

TEAM-PAIR-SOLO TECHNIQUE TO TEACH READING COMPREHENSION OF EXPLANATORY TEXT

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Abstract: The purpose of this research was to investigate the level of the effectiveness of team-pair-solo to teach reading comprehension of explanatory text to Year-X students of “SMA Negeri 8 Pontianak” in Academic Year 2014/2015. This research was a pre-experimental research with one group pre-test and post-test design. The population of this research were students of Year-X MIA. The samples of this research were Year-X MIA₁. The technique of data collecting was measurement technique. The data were collected by applying pre-test and post-test through team-pair-solo to teach reading comprehension of explanatory text. The students score on pre-test and post-test was analyzed by using SPSS. The final computation shows that the effect size of the treatment was 0.904 (> 0.5) and considered very effective. It proves that the use of team-pair-solo was highly-effective to teach reading comprehension of explanatory text to Year-X MIA₁ students.

Key Words: Team-Pair-Solo, Reading Comprehension, Explanatory Text.

Abstrak: penelitian ini bertujuan untuk mengetahui tingkat keefektifan penggunaan tehnik team-pair-solo dalam mengajarkan pemahaman membaca teks explanatory kepada siswa kelas X “SMA Negeri 8 Pontianak” pada tahun ajaran 2014/2015. Penelitian ini adalah sebuah penelitian eksperimental dengan rancangan satu grup pre-test dan post-test. Populasi dalam penelitian ini adalah siswa-siswa kelas X ilmu alam. Sample penelitian ini adalah siswa kelas X ilmu alam satu. Teknik pengumpulan data adalah teknik pengukuran. Data-data diambil dengan menerapkan pre-test dan post-test melalui penggunaan tehnik team-pair-solo dalam mengajarkan pemahaman membaca teks explanatory. Nilai siswa pada pre-test dan post-test kemudian dianalisa menggunakan SPSS. Perhitungan akhir menunjukkan bahwa *effect size* dari perlakuan adalah 0.904 (> 0.5) dan dikatakan sangat efektif. Hal tersebut membuktikan bahwa penerapan tehnik team-pair-solo sangat efektif untuk mengajar pemahaman membaca teks explanatory untuk siswa kelas X ilmu alam satu.

Kata kunci: team-pair-solo, pemahaman membaca, teks explanatory.

Reading is one of the language learning activity. The purpose of reading is to get new information based on the reading content. Thus, the readers need the ability to understand the main point of a reading text. Celce (2001, p. 153) claims, “Reading is gradually being recognized as a valuable source of language input.” Linge (2000, p. 2) refers reading comprehension to the ability to think words to think words together into sentences and to understand the idea that the author is trying to convey in those sentences. The goal of reading

activity is the comprehension. It is a process where the students need to increase their understanding to the given reading text. Reading comprehension is one of the language skills that the students have to acquire and to achieve during the teaching and learning process. Kebudayaan (2013, p. 66). Schell cited in Dechant (1997, p. 237) classifies students' comprehension during teaching and learning process: 1) literal comprehension into: getting the primary, direct, literal meaning of a word, idea, or sentence in context, 2) interpretation: getting deeper meanings, anticipating, drawing inferences, making generalizations, reasoning from cause to effect, detecting, significance, making comparisons, identifying purpose, and 3) critical reading; evaluating the quality, accuracy, or truthfulness of what is read. Those three items refer to levels of students' comprehension of reading text.

Teaching reading is an activity of language learning which is intended to give the students' knowledge or skills of reading. Due to different abilities to understand a text, the teacher has to select the appropriate teaching technique to help students. One of the teaching technique that can be used is discussion group. Daeik (2004, p. 6) claims that the average students who read a text by using discussion group technique will understand the text, 50 percent better than those who do not. In addition, teaching reading through discussion group may increase the students' motivation Nuttall (2005, p. 161).

