USING KWL (KNOW-WANT TO KNOW-LEARNED) STRATEGY IN IMPROVING STUDENTS’ READING COMPREHENSION

Nirwan¹

Sekolah Tinggi Ilmu Ekonomi YPHB, Banda Aceh, Indonesia
Universitas Syiah Kuala, Banda Aceh, Indonesia

ABSTRACT

This experimental study aimed to investigate the effects of the use of KWL (Know-Want to Know-Learned) strategy in teaching reading comprehension. The population of this study was 120 students, while the samples consisted of 60 English department students enrolled in the second semester. The sample was divided into two groups; the experimental group (EG) and the control group (CG). The sample was chosen through random sampling technique. The instruments used in collecting the data were test and questionnaire. The data were analyzed through non-parametric statistical in SPSS 20. The result of Wilcoxon test was 0.00 lower than 5%. The findings reveal that there was significant difference in reading comprehension achievement between EG and CG. The mean score of the post-test for the EG was 9.92, while the mean score for post-test of CG was 7.91. Hence, it can be concluded that the alternative hypothesis was accepted and the null hypothesis was rejected. Consequently, the use of KWL strategy has proven a significance improvement in the students’ reading comprehension. Some implications are derived for both students and teachers.

Keywords: KWL strategy, English, reading comprehension.

INTRODUCTION

Reading is one of the essential parts in language learning. Information and ideas are exchanged between writers and readers in the act of communicating. A writer expresses his or her thoughts on paper

¹ Corresponding Author: nirwan.aceh@myself.com
with language, using whatever skills and styles s/he has developed personally (Harris, 1980). Thus, reading allows learners to open the screen to the outside world. Readers with increased reading abilities will be able to improve and obtain greater growth in all educational areas.

Reading is not considered reading if students do not understand what they have read. Many struggling readers can recognize and pronounce words from print, but cannot understand or answer questions about what they have just read. Text comprehension allows readers to extract or construct meaning from written words. Students who misread words or misinterpret their meanings are at a disadvantage. Proper instructions can boost students’ skills in this key area (National Institute for Literacy, 2007). This means that the absence of any changes after reading activities, mental changes, attitudes, or behavior of readers has not been considered as reading (McEwan, 2009).

Teachers and students should know how to read effectively in order to receive the information of reading. Students realize that they may find themselves in situations where it is useful to be able to read effectively. In a country when the target language is spoken, they may need to read books, signs, menus, instructions, and programs (Valette, 1977).

In reading comprehension subject, students are required to have an ability to understand a text and develop their effective reading. The syllabus of reading comprehension directs lecturers to teach their students some topics such as reading as receptive skill, inference and the purpose of reading.

Teacher centered learning (conventional strategy) is still applied in UIN Ar-Raniry. As both a student and researcher, I noticed that this traditional teaching method has been for many years employed, despite its few advantages to support learners in their reading proficiency. Thus, this teaching approach leads some lecturers to be more active than students. Consequently, students only obtain information based on what they hear from their lecturers. Moreover, based on ongoing survey that the researchers conducted, the traditional method is still being employed by some senior lecturers at the moment. The reason to this could be caused by lack of knowledge in terms of teaching styles which tended to lead to the same teaching patterns throughout a semester. This idea is in line with Butler (1984, as cited in Yamagishi, 1990) who said, “all teachers have a personal learning style which limits their vision of other possibilities in the classroom and their understanding of different types of students and also restricts their choice and interpretation of teaching techniques.” Therefore, it causes many English Department students of
UIN Ar-Raniry still had difficulties in understanding reading comprehension. Similarly, Nafi’ah (2008) revealed that most of the students had difficulties especially in understanding inference.

