflect is not a separate step from the third step, but is an essential component of the third step. During reading, students not only need to remember and memorise, but try to understand the information presented by (1) linking the information with things you already know; (2) linking subtopics in the text with the main concepts or principles; (3) try to solve the contradiction in the information presented; and (4) try to use the material to solve simulated and recommended problems from the subject matter.

5. Recite
In this fifth step, students are asked to recall information that has been learned by stating important points aloud and by asking and answering questions. Students can look back at notes that have been made and use the words highlighted in the reading. From the notes that have been made in the previous step and based on the ideas that exist in students, they are asked to construct the essence of the reading material from reading.

6. Review
In this final step the students are asked to read the essence of what they have made, repeat the entire contents of the reading if necessary and once again answer the questions asked.

**Definition of SQ3R**

The survey learning model, question, read, recite, and review (SQ3R) is a reading learning that aims to help the reader to be able to fully and comprehensively understand the contents of a text (Jones, 2004). With the SQ3R learning model, readers will more quickly find the main ideas contained in the text. The SQ3R learning model is one of the learning strategies for studying a text, especially those contained in textbooks, scientific articles, and research reports.

The SQ3R learning model gives the reader the possibility to determine whether the material they are dealing with meets their needs or not. The SQ3R learning strategy gives readers the opportunity to be flexible. The reading speed settings for each reading section are not the same. Readers will slow down the tempo of reading speed for things that are new to them, or certain parts that are needed. And instead, they increase the tempo of their reading speed, if
the passages were less relevant to their needs or things they already knew. Another benefit is that the reader is provided with a systematic learning method, and with this method, the achievement of learning outcomes effectively and efficiently is more guaranteed, when compared to learning without methods.

The SQ3R learning model gives students the possibility to learn systematically, effectively and efficiently in dealing with a variety of teaching materials. This strategy is more efficiently used for learning because students can repeatedly learn teaching material from the stage of researching reading or teaching material (Tarigan, 2005). Reading activities using the SQ3R model include 5 steps: (1) survey (reviewing or identifying all texts), (2) questions (compiling a list of questions relevant to the text), (3) reading, (reading texts actively to find answers to questions that are arranged), (4) recite, (reiterate every answer found), (5) review, (support all answers to questions arranged in question and read). The steps of this model must be applied sequentially so that the goals to be achieved in reading can be achieved and succeeded in well.

**Understanding Achievement Motivation**

Motivation is a term that refers to the strength of attraction and drive, which will produce persistence of behaviour directed towards achieving the goal. Motivation and motives are often used with the same understanding (Sukaji & Singgih, 2001). The characteristics of individuals with high achievement motives include: 1) always trying, not easily giving up in achieving success or in competition, by setting their own standards for achievement and which have meaning; 2) generally do not show better results on specific tasks that have meaning for them; 3) happy to do tasks that have low levels of difficulty, (4) individuals like to avoid failure and will show the best performance on tasks with low difficulty (Gerot & Wignell, 2004). Overall, it can be concluded that individuals who have low achievement motivation have characteristics such as being pessimistic, orienting in the past, considering success as lucky fate, avoiding failure, like using the old way, not liking jobs that require responsibility and not trying to find feedback from work.

**Methods**

The study was conducted in the even semester of PGSD FIP UNIMED students at Jln. William Iskandar Pasar V Medan Estate when the implementation began in February 2017 until June 2017. The population in this study were all semester II PGSD FIP UNIMED students, amounting to 315 people. The sample in this study was taken by cluster random sampling of two classes, where the first class as an experimental class was treated with the PQ4R learning model and the second class as a control class that was treated with the SQ3R learning model, with a total of 78 experimental and control class students. In this study, the
authors used 3 variables namely, independent variables, moderator variables, and the dependent variable, namely: The independent variables of this study were the PQ4R and SQ3R learning models. The moderator variable of this study is the achievement motivation of students in English courses. The dependent variable of this study is the understanding of students' English texts. This study aims to see the effect of independent and dependent variables. This research is a quasi-experimental. Quasi-experimental research is a grouping of subjects randomly but the researcher accepts the state of the subject as is not allowed to group the subjects randomly to get a new group. In the experimental class the given treatment was the PQ4R learning model. Whereas the control class was given treatment using the SQ3R learning model.

Results

Hypothesis testing in this study is for 3 types of hypotheses. The first hypothesis is called a different test, the second hypothesis is called the influence test of achievement motivation in English courses, and the third test is an interaction test between the model and achievement motivation.

