THE EFFECT OF USING QUANTUM TEACHING IN IMPROVING THE STUDENTS' SPEAKING SKILLS TO THE ELEVENTH GRADE STUDENTS OF SMANEGERI 6 PADANGSIDIMPUAN IN 2015-2016 ACADEMIC YEAR

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ABSTRAK

Penelitian ini diadakan oleh penulis untuk mengetahui apakah adakah efek yang berarti dari penerapan pengajaran kuantum terhadap peningkatan kemampuan berbicara siswa pada siswa kelas sebelas di SMA Negeri 6 Padangsidimpuan Tahun Aajaran 2015-2016 atau tidak. Jumlah sampel adalah 76 orang siswa. Metode penelitian ini adalah Penelitian Tindakan Kelas (PTK) dan sebagai instrumen untuk mengumpulkan data, penulis menggunakan kuisioner untuk variabel X dan test, yaitu test lisan dan tulisan untuk variabel Y. Setelah pengumpulan data yang dibutuhkan, langkah selanjutnya yang dilakukan oleh penulis adalah mengidentifikasi seberapa besar peningkatan nilai kemampuan berbicara siswa sebelum dan sesudah penerapan pengajaran kuantum. Langkah terakhir adalah pengujian hipotesa dengan menggunakan analisa statistik yang dalam hal ini menggunakan Korelasi Produk Moment Pearson (r_{xy}). Hasil data menunjukkan bahwa nilai tengah dari kemampuan berbicara siswa sebelum mereka diajar dengan menggunakan pembelajaran kuantum berada dalam kategori rendah (66.57). setelah menerapkan metode pengajaran kuantum, kemampuan berbicara siswa meningkat menjadi kategori mampu. Hal tersebut dapat dilihat dari nilai tengah siswa, yaitu 74.73 dan 80.46. Total peningkatan kemampuan berbicara siswa hingga siklus terakhir adalah 20.86%, itu berarti bahwa pengajaran kuantum adalah metode yang baik untuk diterapkan untuk meningkatkan kemampuan berbicara siswa. Melalui analisa dari data yang dikumpulkan, telah ditemukan bahwa nilai korelasi atau pengaruh antara kedua variabel adalah 0.77. Itu artinya bahwa ada efek yang berarti antara penerapan metode pengajaran kuantum terhadap peningkatan kemampuan berbicara siswa pada siswa kelas sebelas di SMA Negeri 6 Padangsidimpuan Tahun Aajaran 2015-2016. Dan hipotesa dari penelitian ini diterima.

Kata Kunci : pengajaran quantum, kemampuan berbicara

ABSTRACT

This research is conducted by the writer in order to know whether there is a significant effect of using quantum teaching in improving the students' speaking skills to the eleventh grade students of SMA Negeri 6 Padangsidimpuan in 2015-2016 academic year or not. In this research the writer applies the sample of research. The number of sample is 76 students. The method of this research is Classroom Action Research (CAR) an as the instrument for collecting data, the writer uses the questionnaires for variable X and the test, both oral and written test for variable Y. After collecting the needed data, the next step which is done by the writer is identifies the improvement of the students' speaking skills' score before and after using the quantum teaching. The final step is testing the hypothesis by using the statistical analysis in this case the Pearson's Product Moment Correlation Coefficient (r_{xy}). The result of the data shows that the mean score of the students'

speaking skill before they are taught by using quantum teaching is in low category (66.57). After using the quantum teaching, the students' speaking skills has been improved upto capable category. It can be seen from the students mean score, they are 74.73 and 80.46. The total improvement of the students' speaking skills in the end of the cycle is 20.86%, it means that the quantum teaching is good to be applied in improving the students' speaking skills. Through the analysis of the collected data, it has been got that the value of correlation or effect is 0.77. It means that there is a significant effect of using quantum teaching in improving the students' speaking skills to the eleventh grade students of SMA Negeri 6 Padangsidimpuan in 2015-2016 academic year. And the hypothesis of this research is accepted.

