The Effect of Implementing KWL and Sq3r Strategies on Students' Reading Achievement

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Abstract:
Background: *The objective of this research was to find out the difference between students' reading comprehension achievement by using KWL and SQ3R strategies.*
Materials and Methods: *This research was conducted at SMAN 4 Bandar Lampung. There were 64 students as the sample of this research. This research used true experimental design The data were collected through pre-test and post-test in both groups. In this research, repeated measure t-test was used to analyze the data. The data were computed by SPSS 16.0.*
Results: *The result showed that there was a significant difference in students' reading comprehension achievement after being taught through KWL and SQ3R strategies. In the pre-test of KWL group, the mean score is 58.90 and it becomes 75.93 in post-test. This means that there is an increase of 17.02 points. Meanwhile, in SQ3R group, the mean score of pre-test is 53.12 and the mean score of post-test is 67.65. There is 14.53 point of increase.* **Conclusion:** *It concludes that KWL and SQ3R strategies are able to help students in improving the students' reading comprehension achievement significantly*
Key Word: *teaching reading, KWL strategy, SQ3R strategy, reading comprehension*

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I. Introduction

Reading is one of four language skills that should be mastered by learners. By reading, the learners will get a lot of important information. Reading can also open the world and make the learners gain knowledge. Reading itself is the process of understanding a written or printed text. Grabe & Stoller (2002: 9) state that reading is the ability to draw meaning from the printed page and interpret this information appropriately. This activity requires the readers not only to read the texts but also to understand it. It can be said that reading always comes along with comprehension. Based on the importance of reading for the students, teaching reading to the students is a necessity. In order for the students to master the skill optimally, teaching reading strategies to the students is one way as also outlined by Hoein & Lundberg (2000), Grabe and Stoller (2002), and Pressley (2001) stating that when students learn to read they need to be taught how to use specific strategies to understand the text.

In fact, many teachers still face some problems in teaching reading. Traditionally, problems arise from the condition of ineffective classroom. Scholars of Indonesian teaching, such as Sadtono (1997) and Baradja (1984) have put several problems that are responsible on this matter. The problems might include low motivated students, unprofessional teachers, and limited teaching strategies. This issue also provides a strong fact that English teachers are confused to apply the relevant teaching strategies in the context of classroom teaching-learning processes. Therefore, the researcher has an interest in applying two different teaching strategies in reading class which are KWL strategy and SQ3R strategy.

Ogle (1986) states that KWL is a three-phase strategy that develops students' independent skill in comprehending a text. It helps the students engage with texts in deliberate and purposeful ways. In the first phase (What I know?), students activate their prior knowledge which then helps them develop curiosity on the subject and gets them interested in learning more about it. This can be done individually or in a group. Then, in the second phase (What I Want to Know?), learners generate what they want to learn about the subject that gives them the motivation to read and make up their own questions to predict that additional information they are needed and developed a plan to gather that information. In the final phase (What I Have Learned?), students generate what they have learned an excellent way to compare prior knowledge which might have been accurate or retrieved knowledge. In KWL, the teacher functions as a facilitator for this teaching strategy is student-centered. KWL (*Know*, *Want to know*, *Learn*) strategy might be promising and beneficial to be applied in the teaching-learning process of reading. It aims more diverse. It helps readers elicit prior knowledge of the topic of

the text, set a purpose of reading, monitor their comprehension, assess their comprehension of the text, and expand ideas beyond text (Riswanto et al , 2014).

A recent study has revealed the effectiveness of KWL strategy. Alshatti (2012) in the research purposed to identify the KWL chart as one such tool and follows a case study of four Kuwaiti Family and Consumer Sciences‥ teaching/learning events to evaluate their ability to enhance the learning outcomes of eight students. The research was designed from a qualitative, multi-tiered design approach and was assessed through a constant comparative method of data analysis of interview responses, classroom observation, and worksheet assessments. The results showed that the use of KWL Charts influenced the teachers and learners toward a more inquiry-based approach and facilitated a more student-centered and collaborative learning environment, raising the level of interest and the amount of personal input given by the students.

Another reading strategy that will be used in this research is SQ3R strategy. The SQ3R strategy was found by Robinson (1941). Robinson (1941) states that SQ3R is one of the reading strategies which provide students with a systematic approach presenting a detailed step-by-step outline of what readers should complete and accomplish while reading. Besides, this strategy is also supported by Nuttall (1989) and Brown (2001). First, Nuttall (1989) states that SQ3R makes students responsible for guiding themselves in reading texts, and also it promotes purposeful and active involvement to students in reading texts. Second, Brown (2001) states that SQ3R is one of the principles for designing interactive reading techniques.