Statistical test results show the data, for the SQ3R learning model the lower category average score for English text comprehension of English subjects was 61.36, and for the higher group it was 63.73, with each group numbering 19 people. For the PQ4R learning model for the lower scoring category experiment the average English text comprehension of the English course is 72.30, and for the PQ4R learning model for the higher scoring class experiment group it was 74.38, with a total group of 19 people each. The standard deviation of learning outcomes with low and high group SQ3R learning models is 4.12 and 3.91. Whereas, the standard deviation of understanding English text for the PQ4R learning model for low and high grade experiments was 3.55 and 3.97. In more detail can be seen in Table 1.
### Table 1: Data Description Group reading students' Reading Comprehension

<table>
<thead>
<tr>
<th>Learning Model</th>
<th>Group</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ3R learning model</td>
<td>SQ3R_low</td>
<td>61,36</td>
<td>4,119</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>SQ3R_high</td>
<td>63,75</td>
<td>3,919</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>62,75</td>
<td>4,161</td>
<td>38</td>
</tr>
<tr>
<td>PQ4R learning model</td>
<td>PQ4R_low</td>
<td>73,30</td>
<td>3,556</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>PQ4R_high</td>
<td>74,70</td>
<td>3,975</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>78,22</td>
<td>3,789</td>
<td>38</td>
</tr>
<tr>
<td>Total</td>
<td>SQ3R_low</td>
<td>61,36</td>
<td>4,119</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>SQ3R_high</td>
<td>63,75</td>
<td>3,919</td>
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<td></td>
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<td>3,556</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>PQ4R_high</td>
<td>74,70</td>
<td>3,975</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>68,28</td>
<td>6,985</td>
<td>78</td>
</tr>
</tbody>
</table>

### First Hypothesis Testing

The results showed there were differences in understanding of English texts in students who were given the PQ4R model and the SQ3R learning model, the average understanding score of the PQ4R class text was 78.22 while the average SQ3R class was 62.75.

### Second Hypothesis Testing

The results showed that there were differences in understanding of English texts between students who had low and high achievement motivation. Based on student achievement motivation, the average low achievement motivation in class SQ3R = 42.90 and high teaching motivation class SQ3R = 47.25. Meanwhile, the average total achievement motivation of students in the SQ3R learning model is 47.25. The average low achievement motivation PQ4R = 43.38 and the average high achievement motivation PQ4R = 54.50. Meanwhile, the average total achievement motivation of English subjects in the PQ4R learning model is 48.97. This study was in the form of an understanding of students' English texts. Based on students' understanding of English text, the average of the low group in the class SQ3R = 61.36 and the understanding of the English text of the high group SQ3R = 63.75. Meanwhile, the average total achievement motivation of the SQ3R learning model is 62.75. The average understanding of English text in the low group PQ4R = 73.30 and the
average learning outcomes in the high group PQ4R = 74.70. Meanwhile, the average total understanding of the English text of the PQ4R learning model is 78.22.

**Third Hypothesis Testing**

The results showed that there was no interaction between the learning model and the student's initial achievement motivation towards the retention of students' English texts. For more details, a statistical description and interaction between teaching and the model, achievement motivation in English courses, and understanding of students' English texts with SPSS application as can be seen in table 2 below.

**Table 2: Description of Data Interaction Test**
Tests of Between-Subjects Effects

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>.383^a</td>
<td>3</td>
<td>.128</td>
<td>6.370</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>0.272.232</td>
<td>1</td>
<td>.027.232</td>
<td>1308.824</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td></td>
<td>1</td>
<td>.027.232</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement motivation</td>
<td>.103</td>
<td>1</td>
<td>.103</td>
<td>5.098</td>
<td>.028</td>
</tr>
<tr>
<td></td>
<td>.085</td>
<td>1</td>
<td>.085</td>
<td>4.167</td>
<td>.045</td>
</tr>
<tr>
<td>Achievement motivation</td>
<td>.178</td>
<td>1</td>
<td>.178</td>
<td>8.889</td>
<td>.004</td>
</tr>
<tr>
<td>Error</td>
<td>1.122</td>
<td>56</td>
<td>.020</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>28.0275</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>1.505</td>
<td>59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

R Squared = .254 (Adjusted R Squared = .214)