Keywords : quantum teaching, speaking skills

I. INTRODUCTION

Speaking is one of the language skills which really important to be mastered by the students in order to tell their ideas. However, it is still found that the students' skills are still low in it. The low motivation of students to speak, it can be seen from the lack of student participation in the following speak in English. It is influenced by a complex issue that might be considered trivial, but has resulted in a stagnation of student learning which is evident among other terms that are less comfortable learning environment for students. They found no comfort in terms of both the arrangement of the place, learning, and teaching methods of teachers in the learning process.

In managing learning in the classroom, the English teachers must apply the real pedagogical, professional, and social personality to the fullest. There should be improvements in the system of teaching has been more dominant lead in conventional models to models more learning can make students learn more quickly with a comfortable, enjoyable and meaningful.

From some of the problems encountered in senior high school (eleventh grade), the researchers found: to foster student interest in order to improve learning English outcomes in eleventh in improving their speaking skills, it is necessary to apply a more effective learning model.

In this study the implementation of the Quantum Learning and Quantum Teaching for the Master and the application of Quantum Teaching for the students. That is, teachers are expected to be the teacher and students become Quantum Learner.

Based on the above explanations the researcher is interested to find out about how far the correlation between the application of quantum teaching and speaking, in this case the researcher focuses on the way of teaching method and the improvement of the students' speaking skill and makes the topic as her research as follow: "The Effect of Using Quantum Teaching in Improving The Students' Speaking Skill to the Eleventh Grade Students of SMA Negeri 6 Padangsidimpuan in 2015-2016 Academic Year".

Beside the above backgrounds, the researcher has chosen the topic it is based on the following considerations:

1. Quantum Teaching is one of teaching method that can be applied for helping the students to improve their four language skills especially speaking because the students express their ideas live by this way.
2. It is easy for the researcher to get the needed data, because it is appropriate to her educational background.
3. The researcher thinks that this research is useful, both for the researcher and the people for improving the knowledge about quantum teaching and speaking skills.
4. As far as the researcher knows that the topic has never been researched by other researchers before. So that it is still a new topic in the English educational research.

The researcher formulates the problem of her research as follows:

"How far is the effect of using quantum teaching in improving the students' speaking skills to the eleventh grade students of SMA Negeri 6 Padangsidimpuan in 2015-2016 academic year?".

The main purpose of conducting this research is in order to find out how far the effect of using quantum teaching in improving the students' speaking skills to the eleventh grade students of SMA Negeri 6 Padangsidimpuan in 2015-2016 academic year is.

And beside the above main purpose, the researcher conducts this research based on the following purposes:

1. In order to know about how far the using of quantum teaching is.
2. In order to know about how far the students' speaking skills is.

II. THE REVIEW OF LITERATURE

The Quantum Teaching

According to Henry (2009): "Quantum inspired words of the famous formula in the world of quantum physics, namely: "the mass multiplied by the speed of light squared is equals energy or $E = mc2$". This formula defines Quantum as interactions that transform mass into energy. Interaction is meant is the ability to change students' natural talents into energy that will benefit themselves and others.

As Suryono (2010) states: "Quantum Tearning is an herb or assemblies of various theories or views of cognitive psychology and neurology programming/neurolinguistic who much earlier had there".

In quantum teaching, there are some basic things that become important guidelines, namely:

1. The teachers formulate a plan learning experiences that opened carefully, the potential outcome or have a certain set of results.
2. Teacher should familiarize provide stimulation and motivation introduction to the experience.
3. Teacher should prepare a gladden environment and comfortable situation of studying. The using of the appropriate music is really recommended.
4. Teacher conveys and delivers the students to reach the goals through the varoious ways of learning, such as: playing games, situation changing, body movement enganging, hands-on, physiology, active participation.
5. Students can work individually or work in small groups, the whole group in the learning experience.
6. The students are placed in real situations, that student is able to solve the problems and not in replacement situations.
7. Students actively participate in the experience available, make your own decisions then accept the consequences based on the decision.
8. Overall presenting class experience has been poured into the post in connection with these subjects to broaden students' learning experience and understanding in carrying out various such experiences.

In addition there are many more

The Students' SpeakingSkills

According to Mario Pei (1974): "Skill is a present state of being able to make certain responds perform certain tastes, we say that a person has an ability to do something, we mean that he can do right now. Skill is the state or condition of being able; aptitude; competence; capability; power to do something, whether physical, mental, legal, etc."