This is due to the fact that in understanding the idea of inference, they could not simply get the information from the text, but they had to presume from what is stated. The students’ lack of schemata or background knowledge related to the topics presented by the author made them unable to presume. Besides the students’ schemata, the text itself affects the students’ comprehension, complicated linguistic structure, and main idea. Similarly, based on the preliminary study by interviewing two reading comprehension lectures of English Department of UIN Ar-Raniry, the researchers concluded that the students who took reading comprehension subject in English Department UIN Ar-Ranity were at average level. The problem may decrease students’ motivation in learning reading comprehension. Therefore, the researchers assumed that the way to teach reading comprehension subject should be modified to more current ways. KWL is a strategy that shows steps of students’ ability in understanding a text. The steps are starting from pre-reading, reading, and after-reading stages. It is considered to be easier for students and more effective in increasing reading motivation by following the steps (Akyuz, 2004).

The KWL strategy works as an instructional reading strategy. As a reading strategy, it helps new teachers engage students from the beginning of a reading lesson by activating prior knowledge. KWL also helps teachers keep students interested as they think about what they want to know and what they have learned (Sasson, 2008). Accessing prior knowledge and engaging learners’ interest before beginning a reading activity can improve learners’ ability to make associations, enhance understanding, and increase comprehension (Bailey, 2002). Their proficiency is enhanced in setting purposes for reading, searching information from texts, organizing that information into graphic outlines, and writing summaries based on those graphic outlines (Bader, 2007). The strategy offers a framework that learners can use to monitor their decoding of a text through listing, mapping and summarizing what has been learned.

Based on the explanation above, there are two questions proposed, they were:

1). Does the learning process that uses KWL strategy effectively improve students' reading comprehension?
What is the students’ response toward the implementation of KWL strategy in improving students’ reading comprehension?

Reading Comprehension

Reading comprehension is an interactive process. It involves interaction between a reader and an author via text. According to Burnes and Page (1985), reading comprehension is an interactive process in which readers engage an exchange of ideas with an author through text. Reading is also an active process. It connects eye and brain as Harmer (2007) defines that reading is an exercise dominated by the eyes and the brain. The eyes receive messages and then the brain has to work out significance of these messages.

Palinscar and Brown (1984) provide the following six features of reading for meaning. The first is constructing objective for reading. Only by developing purposes will readers be able to gain appropriate kinds of information while reading. The purpose is to find a particular piece of information. The second is activating appropriate background. Most texts have a lot of unspoken messages and depend on readers to complete the gaps from background knowledge. The third is allocating attention in order to focus on major contents at the expense of trivia. Some details will be important, and other information will be insignificant. Moreover, reading should be conducted by evaluating the content of the text critically. Readers must determine that the details provided is internally reliable. They must also check to see if the passage details are consistent with their own background knowledge and with common sense. Monitoring continuous activities to see if students actually understand the text is another feature of reading for meaning. The last is making and testing inferences of many kinds. Interpreting, predicting and arriving at conclusions are all parts of the process of reading for meaning. It is important because it is easier to make incorrect or inaccurate inferences for a number of reasons. In conclusion, reading comprehension is a comprehending process of how information is understood from the text into the meanings, starting with the information from the text, and ending with what a reader gains.

Reading is an important aspect of studying English. Hung, Tzeng, and Warren (1981) asserted that reading is the fastest and simplest way to raise people’s educational level. In the other words, reading is like opening the door of knowledge. This guide to how to enhance your reading abilities will help you enhance reading skills you use in your own language. It can be started by thinking about how to read different
documents. Reading newspaper is different from reading novels or reading train schedules and so on. Spending several times to think about the skills will be easy to have clues on how to read in English though word is unfamiliar completely.

Furthermore, Harmer (2007) described reading skill generally as a predictive skill, extracting specific information, getting the general picture or skimming, extracting detailed information, recognizing function or discourse patterns, and deducting meaning from contexts. With this skill, a reader is able to access texts for detailed information.