Besides, the availability of reading material is very important in teaching reading. The reading material is presented in the form of a reading text. The reading text can be an authentic material. According to Tomlinson (2012, p. 34) the authentic material is textbook, newspaper, magazine and article. According to Sahiruddin cited in Verawati (2013, p. 71) the textbook should be active learning; communicative competence support containing real word themes; and it focuses more on meaning activities rather than the form-focused activities, and lead the students to be autonomous learners. Thus, the teacher involves selecting textbooks to ensure whether that the books are relevant to the curriculum. The textbook for senior high school has to take up the principles of learner-centered learning, culture-oriented, and scientific learning approach

In Curriculum 2013, the students' activities in the classroom are modified into active learning. With cooperative teaching learning process learners are activated the students are asked to practice observing, questioning, associating, experimenting and networking. Kebudayaan (2013, p. 5). Curriculum' 2013 emphasize the implementation of Cooperative learning strategy. SMA Negeri 8 Pontianak is one of schools that implements Curriculum-2013.

There are actually various techniques to teach reading comprehension. One of the potential techniques to teach students reading skill is Team-pair-solo. This technique was introduced by Kagan (2009). Team-pair-solo technique is one of the cooperative learning technique Kagan (2009, p. 2). Richards (2001, p. 192) define cooperative learning as an approach to teaching that makes maximum use of cooperative activities involving pairs and small groups of learners in the classroom.

Kagan cited in Virginia (2012, p. 23) claims that team-pair-solo can be applied to teach reading activities. There are steps to teach reading comprehension. Firstly, students engage in reading activities or recognize the use of literary device in team. Secondly, the students make interpretation, inference or drawing conclusion in pair. Thirdly, the students construct a personal response to text individually (solo).

There are several steps that explain the general concept of team-pair solo Kagan (2009, p. 4.8). The first step of team-pair-solo technique is forming team. The teams can be heterogeneous, homogeneous, randomized and students-selected teams Kagan (2009, p. 7.4). This research

involves the heterogeneous teams which consist of four students each groups to support teaching reading process on team-pair-solo. Each teams are given a problem that is beyond the ability of lower achieving students. The team member make sure everyone in their team knows how to solve the question that given. In reading activities, the students can work in their team to accomplish the given task. The task is to construct the help for students to recognize the use of literary devices Kagan cited in Virginia (2012, p. 23)

The second step is that the students break into two pairs and in turn the each partner do a problem like the one that was solved as a team. There are two people working together to discuss the given problem. In team-pair-solo, after working as a team, the team is divided into pairs. In reading activity, the students must be able to understand the reading text. According to Kagan cited in Virginia (2012, p. 23) the tasks have to guide the students to interpret, inferred or conclude the given text with their partner. Therefore, the teacher has to prepare a task to lead the students to get a deeper understanding about the reading text shared with their partner.

After the students work in a team, they work in a pair. They go on to the last step, *solo*, in which one works individually. The basic principle of this last step under Vygotsky's theory (1978) can be inferred that every person's development includes the development inside the person as an individual. Because when people work on their own, they can use their own knowledge and understanding that they have already got as the result of the earlier discussions as groups of four and pairs. In this step, the students can solve similar questions alone, applying what they learned first as a team and then during the pair work.

METHOD

To investigate the effectiveness of team-pair-solo to the reading comprehension of an explanatory text, a pre-experimental research was conducted. Study involved a cluster sampling to be the subjects. This research applies both pre-test and post-test. Pre-test is aimed to measure students' prior-knowledge before a treatment is given and post-test is applied to measure the students' knowledge after a treatment has given.

Table 1: The design of pre-experimental research

Experimental	O₁	X	O₂
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The above design describes that O1 is the pre-test, O2 the post-test which was administered and X the treatment, that is, the use of team-pair-solo technique to teach reading comprehension of explanatory text. In this research, the treatment was given once to make the treatment work. The participants of the present research were taken from X MIA₁ consisting of 34 students. They are studying in Year-10 of SMA.

This research applied the measurement technique to collect the data. The pre-test and post-test were applied in this research to know the interval before and after the treatment. Both tests were measured. To measure the students' score in both pre-test and post-test of reading comprehension explanatory texts, multiple choice test are used as a tool of collecting data. The test consisted of 20 items with five options, one of which is a correct answer.

To answer the research question, that is, how effective the use of team-pair-solo technique to teach reading comprehension is, the collected data are computed with The Statistical Package for the Social Science Program (SPSS 22). This research used paired sample t-test statistic. According to Latan (2014, p. 124) paired sample t-test statistic is aimed to know whether or not there are differences between two impaired sample groups. It means that a sample recounted to different treatment in teaching reading comprehension of explanatory text. There are some criteria according to Latan (2014, p. 124) before computing paired sample t-test. First there are two groups' score. Second, both of groups are scores on the same variable. Third, for the paired samples t-test to be valid the differences between the paired values should be approximately normally distributed. Therefore the researcher has to examine normality level of the data. The steps or procedure are as follows Analyze>Descriptive Statistics>Q-Q Plots.

