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USING QUANTUM LEARNING METHOD IN TEACHING READING COMPREHENSION OF GRADE TENTH STUDENTS OF MAN 1 KOTA PALU

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ABSTRACT

The objective of the study is to find out the effectiveness of the using of quantum learning method in teaching reading comprehension of the grade tenth students of MAN 1 Kota Palu in the academic year 2024/2025. This pre-experimental research involved a sample of grade tenth students of MAN 1 Kota Palu which consisted of 19 students chosen by using the purposive sampling technique. The data were collected by using pre and post test. The data were analyzed by using statistical methods. This findings revealed a significant improvement in the student's reading comprehension. It was proved by the result of the t-counted (4.25) which was greater than the t-table (1.734) in the significance degree, (0.05). The conclusion of this research indicates that the using quantum learning method is effective in teaching reading comprehension in the classroom and provides a significant effect to improve the student's level of reading comprehension.

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INTRODUCTION

Reading activities have an important priority in the educational process. Judging from how important reading activities are, unfortunately, Indonesian students have a low reading rate. Some 25% of students in Indonesia attained level 2 or higher in reading, OECD average: 74%. At a minimum, these students can identify the main idea in a text of moderate length, find information based on explicit, though sometimes complex criteria, and can reflect on the purpose and form of texts when explicitly directed in reading text (OECD, 2023). Reading

activities must be followed by a reading comprehension. People's reading comprehension depends on how they link the ideas they already have and the process of recognizing meaning from the text Latifa and Manan (2018). Reading comprehension is a process in which readers construct meaning by interacting with text through the combination of prior knowledge and previous experience, information in the text, and the stance the reader takes in correlation to the text, constructing the meaning which is acceptable and accurate by connecting what has been read to what the students already know and think about all the information until it is recognized.

Reading in the Kurikulum merdeka requires learners to read, identify contexts, main ideas as well as detailed information in various types of reading texts with multimodal forms precisely. Students search and evaluate the details and gist of a wide variety of text types. Based on the document of the Ministry of Education and Culture, in phase E, students read and respond to a variety of texts, such as narratives, descriptions, procedures, expositions, recount and report. identify the author's purposes, developing simple inferential skill to help them understand implied information from the texts.

Quantum learning method is one of the methods that can improv students' reading comprehension. The quantum learning are tips, hints, strategies and the whole learning process that can sharpen understanding and memory, and make learning a fun and rewarding process (Bobbi DePorter &; Mike Hernacki, 2008). This method is one type of learning model that can be used to learn to read, which can create an environment that supports students to read and understanding reading, by making deliberate efforts to remove obstacles that impede the natural learning process. According to Win Wenger (2019) Through the concept of "bringing their world into our world, then deliver them to the world", the main principle of quantum learning reads: bring their world (Learners) into our world (Teachers), and bring our world (Teachers) into Their world (Learners). Quantum learning method making content more meaningful and relevant to students' lives. The frame of quantum learning are developing, experiencing, labeling, demonstrating, reviewing, and celebrating.

This study research has done in MAN 1 Kota Palu on 2024. Based on preliminary observation, researcher conducted a direct interview with the English teacher. Based on the interviews, the researchers found that most students in the classroom had difficulty understanding English reading text. This finding was supported by the teacher's statement that only 5 out of 19 students achieved passing grade or standard minimum of completeness 75> on the exam. This means that a few students still have difficulties in reading and understanding the content of the reading. Researchers found that they lacked confidence in learning English, and acknowledge their deficiencies in mastering fundamental vocabulary.

RESEARCH METHOD

In this research, the researcher conducted a pre-experimental research method to know whether or not using a quantum learning improves reading comprehension of the grade tenth students of MAN 1 Kota Palu. In addition, the design of this study is one-group pretest-posttest design where the researcher used one class by Sugiyono (2017). In sample selection, the researcher used purposive sampling technique to determined the sample and the sample of this

research was X-H. The instruments of data collection are pre-tests and post-test, the researcher gave questions in the forms of multiple choice, pairing, and essays. Researcher provided treatment for experiments after conducting pre-tests. Researcher used the quantum learning method in teaching reading comprehension, with 6 (six) treatments excluding pretest and post test.

