# The Effect of World Cafe Learning Method on Students' Oral Communication Competence in Biology Learning

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**Abstract**

This study aimed to determine the effect of the World Cafe learning method on students' communication competence in biology learning on ecosystem concept. The method used in this study is a quasi-experimental method with a randomized control group only design. The research was conducted from September 2017 to October 2019. The research sample was class X IPA 6 and X IPA 3 which were taken by random sampling at one high school in Indonesia. The instruments used were observation sheets and test descriptions. The experimental and control classes have different results. This can be seen in the average scores of oral and written communication competence in the experimental class, respectively 80.6 and 70. Meanwhile, for oral and written communication competence, the control class scores respectively 74 and 54.8. The results of statistical tests on oral competence were 0.015 which were less than 0.05. So, it can be interpreted that the World Cafe learning method affects students' communication competence on ecosystem concept.

Keywords: World Cafe Learning Method, Students' Communication Competence, Biology Learning

## INTRODUCTION

The Elementary and junior education process standards state that the learning process in educational units is held in an interactive, inspiring, fun, challenging and motivating atmosphere that allow students to actively participate and provide sufficient space for initiative, creativity and independence according to their talents, interests and physical development as well as psychological learners (Republic of Indonesia, 2016). The standard is a reference used in the teaching and learning process to achieve learning goals that are fun for students. Students need to get fun learning in accordance with the educational process standards. One of them is by applying the World Café learning method.

This method is designed by informal situations that can encourage a fun and interesting conversation in dealing with a problem with a flexible format that can be adapted to the goals to be achieved. (Carson, 2011). Furthermore, according to Gisella *et al* (2018), world café is a method that can improve to oral communication competence. The world café is a cooperative learning method that is very appropriate for the learning environment. World café can facilitate dialogue and learning between participants, thereby motivating and responding during learning process (Löhr et al., 2020). Word café is an innovative learning that can be seen from collaborative students in articulating thoughts and ideas clearly and effectively through communication (Nurdyansyah & Andiek, 2015).

The World Cafe Community Foundation (2015) develops seven dynamic principles in supporting friendly and fun dialogue at a world cafe, namely: setting the context, creating a friendly space or environment, deepening questions, encouraging the contribution of all students, connecting diverse perspectives, listening to ideas and broad insights and the last is the sharing of collective discoveries. Apart from being able to create a friendly and fun dialogue, the seven principles of a world cafe can support 21st century competence.

One of the skills contained in the world cafe principle is communication competence. Communication is one of the process competencies related to the student's ability to obtain information in the form of conveying ideas or ideas to be more effective through oral or written (Marfuah, 2017). Student communication competence can be trained by the opportunity for students to speak in turns (Ersanti & Rahman, 2017). Communication is an important competence for students in the learning process so that feedback can be received.

Based on the results of an interview with Biology teacher at high school, it is known that the school has one vision, namely to create students who are able to live independently and be globally competitive in science and technology. This vision is an educational effort to improve competence so that students are able to face the millennial era in the 21st century. Teachers have used various models and methods in the learning process that are tailored to the material being studied. However, not all students in the ecosystem concept are able to achieve the Minimum Completeness Criteria (MCC) score. This is because each student has varying competencies. In addition, ecosystems are also complex concepts that are closely related to natural phenomenon that are directly related to living systems.

Based on this, it is necessary to have an approach that can support students' enthusiasm in communicating. Efforts to be made in this research in order to make the class more effective are to explain in detail the world cafe learning method and to make clear the division of roles effective, for the reasons described above, it is important to conduct a research on the effect of World Cafe learning method on students' oral communication competence in Biology learning.

**METHOD**

This research used quasi experimental methods and random control groups only. The population of this study were all students of class X IPA which is a total of six classes in one high school in Indonesia and the sample was taken from two classes, one as an experimental class, namely X IPA 6 and the other as a control class, namely X IPA 3.

The number of students' samples taken were 56 students who were divided into two classes, 28 students were the control class and 28 students were the treatment class. This sample was taken by random sampling technique because apart from not applying the superior class system in one high school in Indonesia, this research also did not pay attention to the strata or

abilities of the students but rather the diversity of competencies that the students had in each class.

The data collection technique in this study is to use non-test techniques. Non-test techniques are used to observe the implementation of the learning process and assess students' oral communication competence.

Before the instrument is used, the instrument has been tested using the ANATES version 4.0.5 application to test the validity, reliability, difficulty level, and distinguishing power. The data obtained from the results of this study were processed using the SPSS version 23 application to carry out normality tests, homogeneity tests and hypothesis tests.