According to Curriculum Based on Competence (2004): "Speaking is one of the four basic competences that the students should gain well." It has an important role in communication. Speaking can find in spoken cycle especially in Joint Construction of Text stage. In carrying out speaking, students face some difficulties one of them is about language its self. In fact, most of students get difficulties to speak even though they have a lot of vocabularies and have written them

well. The problems are afraid for students to make mistakes.

The Frame of Mind

    Method of teaching is one of the most important factor that always has it is own part in developing the language skills, especially in speaking skill. It means that basically, the appropriate implementation method in this case quantum teaching will support the students to increase their skills through combines context and content to achieve success in learning. So that it can be concluded that quantum teaching is a good method to be applied in improving the students' speaking skills.

III. THE METHOD OF RESEARCH

    From the topic of this research, it has been known this research is conducted in SMA Negeri 6 Padangsidimpuan. And this research is carried out in 2015-2016 academic year.

    In order to find out whether there is a significant effect of using quantum learning in improving the students' speaking skills, so that the researcher chooses some instruments that used in order to complete the needed data include observation, documents of teaching-learning process, interview and questioner. In order to support the data of teaching and learning process, pre-test and post-test were conducted in order to know how the students' scores better after they are taught using quantum teaching.

    There are three techniques of data collecting applied in this study, they are observation, interview, questioner and test in order to support the data of teaching and learning process.

    In this research, the researcher uses the Classroom Action Research (CAR), the researcher uses the CAR principle to collect the data. As Nisa Felicia, M.Ed says: "Classroom Action Reserach is research conducted by the teachers (in context of classroom) or other school components (principal, for example) while they are conducting action such as teaching,

implementing policies, creating or changing a system, etc."

    This research consisted of two cycles and each cycle consisted of four elements. The researcher described the cycles through the scheme of action research designed by Kemmis and Mc Taggart (adapted from Arikunto, 2006) as follows:

Figure 1. Classroom Action Research Cycle

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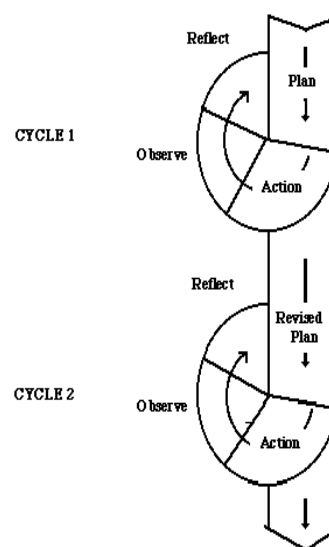
    The population of this research in the whole number of the eleventh grade students of SMA Negeri 6 Padangsidimpuan in 2015-2016 academic year. It consists of 420 students and they are divided into 11 classes.

    In order to make inferences about characteristics of a population, the researcher uses purposive sampling. The purposive sampling can be applied because there are some specific reasons on taken sample. The researcher takes two classes, they are XI-IPA 1 and XI IPS 1 as the sample of this research. It consists of 76 students.

    After getting the needed data, both the data of the implementation of using quantum teaching and the improvement of the students' speaking skills, the next step which is done by the writer is analyzing the data by using Pearson's Product Moment Correlation Coefficient (r_{xy}). The statistical analysis is used in order to know about how far the correlation between the two variables is.

The techniques of data analysis used by writer can be seen below:

1. The writer distributes the data into the table of calculation.
2. The writer calculates the students' speaking skills (mean). To get the mean within one cycle uses the formula by Anas Sudijono (2008) as follows :

$$M_Y = \frac{\sum Y}{N}$$

   In Which :
   M_Y = Mean
   $\sum Y$ = Sum of the students' speaking skills score
   N   = Number of students

3. The writer calculates the percentages of the students who have succeded in achieving the minimal completeness criteria (KKM) for the students' speaking skills. In gaining the class percentage which passes the minimal completeness criteria (KKM), the writer uses the formula:

$$P = \frac{F}{N} \text{ x } 100 \text{ \%}$$

   In Which :
   P   = The class percentage
   F   = Total percentage score
   N   = Number of students