According to many experts, there are some factors influencing readers in comprehending a text: vocabulary development, sentence comprehension, and students’ background knowledge. Owens and Robert (1996) asserted that vocabulary development is the basis for learning language and knowing vocabulary words is key to reading comprehension. The more words a reader knows, the better he or she will understand a text. The knowledge of word meanings and the ability to select the correct meaning from the context is essential factors and the knowledge of vocabulary is strongly related to reading comprehension. In addition, Nuttal (2000) said that a word has more than one meaning and it is bound to choose the trouble to the inexperienced and we are all inexperienced in some field. This means that a reader has to connect vocabularies already known with background experience.

RESEARCH METHODOLOGY

Setting and Subject

The study was carried out at UIN Ar-Raniry, Banda Aceh. The population of this research included all students in the second semester in reading comprehension III at English Department of Tarbiyah Faculty of UIN Ar-Raniry. It consists of 120 students from 4 units. Selected randomly from the five existing classes after the normality and homogenous test had been done, two classes were taken as the sample in this study in which one class was assigned as experimental group (EG), while the other was control group (CG); each group consisted of 23 students. To the experimental class, pre-questioning was applied while the control group was taught by using conventional method.

Procedure

The data were collected in three parts of activities, namely pre-test, treatment and post-test. Pre-test was given for both EG and CG before
implementing treatment. Reading for treatment was taken from student’s textbook entitled “Panorama” and ten questions were provided related to the text. The students were directed to read a reading passage and then answer the questions. The researchers then analyzed the score of the students of both groups. After the post test was given, the treatment or teaching using KWL strategy was done for five meetings in EG. The students in this class were taught some aspects of reading namely; main idea, word recognition, inference, and details. They were then gradually led into the application of KWL with the teacher explaining as well as modelling how to use KWL in front of the EG students. Then, all the students were directed to follow the three steps of KWL strategy. After the treatments were completed, a post-test was administered using similar questions used for the pre-test in both classes. However, for EG, the students were asked to fill in the questionnaire in order to know their opinions and attitudes about the application KWL strategy.

**Instruments**

Fraenkel and Wallen (2006) asserted that tests and questionnaire are part of instrument in completing data needed to support research. In this research, both of the instruments were employed to answer research questions.

**Test (Pre-test and Post-test)**

There were two kinds of test that the researchers gave, namely pre-test and post-test. Pre-test consisted of a set of reading comprehension test given to EG and CG before some treatments were given. It aims at finding out the students’ competence in reading before implementing KWL strategy. The test was taken from the textbook of reading comprehension III entitled “Panorama”, which are also used in the both classes. Besides, the students were also given post-test after the treatments were given. Post-test is a test or questionnaire given at the end of some treatment period. This test was used in order to see whether the implementation of KWL strategy effectively improved the students’ reading comprehension skill. The questions asked in pre-test and post-test are similar.

**Questionnaire**

Questionnaire is a set of questions used to tap into the knowledge, opinion, ideas and experiences of learners. It consists of ten questions. The questionnaire is usually set out in a very systematic way, and very
often the questionnaire is answered by reading the questions, and then ticking responses, or writing in short answers (Wallace, 2011). Additionally, Brown (2002) says “Questionnaires are any written instruments that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers.” In this study, questionnaire was adopted from previous study by Rusmiati (2013) that focused on reading strategy. Thus, this questionnaire was used to analyze the situation of the students in learning English lesson and also to know their interest in English, especially in reading comprehension subject.

The questionnaire was analyzed by using Likert’s scale. The questionnaire consisted of the advantages of implementing KWL strategy in reading class, covering such topics as background knowledge, curiosity, and motivation. Each item of statements provided four answers, namely: strongly agree, agree, disagree, and strongly disagree which the students had to choose only one of them.

**Data Analysis**

This research applied a quasi-experimental design. Brog and Gall (2000) argued that an experimental research is the most powerful research for identifying causal relationships and manipulating a treatment. Moreover, quasi-experimental is most frequently used when it is not feasible for a researcher to use random assignment.

