The Effectiveness of Quantum Teaching Method in Teaching Reading Comprehension

(A Quantitative research at Madrasah Tsanawiyah Sabilu El-Muhtadin, Pandeglang)

Ahmad Taufik Walid1, Abdul Muin,2 Fitri Hilmiyati3

1,2,3 Department of English Education, Faculty of Education and Teacher Training, Universitas Islam Negeri Sultan Maulana Hasanuddin Banten, Indonesia
Jl. Jendral Sudirman No. 30 Kota Serang, Banten 42118

Submission Track:
Received: June 7, 2022
Final Revision: Dec 5, 2022
Available Online: Jan 06, 2023

Keywords:
The effectiveness, Quantum Teaching, Reading Comprehension

Abstract: The research is conducted based on the purpose of study, to analyze the effectiveness of the quantum teaching method in teaching reading comprehension at Madrasah Tsanawiyah Sabilu El-Muhtadin, Pandeglang. The method of the research was quantitative research by implementing quasi experimental design as the research method. The population of this study was the students of ninth grade of MTS Sabilu El-Muhtadin Pandeglang. The sample was divided into two groups, namely control group and experimental group. There were 30 students in control group and 30 students in experimental group. The experimental group was taught by using Quantum teaching method and control group was taught without using Quantum teaching method. After conducting the treatments and evaluating both pre-test and post-test have given, the researcher found that there was significant influence of using quantum teaching method to improve reading comprehension. After collecting and calculating the data, the value of t_observation is bigger than t_table: t_observation = 4.5 > t_table = 1.67 (5%), so H_o is rejected, and H_a is accepted. In other words, there is significant difference between group which use Quantum teaching method and group which did not use Quantum teaching method.

INTRODUCTION

English has four skills: speaking, writing, reading, and listening. Speaking is a very Language is one of the most important elements of communication. To communicate also to understand the individual meaning of others, we must use language as a world medium throughout. Kristin Lems said that “language is an important part of human communication with each other”. With language people can share feelings, idea, and emotions verbally or in writing (Kristin Lems, Leah D. Miller 2010). Language is something that is needed in everyday conversation in any situation and condition.

English used by a lot of people around the world. A lot of countries use English as a second language and more than 60 countries make English as official language. In English, students must master four skills, namely: writing, listening, reading, and speaking. Teacher must involve these four skills in the learning and teaching of the classroom process. Language skills that need to be learned at all levels of education and then reading is one of four important skills in learning. From reading material, students
can get a lot of knowledge, information, fun, etc. According to Linse, Reading is a set of skills that involves drawing meaning from printed words (Linse 2005). Reading is private because it is a cognitive or mental system which includes a reader in seeking to observe and reply to messages from the author some distance away in area and time (Tarihoran and Rachmat 2010).

Reading is the habit of using text to create meaning. The activity of connecting one idea with another idea. Combining ideas into a whole is an important part of reading is reading. It is not necessary to understand every word to read (Johnson 2008). Therefore, reading to understanding is the most important thing from it.

The writer discovered several problems in teaching activities: teaching methods are not compatible with teaching materials, and teacher evaluation and management are not effective. From these problems, one of the solutions is quantum teaching. Because it is good method for teaching reading comprehension.

THEORETICAL SUPPORT

Reading Skill

The Definition of Reading

Reading is a complex activity that is learned as the perception of understanding the text. When the reader reads the text, he decodes the text and has the information and knowledge to learn more the content of the text. Reading is integrated with visual and non-visual information (Johnson 2008). When you read, the visual. Information on the page is combined with the non-visual information in your head to create meaning. Readings are usually linked and linked. This is an important feature of the academic setting in the destination, where students typically read and write the samples from a magazine. Reading is an interactive process that takes place between reading and text strategies and basic knowledge.

Types of reading skill

Intensive reading, learners read in detail and have specific learning goals and tasks. It can be compared to extensive reading, where learners read text for pleasure and develop general reading skills.

The second is extensive reading means reading a lot, but not necessarily focusing on just one article. You can read from various sources to improve your reading skills. This is not to find the meaning, grammatical rules, or other key aspects of the text. The goal of advanced reading is to teach students to read directly and fluently in the target language, which is fun and requires no teaching skills. This type can be used as a basis for oral presentations or classroom discussions in other classes.