4. Next step, the writer identifies the improvement score of the students' speaking skills from score in from pre-action to cycle 1, from cycle 1 to cycle 2, until finally identifies the total improvement from pre-action to the end of the cycle (cycle 2). The writer uses the formula as follow :

$$P = \frac{y2 - y}{y} \text{ x } 100 \text{ \%}$$

   In Which :
   P   = Percentage of Students' Improvement
   y   = Pre- action
   y^1 = Cycle 2 Result

5. The writer calculates the value of X^2, Y^2 and XY.
6. The writer calculates the value of ΣX, ΣY, ΣX^2, ΣY^2 and ΣXY.
7. The writer calculates the value of correlation between the two variables by using the statistical formula that stated above.
8. The writer consults the value of correlation (r_{XY}) to the table of interpretation of correlation that given by Anas Sudijono (1987) below:

Table 1. The table interpretation of r_{xy}

THE VALUE CORRELATION ($r_{XY)}$	INTERPRETATION
0.0 – 0.2	No correlation
0.2 – 0.4	Low correlation
0.4 – 0.7	Sufficient correlation
0.7 – 0.9	High correlation
0.9 – 1.0	Very high correlation

9. The writer tests the hypothesis of the research.

IV. THE RESULT OF RESEARH

Before implementation cycle 1, the researcher administered pre action by asking the students to read aloud and complete the missing word in the conversation text about daily activities. The result of their practices indicates that most students are low in speaking. Based on the observation and interview to the students, the problem is that they feel unmotivated to speak.

By using the collected data the writer can calculate the percentages of the students' scores in speaking skills as follows:

Table 2. The percentage distribution of the students' speaking skills in pre-action

NO	SCORES	FREQUENCY	PERCENTAGES
1	60	23	30.3 %
2	65	22	28.9 %
3	70	17	22.4 %
4	75	12	15.8 %
5	80	2	2.6 %
TOTAL		**76**	**100 %**

Based on the table above the writer can make the histogram graphic as follows:
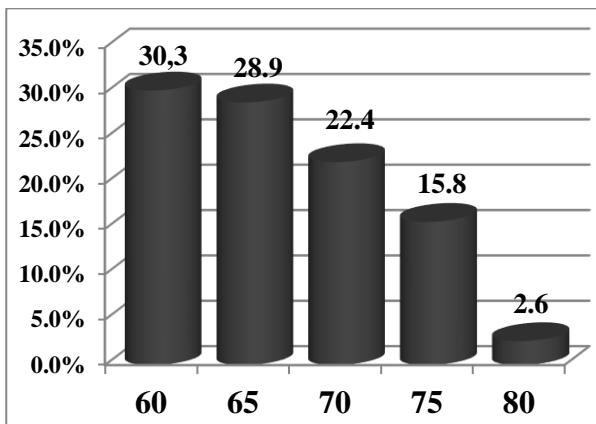
Based on that computation, the mean score of the class in pre-action is 66.57. It can be stated that the students' speaking skills can be categorized into low category. On the other side, to know the class percentage who have passed the minimal completeness criteria (KKM), the writer uses the formula as:

$$P = \frac{F}{N} \times 100\%$$

$$P = \frac{14}{76} \times 100\%$$

$$P = 18.42\%$$

From that calculation, there are fourteen students who passed the minimal completeness criteria, so after dividing with the number of students in the class and altering that into percentage, it could be derived about 18.42% students whom passed the minimal completeness criteria.

In cycle 1 the researcher started the lesson by motivating and giving the explanation and suggestion to pronounce words well. In order to get the students' attention, the researcher asked the students randomly through some simple funny questions then they enjoy to speak unintentionally and spontaneously. For example the writer asked: "What will you say if I enter your class by wearing the red stuffs from the bottom to the top?" or "Imagine that one day Justin Bieber gets lost and looked so confuse in front of your house, what is the first time you will do?". Some students answered with their own opinion while the others laughing. After that, the students are asked to complete the missing word in conversation text with the appropriate words and then they work in pairs to practice that conversation.

When the students were practicing their speaking, the researcher observed the students activities. It is done to know the students motivation and their activeness in doing the task as the effect of the use of quantum teaching. In this activity, the researcher wrote down the students development happened during the observation.