## RESULTS AND DISCUSSION

### Oral Communication Competence

The Students' oral communication competence were measured using observation instrument. The results of the scores of students' oral communication competence in the experimental and control class can be seen in Figure 1.
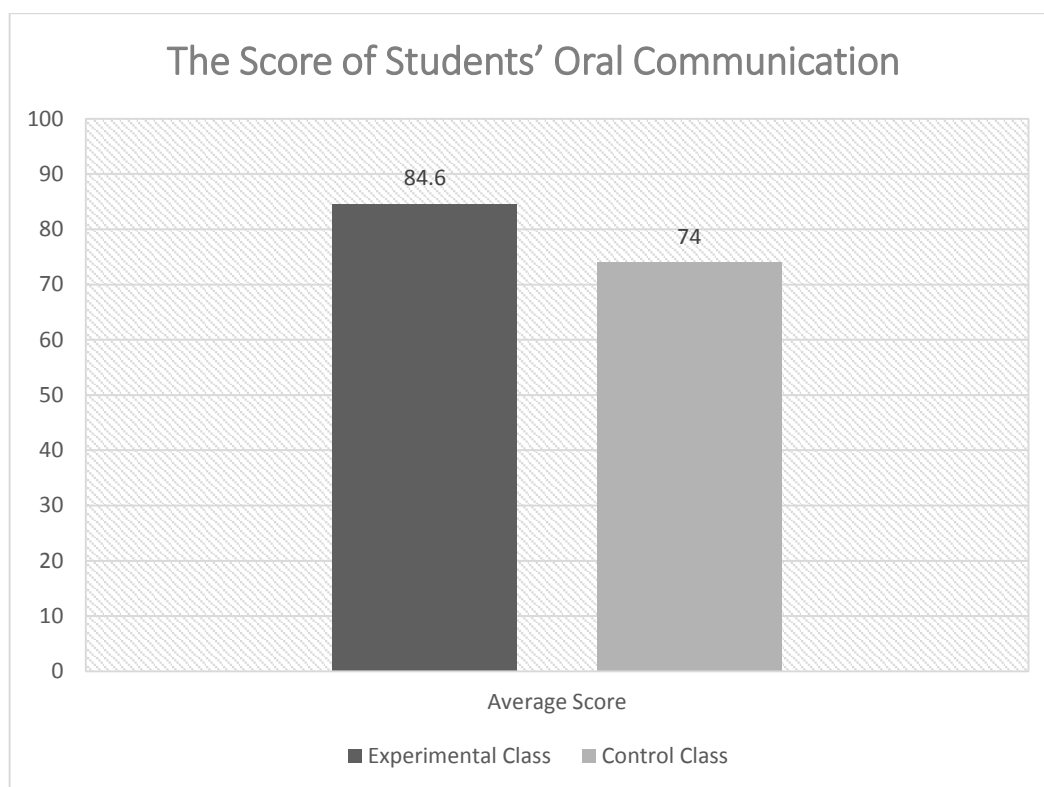


**Figure 1. The Score of Students' Oral Communication in the Experiment and Control Class**

The results of these measurements show that the value of oral communication skills in the experimental class with a score of 80.6 and in the 'very good' category is higher than the control class which has a score of 74 in the 'good' category. The difference that appears in oral

communication competence is because in the experimental class, there is a division of roles that are applied to each student in each group. The division of roles that is applied makes the learning process in the experimental class more focused. While in the control, the discussion steps carried out were dividing students into six groups. The absence of a division of roles for each group member resulted in the discussion process not occurring naturally, in contrast to the experimental class. In the experimental class, apart from the division of roles, the whole class room and cafe owned by each group were also designed in such a way as to the creativity of each group member. Seating arrangements were arranged by circling the tables at each cafe (group). The seat was facing the table in the center.

This seating arrangement affects student activities. Seating arrangement and ergonomics is one of the factors in realizing student learning comfort (Widodo, 2016). The opposite seat model which is usually used in group discussions makes it easier for students to interact with their friends (Tirtoni, 2018). The comfortable and relaxed classroom conditions affect student discussion activities in the learning process. This can be seen from the students not being burdened in carrying out the discussion process. Students look relaxed and enjoy speaking and listening activities during the discussion process.

Meanwhile, in the control class, the classrooms were not designed by either the students or the teachers, nor were they decorated with ornaments such as posters, tumbler lamps, flower vases, etc. like in the experimental class. In addition, although the arrangement of chairs had been arranged to facilitate the discussion process, the conditions were not like an experimental class. There were some students discussing without chairs and tables, but sitting on the floor. This is one of the factors that makes the student discussion process less conducive. The sitting position on the floor makes the students find their own comfortable position. There were students who sat straight, bent over, sitting position with their elbows resting on the floor, and there were also students who stretched out on the floor.

In addition to opposite seating arrangements design, in the experimental class, each table is provided with food and soft drinks like in a real cafe which adds to the relaxed atmosphere of the discussion participants (students).