Reading Comprehension

In reading process that reading comprehension as important aspect. The main goal in reading activities is reading comprehension. In this study, reading and comprehension are relational. Reading comprehension refers to reading for meaning, understanding and entertainment (Linse 2005). People read the text not only to get information, but also to learn from the text, integrate information, criticize text and even for entertainment. According to Klingner (janette k. klingner, sharon vaughn, n.d.), reading comprehension is a process of creating meaning by coordinating many complex processes, including reading words, knowledge of words and fluidity. It refers to the ability to interpret the text and understand the meaning and relationship between the ideas conveyed in the text. Westwood said the understanding of the reading is presented in the text (Westwood 2001). Holistic reading means that the reader can coordinate several complex processes so that the reader knows the meaning of words verbatim,
which includes the reader's prior knowledge. Reading comprehension is a complex sequence of activities or an active process of forming text meaning. This means reading and reading words automatically, assessing prior knowledge, understanding vocabulary and concepts, and understanding basic principles and important ideas.

**Teaching reading**

Teaching is a process; it does not just provide teachers with information for students. Harmer said that teaching is not an easy task, but it is a necessary task, which will be very useful when we see the progress of students and know that we are helping to achieve them (Harmer 2010). It is true that some students find it difficult and stressful at times, but it should also be remembered that the best courses can also be fun. Brown stated that educating cannot be defined separately from learning. Teaching is to guide and encourage learning, enable learners to learn and create the conditions for learning (Brown 2007).

**Assessing reading**

Brown stated there are tasks of evaluation of projects in reading (Brown 2007), they are:

**Assessment task design: perceptual reading**

Read aloud: The test taker looks at separate letters, words, and/or short sentences and reads them aloud, one at a time, in front of the teacher. Since the assessment is reading comprehension, any verbal approach that can be identified from the target response is considered correct.

Multiple choice answers are not just a matter of choosing one of four until five possible answers. Some of which are specifically useful with low reading levels of other formats, include equal/different, circle answers, correct/false by letter, and matchmaking.

**Designing assessment activity: selective reading**

The multiple choices are the most popular method of testing reading knowledge with vocabulary and grammar, mainly for practical reasons. Easy to manage and can score quickly of the goals.

Editing task; editing grammatical or rhetorical errors is a widely used test method for assessing language reading comprehension.

Task depicted; The previous section described image tasks for recognizing symbols and words in perspective.

**Design of assessment activity: interactive reading**

Close tasks; The word "close" fills the gap in the incomplete (visual, auditory, or cognitive) image, the concept of reasoning in Gestalt psychology, and provides omitted details (from a schematic background). Created by an educational psychologist to capture abilities.

**Quantum Teaching**

The term "quantum" refers to the interaction between packets of energy in photon energy, and learning is the quantum interaction between students in the classroom and an effective learning environment.

Quantum is an agreement that learns the learning of its environment and is also linking the interaction and variation that is maximized in the learning process. It is focusing on relational dynamics in interactive classification as a framework and a basic reference for the learning process. It means the quantum teaching method more using the focus and the interaction of students.

When we use quantum teaching, we can teach use the right and sinister of students of students functionally "the left side brain in the association for logical analytical information, mathematical information and linear processing, feeling and
audio. It is more efficient in holistic information, integration and emotion” (Brown 2007). Each side brain has each function to strengthen the role. According to Bobby de Porter, the steps of Quantum Teaching are:

Class setting: the language chosen by the teacher, the way the teacher sympathizes with the students and the attitude of the teacher towards students in the learning process.

Basic is a handbook used by teachers in the learning process.

The area/environment is a way of arranging classes, lighting, coloring, setting benches, music and everything that supports the learning process.

The program is the creation of character elements that can foster student motivation and interest in learning.

**Core Elements of Quantum Teaching**

All aspects of the activity are carried out to create a comfortable and enjoyable learning environment. Weather-appropriate lighting and room temperature, varied classroom environment colors, unique decorations and decorations, and plants that create a peaceful atmosphere, as well as seating arrangements that are not boring. So, that everything is well looked after.

**The Procedure of Quantum Teaching**

Quantum teaching has the procedures they are grow, name, demonstrate, repeat, and celebrate.

1. Grow, grow students learning with students’ point of view that the topic delivered benefits students’ life.
2. Experiment, believe or bring common experience that all students can be understood.
3. Name, when the learning material is presented, the teacher provides keywords, concepts of concepts, formulas or input.
4. Demonstrate, students must demonstrate learning material that is taught, so that the student can dominate the material well.
5. Repeat, repetition will strengthen nerve connections and sort students' memory.
6. Celebrate, all efforts are made by students who deserve recognition. For students to have more confidence and more enthusiastic that participate in the next material.