By using the collected data the writer can calculate the percentages of the students' scores in cycle 1as follows:

Table 3. The percentage distribution of the students' speaking skills in cycle 1

NO	SCORES	FREQUENCY	PERCENTAGES
1	70	25	32.9 %
2	75	32	42.1 %
3	80	17	22.4 %
4	85	2	2.6 %
TOTAL		76	100 %

Based on the table above the writer can make the histogram graphic as follows:
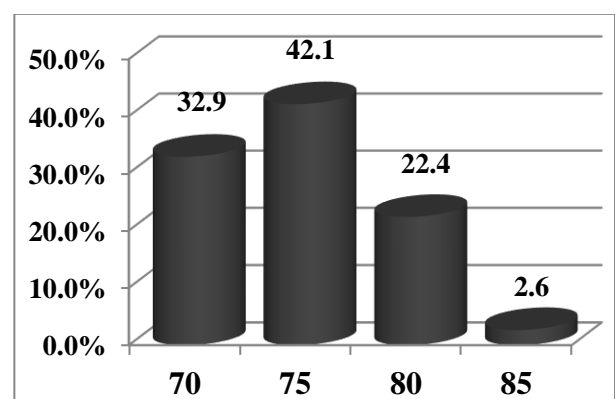
Based on that computation, the mean score of the class in cycle 1 is 74.73. It can be stated that the mean score of the students' speaking skills still has not achieved the value of the minimal completeness criteria yet. On the other side, to know the class percentage who passed the minimal completeness criteria (KKM), the writer uses the formula as:

$$P = \frac{F}{N} \times 100\%$$

$$P = \frac{51}{76} \times 100\%$$

$$P = 67.10\%$$

From that calculation, there are fifty one students who passed the minimal completeness criteria (KKM), so after dividing with the number of students in the class and altering that into percentage, it could be derived about 67.10% students whom passed the minimal completeness criteria (KKM).

The result of the implementation of cycle 1 shows that the students' speaking skills have improved, but it has not achieved the criteria of success. The minimal completeness criteria of the students' speaking skills are when the mean score of all the students is 75. The result show that the mean score of the students is only 74,73. It means that the study has not been successfully yet.

In cycle 1, the researcher asked the students to practice their speaking through their own choice themes of conversation. The result shows that some students get improvements in their scores and in their activeness in speaking skills, but some others are still under the target or the criteria. To know the improvement into percentage, the writer calculated as following:

$$P = \frac{y_1 - y}{y} \times 100\%$$

$$P = \frac{74.73 - 66.57}{66.57} \times 100\%$$

$$P = 12.25\%$$

In cycle 2, the researcher applied the different situation and atmosphere of learning. The researcher played instrumental music while giving motivation to the students then asked the students to sing one song together in order to celebrate their success in speaking improvement. After the students ready and get more confident, the researcher explained the activity for doing in that day. The students are asked to work in group for completing an outdoor learning mission. The students divided into four groups, each group are given a piece of paper that contain the silly alphabets of words and one missing word to build a sentence. They must re-arrange the alphabets first then they follow the next step by following the instruction written at the paper's bottom corner. The instruction tells where the next paper waiting to find until in the end every group must collect ten papers until finally the go back to the classromm. In this step, the students work by themselves. They wrote the ten incomplete sentences to their paper work, filled the missing words in each sentence until in the last step they read their result aloud in front of the class.

In this cycle, the result shows that the mean score is 80,46, that is higher than 75. It means that the study has achieved the score of minimal completeness criteria.

By using the collected data the writer can calculate the percentages of the students' scores in cycle 2 as follows:

Table 4. The percentage distribution of the students' speaking skills in cycle 2

NO	SCORES	FREQUENCY	PERCENTAGES
1	70	8	10.5 %
2	75	13	17.1 %
3	80	29	38.2 %
4	85	19	25 %
5	90	4	5.3 %
6	95	3	3.9 %
TOTAL		**76**	**100 %**