In the process of reading comprehension learning using SQ3R had 5 stages, namely survey, Question, Read, Recite, and reviews. Survey activities are carried out to get to know the concepts that will be studied by reviewing the reading titles, paragraphs, and forms of the discourse. The question has purpose to help students understand learning material by asking questions. Read is a reading activity to find the answers to student questions that have already been made in the question stage, these questions are about reading topics, main ideas, explanatory sentences, and reading organizations. Recite is an activity to retell the contents of the reading with its own language. If student could retell the content of the reading properly, it means that they are successful. Review is a rereading activity with the aim of correcting errors. This SQ3R method is expected to overcome the problem of students' low reading comprehension ability. Some previous studies have been carried out on the application of SQ3R strategy. Yenisa (2017) stated that SQ3R was more effective than teaching reading of hortatory exposition text without using SQ3R.

From those explanations above, the researcher applied two reading strategies in reading class to see which strategy between KWL and SQ3R can give better results on students' reading comprehension. In addition, to support the previous research findings, the researcher applied this technique in teaching reading in another level of education, that is senior high school. Furthermore, the researcher hoped this technique can be used by the teacher in teaching reading comprehension in the classroom.

II. Material And Methods

This research is a quantitative method which research is intended to find out whether KWL strategy and SQ3R strategy can be used to improve students' reading comprehension better or not. Then, in conducting this research, the researcher applies true experimental design with pretest-posttest control group design. The true experimental design which refers to (Hatch and Farhady, 1982) that is applied in this research is illustrated below:

$$G1: T1 \ X \ T2$$
$$G2: T1 \ O \ T2$$

Notes:
G1 : Experimental group
G2 : Control Group
T1 : pre-test
T2 : post-test
X : treatments (KWL Strategy)
O : treatments (SQ3R Strategy)

The population of this research was the sudents of second year at SMAN 4 Bandar lampung. The sample was XI MIA 4 with 32 students as the experimental class and XI IIS 2 class with 32 students as the control class. The research was conducted into several procedures, they are 1) determining the population and sample, 2) selecting the instrument materials, 3) administering the tryout, 4) administering the pre-test, 5) giving treatment, 6) conducting the post-test, 7) analyzing data, and 8) hypothesis testing.

III. Result

This research was conducted in order to find the difference between students' reading comprehension achievement by using KWL and SQ3R strategies. In order to answer the research question, the researcher used pretest and posttest. After collecting the data of students' reading comprehension achievement through the

pretest and the posttest, the researcher analyzed the data of students' reading comprehension achievement from both of the classes, KWL and SQ3R classes. The results of KWL and SQ3R classes' pretest and posttest could be seen in the table and below:

Table 1. The result of student's pre-test and posttest in KWL and SQ3R classes

	KWL Class		SQ3R Class	
	Pre-test	Post-test	Pre-test	Post-test
Min	40	50	30	50
Max	85	95	80	90
Mean	58.91	75.93	53.12	67.65
Gain	KWL: 17.02		SQ3R: 14.53	

From the table above, it can be seen that the scores of students' pretest to posttest in both classes were improved. The mean of students' pretest scores in the KWL class is 58.91 and, in the posttest, increased to 75.93 with gain scores 17.02 which means there is a significant improvement of students' scores before and after the treatment using KWL strategy. Besides, it can be seen that the minimum and maximum scores of the KWL class are also improved, from 40 to 50 for the minimum scores and from 85 to 95 for the maximum scores. From the table above it can be stated that the KWL strategy could be used to improve students' reading comprehension ability by helping the students in increasing their reading scores.

It can also be seen that the scores of students from pretest to posttest in the SQ3R class were increased. The mean of students' pretest in the SQ3R class was 53.12 and, in the posttest, increased to 67.65 with gain scores 14.53 which means there is a significant improvement of students' scores before and after the treatment using SQ3R strategy. Besides, it can be seen that the minimum and maximum scores of the SQ3R class were also improved, from 30 to 50 for the minimum scores and from 80 to 90 for the maximum score. From the table above it can be stated that the SQ3R strategy can be used to increase students' reading comprehension achievement by helping the students in comprehending the reading text easily. For the detail, it can be seen from Paired Sample Statistic, as follow:

Table 2. Mean Score of Pretest and Posttest in KWL Group

Group Statistics

	KWL	N	Mean	Std. Deviation	Std. Error Mean
RESULT	post-test	32	75.9375	11.67003	2.06299
	pre-test	32	58.9062	12.42619	2.19666

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
KWL GROUP	Equal variances assumed	.020	.887	5.652	62	.000	17.03125	3.01351	11.00733	23.05517
	Equal variances not assumed			5.652	61.757	.000	17.03125	3.01351	11.00686	23.05564

Table 2 above shows that the mean score improved from 58.90 in the pre-test to be 75.93 in the post-test. To prove whether the students' reading comprehension achievement improved or not, the researcher used the repeated measures t-test to analyze the data. The table above shows the result of t-test computation in which the t-value was higher than t-table $5.652 > 1.997$ and with the level significance $p < 0.05$ and sig. 2 tailed was

0.000. It means that teaching through KWL strategy technique could improve the students' reading comprehension achievement.