After examining normality data test, the researcher can do t-test. The steps are described as, Open tryout.sav data then click analyze -> Compare Means -> Paired -> Sample T-Test. Input variable Post in the dialogue field variable 1 and pre-test (X1) in variable 2 then click option and select 95% as Confidence Interval Level then click continue and click OK. The syntax is as follows:

```
Paired-samples tests:
T-TEST PAIRS=varlist [WITH varlist [(PAIRED)]] [/varlist ...]
All types of tests:
[/MISSING={ANALYSIS**} [INCLUDE]]
{LISTWISE }
[/CRITERIA=CI({0.95**})
{value}]
```

After all terms are fulfilled, the researcher can initiate paired sample of t-test on SPSS Program. Since it is a pre-experimental research and it aims to find out the effectiveness of the treatment, the effect size formula is used.

$$\text{Effect size } d = t \sqrt{\frac{n_1 + n_2}{(n_1)(n_2)}}$$

Morgan cited Latan (2014, p. 131)

The calculation is then categorized into the qualification of the effectiveness shown in the following table:

Table 1
The Qualification of the Effectiveness

ES 0-0.1	Weak
ES 0.1-0.3	Modest
ES 0.3-0.5	Moderate
ES > 0.5	Strong

Muijs (2004, p. 195)

FINDINGS AND DISCUSSION

Findings

From the computation using SPSS, the researcher obtains two results that can be applied to determine data normality. They are descriptive and analytical approaches. This research focused on the analytical result that can be seen in appendix 8. From the analytical table, it can be assumed that the result shows computation result according to Kolmogorov-Smirnov^a and Shapiro-Wilk.

According to Latan (2014, p. 368) Kolmogorov-Smirnov^a is used if the sample number is more than 50, meanwhile Saphiro-wilk is used if the sample number is less than 50. This research, involved the sample of consist of 68 samples. Sixty eight samples are obtained from the pretest and posttest of the students score. Therefore the researcher applies Kolmogorov-Smirnov^a to determine data normality distribution. The data can be considered normally-distributed when the significant value stated in the table > 0.05 . Meanwhile the data are not normally-distributed when the significant value stated in the table is < 0.05 in the table of normality test (table 2).

Table 2
Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
X1	,147	34	,061	,938	34	,055
X2	,142	34	,080	,940	34	,063

It can be seen that significant value computation of X1 is 0.061 and X2 is 0.080. It can be concluded that the data have been normally-distributed since the significant value > 0.05 and they have the same variants.

The researcher computed the dependent t-test and effect size. The result computation of dependent t-test by using SPSS is as follows:

T-Test

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T-TEST PAIRS=X1 WITH X2 (PAIRED)
/CRITERIA=CI (.9500)
/MISSING=ANALYSIS.
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Table 3
Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	X1	63,09	34	8,166	1,401
	X2	66,32	34	8,286	1,421

Table 4
Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	X1 & X2	34	,811	,000

Table 5
Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	X1 - X2	-3,235	5,058	,867	-5,000	-1,471	-3,730	33	,001

Based on displayed score value, the difference of average score of X1 and X2 is 3.235. From the result t-statistic or t-value = -3.730 is obtained with the degree of freedom (df=33). It resulted significant of $0.001 < 0.005$. According to the result or t-value of distribution is obtained with $5\% = 1.697$ out of probability. It is obtained t-value $>$ t-distribution or student t-test ($3.739 > 1.697$).

By using the mean score of the computation above, the researcher computed the effect size as follows:

$$\text{Effect size} = t \sqrt{\frac{n_1 + n_2}{(n_1)(n_2)}}$$

$$\text{Effect size} = -3,730 \sqrt{\frac{34 + 34}{(34)(34)}}$$

$$\text{Effect size} = -3,730 \sqrt{\frac{68}{1156}}$$

$$\text{Effect size} = \mathbf{0.904}$$

As shown in the above computation, the effect size is 1.55. It is categorized high.