The data analysis was conducted by organizing the collected data systematically. This study applied both quantitative and qualitative analysis. Quantitative analysis was used to examine the first research problem which employs some statistical formulas namely mean, standard deviation, and t-test in order to analyze the data. Meanwhile, qualitative analysis was used to answer the second research problem which deals with the student’s perception on the strategy applied in the classroom which was analyzed by using Likert’s scale. The normality and homogeneity test were also done in order to know about the condition of the population and sample chosen. The normality test purposed to know whether the data set has a normal distribution or not, whereas homogeneity test purposed to know whether the sample comes from population that has homogeneous variance or not. All of the data were analyzed by using SPSS version 20.

Two types of statistical methods may be used when analyzing data parametric or non-parametric tests. Parametric methods make the assumption that the variable being analysed has a particular distribution
in the population, typically a normal distribution. The independent samples $t$ test is also a parametric method (Altman, 2011).

Non parametric statistics can be used with data that are not normally distributed. Non-parametric tests do not require the assumption of normality. Most non-parametric tests do not require an interval or ratio level of measurement; it can be used with nominal/ordinal level data. The Mann-Whitney $U$ test is the non-parametric. It is equivalent of the independent samples $t$ test in parametric. It uses when all assumptions of parametric statistics cannot be met (Altman, 2011).

In short, some tests for parametric statistics are $t$-test, ANOVA, Pearson’s, linear regression and correlation while non parametric statistics are Mann Whitney U test, Kruskal Wallist test, Chi square test, and Wilcoxon test (Altman, 2011).

**RESULTS AND DISCUSSION**

**Normality Test**

The normality test is conducted through Kolmogorov-Smirnov method to see the significance result compared to alpha ($\alpha$). The normality test was measured by the reliability score of 95%, which mean the score of alpha is equal to 0.05. The data is categorized normal if the significance value is equal or more than 0.05, but the data is not normally distributed if the significance value is less than 0.05.

Table 1. Test of Normality

<table>
<thead>
<tr>
<th>Data</th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test Experiment Class</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>Post-test Experiment Class</td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>Pre-test Control Class</td>
<td></td>
<td>.019</td>
</tr>
<tr>
<td>Post-test Control Class</td>
<td></td>
<td>.027</td>
</tr>
</tbody>
</table>

The result of normality test shows that the data of pretest and posttest of EG and CG were less than 5% ($\alpha$) indicating that the data was not normally distributed. Therefore, it should be analyzed through non-parametric statistical method, namely Wilcoxon test for pair samples and Mann Whitney test for two independent samples.
Wilcoxon Test
The Wilcoxon test is categorized as non-parametric statistical hypothesis test used when comparing two related samples, matched samples, or repeated measurements on a single sample to assess whether their population mean ranks differ. It can be used as an alternative to the paired student's t-test, t-test for matched pairs, or the t-test for dependent samples when the population cannot be assumed to be normally distributed, and data are paired and come from the same population (Wilcoxon, 1946).

Wilcoxon Test for Experimental Group
This test is used to see the difference of test score before and after treatment for the experimental class. The hypothesis test uses the reliability of 95% indicating alpha score is 5% or 0.05. Null hypothesis is rejected if the significant value is more than alpha score.

The hypotheses of this study are formulated as follows:
Ho: There is no difference between pretest and posttest scores of EG and CG after treatment.
Ha: There is a difference between pretest and posttest scores of EG and CG after treatment.

Table 2. Wilcoxon Test for Experimental Group

<table>
<thead>
<tr>
<th></th>
<th>Pretest – Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z</td>
<td>-3.859*</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.000</td>
</tr>
</tbody>
</table>

The result of Wilcoxon test shows significant score of 0.00 lower than 5% (alpha score) indicating Ho was rejected. In summary there is a different score between pre-test and post-test. Moreover, mean scores of pre-test and post-test for experimental group are presented below.

Table 3. Mean Score of EG

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>25</td>
<td>8.72</td>
</tr>
<tr>
<td>Post-Test</td>
<td>25</td>
<td>9.92</td>
</tr>
</tbody>
</table>

The table shows the mean scores of pre-test (8.72) and post-test (9.92) of the EG. The mean score of post-test is bigger than pre-test,
indicating that the score was different before and after treatment was given.