RESULT AND DISCUSSION

The objectives of the study is to find out the improvement of the students' reading comprehension in literal and inferential levels through the use of quantum learning. In this study, the researcher applied pre-experimental research design using one group as the research sample it is class X-H consist of 19 students. Based on the findings of this study, the data analysis reveal that quantum learning method in teaching improves reading comprehension of grade tenth students of MAN 1 Kota Palu.

Result of the Pre-test

The researcher gave pre-test and post-test before and after treatments. The pre-test was given to find out the students' level in reading comprehension. The pre-test results for both classes are completely shown in the following tables, Arikunto (2006):

Table 1. Results of the pre-test

No	Initials	Scores		Total Score	Max Score	Standard Score
		Multiple choices and pairing	Essay			
1	AM	14	14	28	35	80
2	FA	15	11	26	35	74,2
3	MR	14	9	23	35	65,7
4	RA	14	10	24	35	68,5
5	MT	8	10	18	35	51,4
6	RH	7	12	19	35	54,2
7	AA	15	8	23	35	65,7
8	AN	7	12	19	35	51,4
9	AY	12	12	24	35	54,2
10	FR	11	9	20	35	57,1
11	JN	14	9	23	35	65,7
12	LT	11	9	20	35	57,1
13	NU	15	8	23	35	65,7
14	NR	15	10	25	35	71,4
15	RZ	15	10	25	35	71,4
16	SD	15	12	27	35	77,1
17	SZ	11	10	21	35	60
18	YL	8	10	18	35	51,4

19	FN	15	8	23	35	65,7
Total Score		**240**	**189**	**429**		**1,207.9**
Mean Score						**63.5**

According to the table above, there are two student that got the highest score, it is 80 or over than 75. While 17 students did not get the standard score or less than 75. Finally, the researcher got the results of the students' mean score in pre-test which is 63,5. by looking at the result of the pre-test, the researcher concluded that many students still got difficulties in understanding the text, students' reading level in literal and inferential need to improve.

After obtaining the total score, the researcher computed students' mean score by using formula :

$$M = \frac{\sum x}{N}$$

$$M = \frac{1.207.9}{19}$$

M = 63.5

It shows the mean score of the pre test is 63.5. It means that students reading comprehension skills is still low.

Result of the Post-test

The post-test used similar design as in pre-test but in different content, in order to know whether there is an improvement after the treatment or not. the result of the post-test can be seen in the following table :

Table 2. Result of the post-test

No	Initials	Scores		Total Score	Max Score	Standard Score
		Multiple choices and pairing	Essay			
1	AM	15	18	33	35	94.2
2	FA	14	18	32	35	91.4
3	MR	14	16	30	35	85.7
4	RA	14	16	30	35	85.7
5	MT	13	15	28	35	80
6	RH	15	14	29	35	82.8
7	AA	15	16	31	35	88.5
8	AN	14	16	30	35	85.7
9	AY	15	13	28	35	80
10	FR	15	14	29	35	82.8
11	JN	14	16	30	35	85.7
12	LT	15	14	29	35	82.8
13	NU	13	15	28	35	80
14	NR	15	16	31	35	88.5

15	RZ	13	13	26	35	74.2
16	SD	15	16	31	35	88.5
17	SZ	14	14	28	35	80
18	YL	14	13	27	35	77.1
19	FN	12	16	28	35	80
Total Score		**271**	**287**	**558**		**1.593.6**
Mean Score						**83.8**

Based on the table, it can be seen there are 18 students got score >75 while 1 students still got score under standard score. It is proven from the post-test's result in essay most of the students understood about to identify main idea, finding information and how to inference the text, while some of them still got difficulties in inferential level of reading comprehension. Thus, most of students' scores are increase after the treatment. The researcher then calculated the mean score of post-test by using the formula :

$$M = \frac{\sum x}{N}$$

$$M = \frac{1.593.6}{19}$$

M = 83,8

It shows that the mean score of the post-test is 83.8, it is higher than the pre-test mean score, the students' reading comprehension skills improved.

Deviation and Squared Deviation

After getting the mean score of pre-test and post-test, the researcher computed the deviation and square deviation in pre-test and post-test. The scores are shown in table below.