**Discussion**

Statistical test results show some conclusions to be discussed. As for what is discussed is every link between variables in this study, namely: Learning using the PQ4R learning model is a series of learning activities that are expected to empower students to be able to face problems by inviting students to understand the situation, starting with what students already know. The results of the statistical analysis in this study provide the conclusion, that students' understanding of English text using the PQ4R learning model is higher than the SQ3R learning model in English subjects. In the PQ4R learning Model, students become active in learning, enthusiastic, foster an attitude to dare to express opinions, interact with friends, or ask questions. As this learning pattern is more varied than SQ3R learning model, so in this
study students in the PQ4R learning model class have more discussions together. The findings in this study indicate that there are differences in the understanding of English texts in students who are given the PQ4R model compared to the SQ3R learning model; the average understanding of the PQ4R class text is 78.22 while the average SQ3R class is 62.75. The results of the study using the PQ4R learning model by (Wulandini, 2015) show that the results indicated that the PQ4R study strategy greatly improved the scholastic. In using the PQ4R learning model, lecturers must understand the weaknesses and strengths that support learning, so that this model can perform well and produce good learning outcomes. The results showed that there is the effect of applying the PQ4R strategy on deaf children in class X in at SMA LB Dharma Bhakti Patianrow. In line with the research conducted (Bibi and Arief, 2011). Based on the analysis of the data it can be concluded that there is a significant influence on the PQ4R strategy and the magnitude of the significant influence exerted at 0.54 which if included in the interpretation of the correlations falls into a quite significant category (Faisal, 2015). The results of the study show that the PQ4R strategy can improve students' reading comprehension skills in grade VI elementary school. Thus, the use of the PQ4R strategy is worth considering as an effort to build synergy in students' reading comprehension in grade VI elementary school. Further studies were carried out (Rahayu, 2018), the results showed there was an increase in students' reading comprehension skills using the PQ4R method. Can be seen from the results of the percentage before carrying out research when pre-cycle only reached 50%. But after doing the first cycle increased to 62%, then when carrying out the second cycle the percentage results increased to 92%. Based on these results, the PQ4R method can be used as an alternative learning method in reading in elementary schools.

The second hypothesis in this study is called the influence test. The second hypothesis in this study is to find out the students' reading comprehension that have high achievement motivation and low achievement motivation in English subjects of students with different teaching models of teaching treatment, namely; for the experimental class were given teaching treatment with the PQ4R learning model and the control class was given the teaching treatment of the SQ3R learning model.

Achievement motivation is part of the competency that students must possess. High and low achievement motivation is based on the amount of student experience in dealing with problems in English courses. Students' understanding of the learned concepts will make it easier for lecturers to direct students to learn through the experiences gained, and even further to solve a problem. The results showed that there were differences in English reading comprehension between students who had low and high achievement motivation.

The achievement motivation data and reading comprehension shown above give a conclusion that statistically there are differences in students reading comprehension with the same level
of initial achievement motivation with different learning models. Reading comprehension with the PQ4R learning model is higher than with the SQ3R learning model with the division of different initial learning characteristics and the application of different models.

The experts expressed the importance of a concept in the learning process built by the concepts of solving and learning outcomes. The learning model and achievement motivation can both improve students' reading comprehension in English. PQ4R learning models can help students in remembering and helping the learning and teaching process in the classroom and outside the classroom by reading and through technology. With the PQ4R learning model, the learning process will not be boring in the classroom (Slavin, 2000). Likewise the research conducted by (Fatuni’mah, 2015) shows that the PQ4R learning model was effective in teaching reading narrative text. By using PQ4R Strategy, the teacher could create an interesting teaching learning process in the classroom where the students could be happy and they would not get bored.

Research conducted by (Sopiawati, 2015) obtained an average pre-test score of 9.15 / 20 and an average post-test score of 13.18 / 20. This shows that there are significant differences in results before and after the use of the PQ4R learning model to read French text with understanding. The results of this study prove that the use of the PQ4R learning model has shown to be effective in improving reading comprehension skills in French text. Further research by (Indrawati & Matsuri, 2014) had as the results of the study that the PQ4R learning methods produce better comprehension reading skills compared to the assignment learning method. In line with this research (Asrtriani Mustahidang, 2015), the results of the study prove that the application of the learning strategies of preview, question, read, reflect, recite, and review (PQ4R) is very influential in improving the PAI learning achievement of high school students in Neg. 1 Anggeraja, which is marked by an increase in student learning outcomes from cycle to another cycle namely completeness of learning outcomes in pre-cycle 37.03%, cycle 1 is 44.44%, and cycle 2 is 81.48%.

The test results to see the interaction of the model with achievement motivation to improve reading comprehension, obtained Sig. = 0.83 whose value is greater than α of 0.05. So for this study there is no interaction between the PQ4R and SQ3R learning models with achievement motivation on students' reading comprehension. Research conducted by Sarimanah shows that learning model based reading metacognitive strategies PQ4R are effective and fit for use. The study is similar with this study in that the use of PQ4R and SQ3R learning models are equally effective in English learning.
Conclusions

Based on the results of data analysis and discussions that have been carried out, it can be concluded: (1) There are differences in reading comprehension of English courses of students using the PQ4R learning model and the SQ3R learning model for PGSD FIP UNIMED students, (2) There is a difference in reading English comprehension between students who have high achievement motivation and low motivation, (3) There is no interaction between the PQ4R and SQ3R Models and achievement motivation on reading students' understanding of English.

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