**Table 4. Wilcoxon Test of CG**

<table>
<thead>
<tr>
<th>Posttest – Pretest</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-1.342&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>.180</td>
</tr>
</tbody>
</table>

The result of Wilcoxon test shows significant score 0.180 bigger than 5% (alpha score), indicating Ho was accepted. In summary, there was no different score without treatment. Furthermore, the mean scores of pre-test and post-test for experimental group are presented below.

**Table 5. Mean Score for Control Group**

<table>
<thead>
<tr>
<th>Control Group</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>23</td>
<td>7.78</td>
</tr>
<tr>
<td>Post-test</td>
<td>23</td>
<td>7.91</td>
</tr>
</tbody>
</table>

The table shows the mean score of pre-test (7.78) and post-test (7.91) of CG. We can see that there was no significant difference between these two scores.

**Mann-Whitney Test**

In statistics, the Mann–Whitney U test is a non-parametric test of the null hypothesis that two samples come from the same population against an alternative hypothesis, especially that a particular population tends to have larger values than the other. This test has greater efficiency than the t-test on non-normal distributions, such as a mixture of normal distributions and it is nearly as efficient as the t-test on normal distributions (Conover & Conover, 1980).

This test is used to see the difference of test score between the experimental and the control group. The hypothesis test uses the reliability of 95% indicating alpha score is 5% or 0.05. Null hypothesis is rejected if the significant value is more than alpha score.

Hypothesis:
Ho: The two population is identical or the data of both classes is no difference.
Ha: The two population is not identical (score result of both classes is difference).
Table 6. Mann-Whitney Score for Control Group

<table>
<thead>
<tr>
<th>Score Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
</tr>
</tbody>
</table>

The result of Mann Whitney test shows significant score of 0.00 bigger than 5% (alpha score) indicating Ho was rejected. In summary, the two population is not identical (the score result of EG and CG is different). It can be seen clearly from the following table that the mean score of the EG is bigger than the CG indicating that they are not identical.

Table 7. Mean Score

<table>
<thead>
<tr>
<th>Post-Test</th>
<th>N</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score Result of Experimental Group</td>
<td>25</td>
<td>9.92</td>
</tr>
<tr>
<td>Score Result of Control Group</td>
<td>23</td>
<td>7.91</td>
</tr>
</tbody>
</table>

The Mean score of EG was 9.92, whereas that of CG was 7.91. The mean score of the EG was bigger than the CG, indicating that the two populations were not identical. The score of EG was bigger than the CG, meaning that the students who were taught by using KWL strategy achieved a better performance in reading comprehension than those who were taught by using conventional strategy. In conclusion, the learning processes that used KWL strategy effectively improved the students’ reading comprehension.

In addition, the students’ opinion about the practice of KWL strategy that is analyzed by Likert’s scale comes out with 6 statements of KWL strategy are chosen as strongly agree and the other 4 statements of those are chosen as agree by the students. It can be concluded that the students like and enjoy to practice this strategy in their reading comprehension class.

Discussion
In this research, the data is categorized as being not normally distributed because the result is less than α score (0.05). Therefore, non-parametric statistical is more appropriate to use. Mann Whitney and Wilcoxon test are greater efficiency than the t-test on non-normal distributions.
The result of Wilcoxon test shows that there was improvement about 20 points in the post test (8.72 for post-test and 9.92 for pre-test) in EG. Therefore, Ho was rejected and accordingly Ha was accepted, meaning that the students who were taught by using KWL strategy achieved a better performance in reading comprehension than those who were taught by using conventional strategy.

This finding supports statement that contends whenever the students are involved in questioning, they are engaged in active comprehension. The theory was developed by Ogle in 1986 and it has played significant role in teaching learning process especially in reading lesson. It is also able to activate students’ prior knowledge when a teacher encourages them to tell what they already know related to the topic, what they want to know, and what they have learned in term of the topic. An interactive learning can be occurred automatically.