**The Advantages and Disadvantages of Quantum Teaching Method**

It turns out that there is no best teaching method that is better than other teaching methods. This is caused by many factors, including objectives, teaching materials, teacher skills, student characteristics, situations, and conditions of the learning environment. Quantum teaching method has some advantages and disadvantages, they are (Widyansari 2014):

The advantages of quantum teaching method are Quantum theory introduces students to creative activities and makes it possible to develop creative products that help students and those around them. For example, if a class teacher teaches a student who is always accustomed to thinking creatively, new ones will be created much more creatively. Secondly, Quantum education requires emotions to generate high learning motivation. A high level of motivation can increase students' self-confidence, so students will not hesitate, feel ashamed, and want to develop the possibilities that exist. The fourth, Quantum education focuses not only on the importance of providing materials, but also on quality and meaningful interactions. Therefore, the teacher will explain to the students immediately. The fifth, Quantum teaching emphasizes highly successful
accelerated learning. For example, classical music accelerates students’ understanding and facilitates understanding materials provided. The sixth, Quantum theory focusing on building academic ability and ability in life. The seventh, Quantum education presents values and beliefs as an important part of the learning process. Therefore, the teacher should not only teach the material, but also silently have the character belong to the student. The last, Quantum theory prioritizes diversity and freedom, not uniformity and order. This allows these students to freely express their opinions and contribute with interest.

**The Disadvantages of Quantum Teaching Method**

Real experience is required. In quantum learning, teachers need to be creative and learning activities need to be more enjoyable, so the necessary experience can create a situation suitable for the above.

Enough time to motivate their learning. Quantum learning uses suggestive methods, so it takes a long time for the expected character to grow. Difficulty in achieving student abilities. Because each student has different skills, identifying each student's skills requires a process that is not easy to observe each student's behavior and interests.

Requires and demands expertise and skills from teachers. Quantum education requires teachers to be creative and make learning more enjoyable. This is a lack of learning resources, learning tools, and difficult situations. Limited infrastructure facilities hinder the implementation of these activities and the results of educational and learning activities are less effective.

**METHOD**

This research used quantitative and applied quasi-experimental methods. There will be two variables as a group in this research process. There is quantum teaching method as the independent variable and reading comprehension as the dependent variable. The search was conducted in Madrasah Tsanawiyah Sabilu El-muhtadin because the researcher had experience in teaching of this school as a volunteer teacher. Researcher received permission from English teachers and principals of Madrasah Tsanawiyah Sabilu El-Muhtadin in Pandeglang to conduct research on quantum teaching methods. The time of the researcher spent for this research in order to develop scientific paper was begun 27 December 2021 to 24 Februari 2022.

This study is composed of ninth-grade of Madrasah Tsanawiyah Sabilu El-Muhtadin. Those are two classes of ninth-grade, each class consist of 30 students. Two classes were used as the samples; the first class or IX A was a class that got treatment, and the second class or IX B was a control class. In require for the sample, the researcher uses a purposive sample. The qualification of the subject must be Ninth grade students of MTs Sabilu El-Muhtadin.

Researcher uses classroom observation (pre-test and post-test) in collecting the data.

**Pre-test**

After obtaining data from the class observation, the researcher performed the previous test in the experimental and control group. This phase was carried out to know the reading of the students before searching and as a measure between two groups. The researcher offers students an equal text related to the theme based on the curriculum and lesson for the ninth grade. The researcher gives himself instructions to provide an exercise document since he was linked to improving students' reading. Then the students do an exercise.
**Post-test**

The purpose of conducting the post-test was to know the reading comprehension of the students between experimental class and control class with diverse treatment. The form of the post-test corresponds to the form of the pre-test. Researchers provided 30 students with equipment to measure pre-tests, and post-tests were scored based on multiple-choice results. The post-test was in accordance with the reading rubric assessment based on Nuttal (1982: 20). The test was administrated to know the students’ score in reading comprehension.

**Observation**

As the research progressed, the researchers made observations. The reason is to analyse the situation of the students in the class and understand students’ problems and difficulties in learning English. The purpose of this observation is to obtain information about students' ability to learn English, especially in terms of comprehension and reading.

**Treatment**

The first step before doing this research, the researcher prepares the lesson plan for the groups. The goal of the lesson plan is to make the learning process become systematic. According to the teaching plan, the control group only accepts regular teaching reading, while the experimental group accepts suggested treatment to improve students’ reading comprehension.

From the results of the pre-test and post-test in the experimental class above, the author can conclude that the lowest pre-test score is 40 and the highest pre-test score is 75. After the author has treated quantum teaching method toward student’s reading comprehension of narrative text and conducted post-test, it is far based on the bottom rank in the post-test is 65 and the best rank in the post-test is 95.