Table 3. Deviation score of pre-test and post-test

No	Initials	Scores		$O^1 - O^2$ (d)	d^2
		Pre-test (O^1)	Post-test (O^2)		
1	AM	80	94.2	14.2	201.6
2	FA	74.2	91.4	17,2	295.8
3	MR	65.7	85.7	20	400
4	RA	68.5	85.7	17,2	295.8
5	MT	51.4	80	28,6	817.9
6	RH	54.2	82.8	28,6	817.9
7	AA	65.7	88.5	22,8	519.8
8	AN	51.4	85.7	34,3	1171.4
9	AY	54.2	80	25,8	665.6
10	FR	57.1	82.8	25,7	660.4
11	JN	65.7	85.7	20	400
12	LT	57.1	82.8	25,7	656.2

13	NU	65.7	80	14.3	204.4
14	NR	71.4	88.5	17,1	292.4
15	RZ	71.4	74.2	2,8	7.8
16	SD	77.1	88.5	11,4	129.9
17	SZ	60	80	20	400
18	YL	51.4	77.1	25,7	660.4
19	FN	65.7	80	14,3	204.4
		1.207.9	1,593.6	385,7	8801.7

After obtaining the deviation score, the researcher counted mean deviation between students' score in pre-test and post-test by using the following formula :

$$Md = \frac{\sum d}{N}$$

$$= \frac{385.7}{19}$$

$$= 20.3$$

Then, the researcher counted the sum of square deviation as shown below :

$$\sum xd^2 = \sum d^2 - \frac{(\sum . d)^2}{N}$$

$$= 8801.7 - \frac{385.7^2}{19}$$

$$= 8801.7 - 971.94$$

$$\sum X^2 d = 7829.76$$

After getting the result, it shows that the mean deviation score of the pre-test and post-test was 20.3. Then, the researcher calculated the sum square deviation as known below:

$$t = \frac{M\,d}{\sqrt{\frac{\sum x^2 d}{N(N-1)}}}$$

$$t = \frac{20.3}{\sqrt{\frac{7829.76}{19(19-1)}}}$$

$$t = \frac{20.3}{\sqrt{\frac{7829.76}{342}}}$$

$$t = \frac{20.3}{\sqrt{22.89}}$$

$$t = \frac{20.3}{4.79}$$

$$t = 4.25$$

From the computation above, the researcher found that the t-counted is 4.25.

The objectives of the study is to find out the improvement of the students' reading comprehension in literal and inferential levels through the use of quantum learning. In this study, the researcher applied pre-experimental research design using one group as the research sample. In accordance with the design of the quantum learning method, in the first phase, namely Developing (*tumbuhkan*), students are actively involved physically by doing ice breaking together, this can help revive a fun and relaxed learning atmosphere. In this developing phase, students are also given an introduction using a short video, which then students are given simple triggering questions to explore students' curiosity. In the second phase, namely experiencing (*alami*), students are given the opportunity to be able to read the text directly and then be able to ask questions if there are sentences that are difficult to understand. In the third phase of labeling (*namai*) students give circle marks to words that are not understood, then the researcher helps students understand by using simple explanations so that students can easily understand. In the fourth phase of Demonstrating (*demonstrasikan*), students work on questions through a variety of learning resources such as quizziz, kahoot, bamboozle, etc. By using a variety of learning resources that have visual variants, it can help students in getting new learning experiences that are not monotonous. In the fifth phase, namely reviewing (*ulangi*), students are given the opportunity to ask questions and discuss related to the material that has been studied, in this phase the researcher also gives a feedback to the results of the quiz given. In the final phase, celebrating (*rayakan*) students giving each other appreciation, the power of affirmation sentences and self-reflection at the end of learning to liven up student motivation, the researcher prepares different affirmation sentences for each meeting which can then be read together with students.

CONCLUSION

Based on the findings of this study, the data analysis reveal that students' post-test score is higher than their pre-test scores. Specifically, the mean pre-test score is 63.5, whereas the mean post-test increase to 83.8 after the treatment that has been given, In addition, by applying 0.05 level of significance with 19 degree of freedom (df) or 19-1 =18 in one tailed test level of significance, the researcher found that the value of t-table is 1.734. Moreover, t-counted value of 4.25 is higher than t-table value of 1.734. In other words, quantum learning method in teaching significantly improves reading comprehension of the grade tenth students of MAN 1 Kota Palu.

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