The last discussion was about the qualitative analysis which works on the questionnaire responded by the students of the experimental class in the last meeting. The questionnaire consists of 10 questions. The questions are divided into five categories namely; students’ general knowledge about the strategy and students’ response about strategy applied.

KWL strategy is a fun strategy. Most of the students choose “strongly agree” for the technique applied by the teacher. They gave positif response of the strategy. Fun is required in learning process. It is supported by result of the analysis on students’ perception indicated that their understanding about the content of the text is increase. Most of students in the experimental class expressed strongly agree that they need fun strategy in learning. Most of the students choose option “it needs a fun strategy in learning reading” which the Mean score is 3.60 points indicating that the students are “strongly agree” that need fun learning reading.

From the questionnaire, students response as strongly agree on statement “the use of this strategy activates my background knowledge”. It shows at third meeting students looked more active than first and second meeting. They were trying to find out materials related to the next topic and its become their background knowledge when they were asked to explain about their insight of the topic discussed.

In addition, the strategy was able to activate students’ existing knowledge and stimulate them to gain more new knowledge. This result supports the theory of Blaskowski (2010) states that the KWL strategy is good method to help students to activate prior knowledge.
Then, students curiosity was increased learning by using KWL strategy. The statement supported by the Mean score in the questionnaire. In the table of the students’ response about the strategy applied show the Mean score is 3.28 which indicating students were strongly agree with statement.

In conclusion, most of the respondents strongly agree that this strategy should be applied for students whose motivation in reading is low because it encourages students to involve in learning process. In addition, Lismayanti (2014) conducted a study related to reading comprehension with a total sample of 40 students, and the result showed that KWL strategy was effective in improving the students’ reading comprehension achievement. Therefore, this finding is significantly correlated with the current study which obtained similar positive result. Similarly, KWL strategy is very elegant as declared by Wilhelm (2002) KWL is a simple and elegant strategy.

CONCLUSION AND SUGGESTION

Based on the previous explanations and analysis, five conclusions related to the implementation of KWL (Know-Want to Know-Learned) strategy in improving students’ reading comprehension at English Department Students of UIN Ar-Raniry can be drawn. First, KWL strategy increases the students’ reading comprehension. The students in the EG who were taught by applying KWL strategy achieved higher score than those in control class. Second, there is a significant difference in reading achievement between the students who were taught by using KWL strategy and those who were taught by using conventional strategy. Third, the null hypothesis was rejected and the alternative hypothesis was accepted. Fourth, most of the students in the experimental class enjoyed the KWL strategy. It can be shown from the mean score of the questionnaire that most of them chose ‘agree’ option. In personal experience when the researchers started to ask their insight about the topic, they competed to each other to elaborate their understanding about the topic. Fifth, most students believed that the KWL strategy triggered their prior knowledge and therefore it helped them comprehend a text more easily.

The result of this study reveals some significant contribution for future improvement in teaching reading. They are as follows:

1. Course instructors can apply KWL strategy in order to help students understand reading to the maximum. KWL helps
students understand reading in a more pleasant way that creates better learning atmosphere. Thus, applying KWL brings significant improvement in teaching reading.

2. KWL strategy is very flexible. This strategy can be applied in a variety of disciplines, namely in physics, chemistry, economics, etc.

3. It is suggested that future researchers can incorporate larger samples and population that cover both English major students and non-English major students. Therefore, the accuracy of the data is more credible to achieve more reliable findings. Besides, future researchers can obtain more data in gender differences, respondent’s background, area of origin, and the level of intelligence. As a result, intriguing findings can be found to represent those characteristics.

4. Human being experience creates insight. Insight occurs when people recognize relationship or make associations between objects and actions that can help them solve new problems. The easy way to have good insight is through reading.

REFERENCES


Using KWL (Know-Want to Know-Learned) Strategy in Improving Students’ Reading Comprehension (Nirwan)