Discussion

It is found that the use of team-pair-solo technique to teach reading comprehension of explanatory text is very effective. It can be concluded that the students' achievement in post-test got improved. In pre-test, the mean score of the students' achievement was 63.09. The treatments produced the significant difference between pre-test and post-test. In post-test, the mean score of the students in post-test was 66.32. This progress showed that the use of team-pair-solo technique to teach reading comprehension of explanatory text was successful to improve students' achievement in reading comprehension. The improvement of the achievement was considered an effect of the treatment. The treatment in this research is the use of team-pair-solo technique to teach reading comprehension of explanatory text.

In the treatment, the students sat in the group. They were given an explanatory text entitled earthquake. The topic was folklore. In the treatment, the researcher tried to make the meeting interesting. The researcher guided the students to learn more on generic structure of explanatory text so that the students could know more on how to take important points of each part of the reading text. The class was so alive with some students who tried to explain how and why an earthquake happened by using pictures. The researcher also taught the students the language features of explanatory text. Those language features were taught to help the students in making their own comprehension. Then, the students were asked to match some difficult word with the appropriate meanings by using literary device. According to Kagan cited in Virginia (2012, p. 23), the team task was constructed to help the students to recognize the use of literary device. The students showed their enthusiasm when they discussed in group. Then, the group broke in pairs. The students were asked to decide whether the statements were true or false based on the text that had been discussed. They shared their understanding with their partner. Kagan cited in Virginia (2012, p. 23) state "The tasks have to guide the students to make interpretation, inference or conclusion of the text given with their partner". They helped each other. S/he explained why they decided whether the statement was true or false to their partner who didn't get deep understanding about the text. At the end of the meeting, the students are asked to answer ten multiple choice questions individually.

By the treatment, the students' confidence and their courage got improved their reading comprehension skill. They dare to share their understanding about the given reading text. Here, the students showed their good progress. The pre-test and post-test measured the comprehensibility of the students related to the given text. In the post-test, the students showed a high significant positive progress than in the pre-test.

In conclusion, the use of team-pair-solo technique to teach reading comprehension of explanatory text has a strong effect to improve the students' achievement in reading comprehension skill. Although the researcher found out that team-pair-solo technique is effective to teach reading comprehension of explanatory text, but team-pair-solo technique can be more effective if the teacher pays attention to students' knowledge on how comprehending a reading text. In this research the researcher found that team-pair-solo technique can help students in reading comprehension of explanatory text, but the teacher should manage the class as effectively as possible because the students would get noise during teaching and learning process in the classroom.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Referring to the research finding, the researcher draws some conclusions. The conclusions are that the effect size of the treatment Team-Pair-Solo technique is at 0.903 ($ES > 0.5$). This score is categorized as strong effect. It means that the use of Team-Pair-Solo technique is a good technique to teach reading comprehension of explanatory text for senior high school students to Year-X students of SMA Negeri 8 Pontianak in Academic Year 2014/2015. Team-Pair-Solo technique can help students to get more information of a text by sharing their understanding with their group members. The use of Team-Pair-Solo technique in teaching reading comprehension at year-X students is considered good to apply in improving students' reading comprehension especially to help those students who are lacking in reading comprehension. Team-pair-solo can improve students' social skills, because the students can help one another to solve the problem. Team-Pair-Solo technique can improve students' motivation by giving support to their teammates or partners. Team-pair-solo can improve the students' academic achievement.

Suggestions

Based on the result of the research, the researcher gives some suggestions as: (a) The teacher can use Team-Pair-Solo technique as an alternative technique in teaching reading comprehension on explanatory text because it is effective. Not only in teaching reading comprehension on explanatory text, it can be applied in other types of text. Applying team-pair-solo technique can attract the students to be more active in the teaching and learning process. (b) The teacher should be considered to the students' English ability before putting them in a group. Because the teacher should create heterogeneous members' ability of their group. The heterogeneous ability members' group can help the students to help their group members who are lacking in English especially in reading comprehension. (c) The teacher should manage the class as effectively as possible such as preparing lesson plans, teaching materials and media that will be used in the teaching and learning process. It will help the teacher to focus on the teaching and learning process. Because in the Curriculum 2013, English subject only has one meeting a week. So the teacher will have limited time to explain material. (d) The teacher should ensure all the students do the task in group by cooperating. The teacher can check it by going around to each group to find out their difficulties and solve the problem. (e) The teacher should ensure that the students are helping each other and understand what they wrote and decided in their group by asking the students some questions randomly from each group.

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