Before determining the outcome of the hypothesis, the author proposes an interpretation using the following procedure:

- **Ha:** $t_{\text{observation}} > t_{\text{table}} = \text{There is the significant effectiveness of Quantum teaching method toward student’s reading comprehension.}$
- **Ho:** $t_{\text{observation}} < t_{\text{table}} = \text{There is no the significant effectiveness of quantum teaching method toward student’s reading comprehension.}$

**RESULT AND DISCUSSION**

From the results of the research above, the writer concluded that there is a significant effectiveness of the quantum teaching method on students’ reading comprehension. It can be seen that students get better grades with the quantum teaching method. This can be seen after comparing the pre-test scores (before the quantum teaching method) and the post-test scores (after using the quantum teaching method).

Based at the information received from manage and experimental class many of the common scores, and $t_{\text{observation}}$, the writer summarizes that teaching narrative textual content thru quantum teaching method has considerable effectiveness closer to students' reading comprehension. Quantum teaching method has been shown to enhance the understanding between the students. Quantum teaching method provides the story elements that students be easier to read the mean in the text of the story. Therefore, students who were treated in three sessions, the writer was able to read the story of the text easy by using quantum teaching method. Because they had been acquainted with the tale grammar elements, after they had studying post-test they will be smooth to examine the passage and solution it.
The students’ studying fulfilment advanced in post-test. This may be seen in the previously cited main rankings. In addition, in utilizing the quantum approach in the classroom, the writer feels that students always want to have fun in reading.

They may want to be actively involved in coaching and recognize interests as students may want to use their creativity and imagination. The effects confirmed that the experimental class (the students taught through the quantum teaching method) had a mean score (75), while the control class (the students who had been now no longer taught through the quantum teaching method) had a mean score (64). It may be stated that the gaining knowledge of fulfilment of the experimental class is better than the control class. So, it is able to be concluded that the quantum teaching method is powerful in facilitating students’ reading comprehension within the experimental group. This may be visible within the common cost of the two groups. There changed into an enormous distinction in students’ writing success among the experimental and control groups.

After testing the hypothesis using the T-test, to find out how the big influence of learning with quantum teaching method between the control class and the experimental class a test with using the effect size. From the calculation results obtained by using effect size value of 0.72 and when it seen based on the interpretation table of the effect size generated by the value of effect size obtained shows the treatment carried out by the researcher have an influence on the value of learning outcomes by 72% which is a high category. This means that learning reading comprehension using the quantum teaching method is enough to have a high influence on student learning outcomes in the class.

CONCLUSION

Based on the data obtained and the hypothesis proposed in the previous chapter, the author concludes on research before being given treatment, it turns out that the students' reading comprehension ability is no longer good, because this can be seen the general pre-test which states that many students get bad grades. The preliminary test proposal changed to 62.66. Their post-test ratings confirmed improvement, and the maximum score was better. The common post-test is 75. This method is used by students to improve their reading comprehension after treatment. The difference between students who received treatment with the quantum teaching method could improve reading comprehension of story texts, while students who did not receive treatment did not understand the material presented.

Quantum provides narrative elements that make stories easier for students to read in narrative texts. The impact of teaching reading using the quantum teaching method on improving students’ reading comprehension is quite large. Based on the data, the value of $t_0$ (t_{observation}) is greater than $t_t$ (t_{table}). $t_0 = 4.5 > t_{table} = 1.67$ at the 5% significance level with df = 30+30-2 = 58. This means that research $H_a$ (alternative hypothesis) is accepted and $H_0$ (zero hypothesis) is rejected. Based on these calculations, it is known that $r^2 = 0.72$. Than the interpretation is High. It can be concluded that the magnitude of the effect of the quantum teaching method on the class IX students of MTs Sabilu el-Muhtadin is high with a classification of 0.72. It can also be concluded that there is a big difference between learning to read with the quantum teaching method and learning to read with the conventional method.

REFERENCES

Creswell, John W., and Cheryl N. Poth. 2018. “Creswell, John W.”
Kristin Lems, Leah D. Miller, and Tenena M. Soro. 2010. TEACHING READING TO ENGLISH LANGUAGE LEARNERS.
Tarihoran, Na\'an, and Miftahul Rachmat. 2010. “Reading 1 Basic Reading Skills.Pdf.”
Westwood, Peter. 2001. “Reading and Learning Difficulties a Process of Teaching and Assessment.”
DePorter bobbi, Reardon. 2000."Quantum Teaching:Orchestrating Student Success"