Based on the table above the writer can make the histogram graphic as follows:
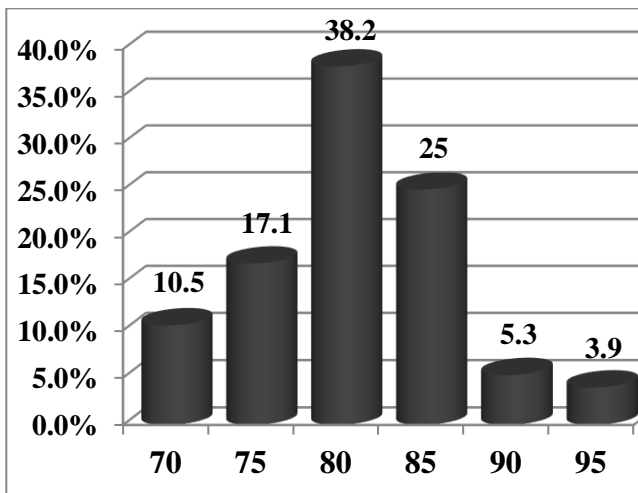
Based on that computation, the mean score of the class in cycle 2 is 80.46. It can be stated that the students' speaking skills can be categorized into capable category. On the other side, to know the class percentage who passed the minimal completeness criteria (KKM) using the formula as:

$$P = \frac{F}{N} \times 100\%$$

$$P = \frac{68}{76} \times 100\%$$

$$P = 89.47\%$$

From that calculation, there are sixty eight students who passed the minimal completeness criteria (KKM), so after dividing with the number of students in the class and altering that into percentage, it could be derived about 89.47% students whom passed the minimal completeness criteria (KKM).

The result of the implementation of cycle 2 shows that the students' speaking skills is improved from the cycle 1. The minimal completeness criteria of the students' speaking skills are when the mean score of all the students is 75. The result show that the mean score of the students is 80.46 and it can be categorized into capable category. It means

that the study has been successfully.

In cycle 2, the researcher asked the students to practice their speaking through group and individual activities. The result shows that some students get improvements in their scores and in their activeness in speaking skills, but some others are still under the target or the criteria. To know the improvement into percentage of cycle 2 with cycle 1, the writer calculated as following:

$$P = \frac{Y_2 - Y_1}{Y_1} \times 100\%$$

$$P = \frac{80.46 - 74.73}{74.73} \times 100\%$$

$$P = 7.66\%$$

But in order to know the total improvement of percentage, the writer calculated the result in pre-action and cycle 2 as following:

$$P = \frac{Y_2 - Y}{Y} \times 100\%$$

$$P = \frac{80.46 - 66.57}{66.57} \times 100\%$$

$$P = 20.86\%$$

Based on that calculation, it can be stated that the percentage improvement before and after using quantum teaching is 20.86%. It means that the quantum teaching is good to be applied in improving the students' speaking skills.

The result from the pre-action data shows the students' speaking skills to the eleventh grade students of SMA Negeri 6 Padangsidimpuan can be categorized into low category (66.57). While from the result of cycle 1 and cycle 2, it can be stated the students' speaking skills has been improved from low upto capable category (74.73, 80.46).

After analyzing the data, it was gotten that the analysis of the effect of using

quantum teaching in improving the students' speaking skills can be categorized high. It can be known from the calculating score that the using of quantum teaching in improving the students' speaking skills to the eleventh grade students of SMA Negeri 6 Padangsidimpuan in 2015-2016 academic year the value of correlation (r_{xy}) that is 0.77, in which after consulting to the table interpretation of r_{xy} it can be categorized into the high correlation category.

V. THE CONCLUSIONS AND SUGGESTIONS

The Conclusions

1. The mean score of the students' speaking skill before they are taught by using quantum teaching is in low category (66.57).
2. The use of quantum teaching in improving the students' speaking skills to the eleventh grade students of SMA Negeri 6 Padangsidimpuan in 2015-2016 academic year in cycle 1 and cycle 2 can be categorized into "capable category". It can be seen from the students mean score, they are 74.73 and 80.46.
3. The total percentage of the students' speaking skills improvement before and after using quantum teaching is 20.86%.
4. The hypothesis of this research is accepted.

The Suggestions

1. It is suggested to the English teacher to use the quantum teaching to teach students about the four language skills, especially speaking. Quantum teaching combines context and content to achieve success in speaking, and it is important to be confident with teachers abilities to teach and the students' skills to learn in order to reach the goal of learning.
2. It is suggested to the students to keep practice their English continuously because practice makes perfect in speaking and the other language skills.

3. This research is still far from being perfect based on the limitation of the writer in knowledge, time, energy and financial, so that it is expected to other researchers to carry out the deeper research concerning to the topic of this research.

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