The mean of pre-test and post-test of students' reading comprehension achievement in SQ3R group was depicted as in the following table below:

Table 3. Mean Score of Pretest and Posttest in SQ3R Group

Group Statistics

	sq3r	N	Mean	Std. Deviation	Std. Error Mean
RESULT	Post-test	32	67.6562	10.54823	1.86468
	pre-test	32	53.1250	14.46631	2.55731

Table above shows that the mean score improved from 53.125 in the pre-test to be 67.65 in the post-test. In order to prove whether the students' reading comprehension achievement improved or not, the researcher used the repeated measures t-test to analyze the data.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
SQ3R GROUP	Equal variances assumed	5.064	.028	4.591	62	.000	14.53125	3.16494	8.20462	20.85788
	Equal variances not assumed			4.591	56.699	.000	14.53125	3.16494	8.19284	20.86966

The table above shows the result of t-$_{test}$ computation in which the t-$_{value}$ was higher than t-$_{table}$ $4.591 > 1.997$ and with the level significance $p < 0.05$ and sig. 2 tailed was 0.000. It means that teaching through SQ3R strategy could improve the students' reading comprehension achievement.

IV. Discussion

The results of this research showed that there is a significance difference in students' reading comprehension achievement after being taught through KWL and SQ3R strategies. It can be seen from the students' mean score on students' reading tests after being taught through KWL and SQ3R strategy. The students' mean score of pre-test in KWL group was 58.91. Meanwhile, their mean score of post-test after being taught through KWL strategy was 75.93, in which students' gain score was 17.02. Moreover, the result showed that the students in the SQ3R group got a better gain score than those in KWL group. The students' mean score of pre-test in SQ3R group was 53.12. Meanwhile, their mean score of post-test was 67.65, in which students' gain score was 14.53. The significance results gotten from the *Paired Sample t-test* in both groups is lower than alpha value. It indicates that there is significant improvement on students' reading comprehension achievement in pretest and posttest.

Theoretically, Ogle (1986) asserted that KWL can activate students' prior knowledge, retrieve information from the text, interpret the text, reflect and create personal knowledge. During the teaching and learning process, this strategy made students more courageous to present ideas and knowledge from what they have read from the reading text. They were not terrified to share their ideas or views with their friends. The students were asked what they knew about the topic, what they wanted to know about the topic, and eventually learned something from the text after they had read the passage. It is also supported by Hamdan (2014) who stated that KWL was useful and practical for students in improving their reading experiences. Students can accomplish more in summarizing reading passages, drawing the main ideas, and comprehending the text. Applying the KWL strategy in teaching reading comprehension made the students grasp the text well.

The finding that KWL strategy can improve students' reading comprehension achievement was also consistent with the previous research conducted by Pakpahan (2017). She proved that KWL strategy was effective to increase students' reading comprehension in Junior High School students. She said that using KWL strategy made her students were more enthusiastic during the learning process. Additionally, the three phases in this strategy (KWL) also can measure students' reading comprehension achievement.

Another finding is that SQ3R also could be used to improve students' reading comprehension achievement. SQ3R strategy, theoretically, provides a structured approach for students. Robinson (1961) says that SQ3R method is an efficient method for students to read faster, pick out the important points of the text, and

memorize it. It is a strategy that students may use throughout the reading process. Using this strategy, students first preview texts in order to make predictions and generate questions to help direct their reading. As students read, they actively search for answers to their questions, and, when they have finished reading, they summarize what they have read and review their notes, thus monitoring and evaluating their own comprehension. Thus, it can encourage them to think critically and have active and meaningful learning. It is also in line with Biringkanae (2018) who conducted research to improve students' reading ability using SQ3R strategy. The finding of her research showed that SQ3R strategy can serve to make the students more active in learning so that it can increase their reading comprehension significantly based on the result of the questionnaire in her research.

However, if we see the result of both strategies it is found out that KWL strategy gave a better result than SQ3R strategy. It can be seen from the mean score of post-test from both groups. KWL strategy is considered more effective to be used in comprehending the text since the first step of KWL leads the students to activate their prior knowledge and leads them to enhance the students' ability to interpret the reading material and adapt it as to cope with their cognitive background. It is also consistent with the finding from Erawati (2012) who conducted a comparative study between KWL and SQ3R strategies. She stated that SQ3R was less effective to be used to help students in comprehending the text compare to KWL strategy.

From the explanation above, the result of this research has shown that both strategies KWL and SQ3R strategy can be used to improve students' reading comprehension achievement in reading class. Additionally, both KWL and SQ3R strategies were effective in being implemented in Senior High School students.

V. Conclusion

Based on the result above it can be concluded that KWL strategy and SQ3R strategy can be helpful reading strategies that can be used in the teaching-learning process of reading class. After being taught using KWL strategy, students' reading comprehension achievement is significantly improved because students are engaged to activate students' prior knowledge before reading the text. KWL strategy also made students more courageous to present ideas and knowledge from what they have read from the reading text. In the SQ3R group, there is also an improvement in the students' reading comprehension achievement after the researcher applied SQ3R strategy. However, from the calculation, it can be concluded that there is a significant difference in the students' post-test mean between KWL and SQ3R group, in which the mean score of students who were taught by using KWL is higher than those who were taught through SQ3R strategy.

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