In addition to providing food at the table for each group, each table is also decorated with flower vases and other ornaments (tablecloths, posters, cartons, containers for storing color markers, etc.) that support the theme (case) obtained. The posters provided for each group to be affixed to each cafe are only limited to beauty enhancement decorations, did not really affect the discussion process because the content of the posters provided only contained appeals to protect the environment and its living creatures. The linkage between the appeal to protect the environment and the concept of ecosystem was not understood by the students so that even the
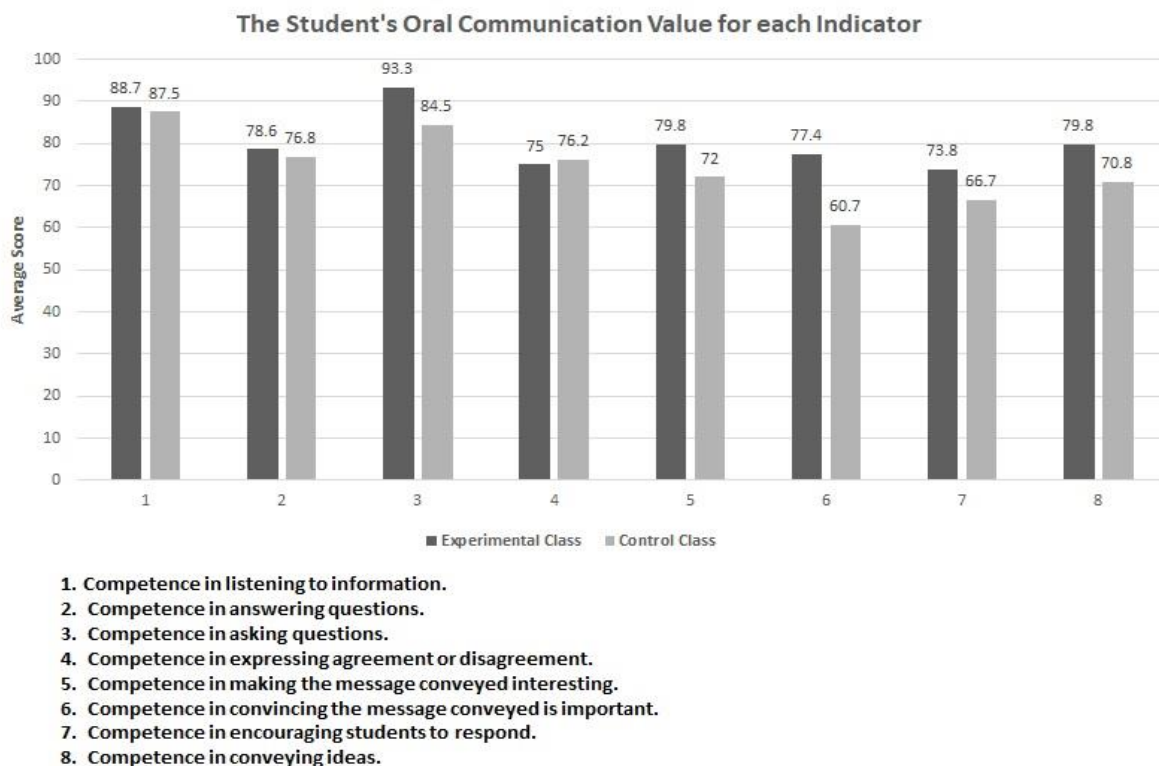
posters that were attached were only limited to displays. Only a few groups use posters as a medium to train students' speaking processes by explaining the content of the posters that are attached. Although explicitly the poster content did seem to be related to the ecosystem concept, students were not able to convey the relationship between the poster content and the ecosystem concept.

The affixing appeals posters to each group and flickering tumbler lights on the corners of the walls make the room livelier. Moreover, musical instruments were also played to accompany the discussion process. This adds to the comfortable atmosphere of the student discussion process. The musical instruments played in the learning process include vocal hits from Indonesia and abroad with the tempo of Grave and Largo. These musical instruments accompanied the opening activities in the discussion process, were able to increase enthusiasm and stimulate students' adrenalines in designing the room. Classical music instruments and relaxation also accompany the core activity (a group discussion process with five rounds of conversation, each round of conversation takes 10 minutes) which added to the impression of a classroom like a comfortable cafe so that it relaxed students in discussions. Musical instruments of Indonesian hits from several times that are still often heard by the millennial generation were accompanying the closing activities in the discussion process which kept the students in a happy mood until the end of the learning process. This is in line with Sofa *et al*. (2014) that stated the use of musical instruments as one way of creating interesting and fun learning.

The results of statistical tests carried out using the Independent Sample T-Test, obtained a significance value of 0.015. According to Sarwono (2009) if the significance value is <0.05 then H0 is rejected and if the significant value is> 0.05 then H0 is accepted. The Sig value. result (2-tailed) was less than 0.05, H0 is rejected and H1 is accepted, meaning it can be concluded that the world cafe method used in the learning process affected students' oral communication skills on the concept of the X class ecosystem

**Recapitulation of the Average Score of Student Oral Communication Skills on Each Indicator**

The recapitulation of the score of students' oral communication skills for each indicator in the experimental classes and control can be seen in Figure 2.

1. Competence in listening to information.
2. Competence in answering questions.
3. Competence in asking questions.
4. Competence in expressing agreement or disagreement.
5. Competence in making the message conveyed interesting.
6. Competence in convincing the message conveyed is important.
7. Competence in encouraging students to respond.
8. Competence in conveying ideas.

**Figure 2. Student's Oral Communication Value for each Indicator in the Experiment and Control Class**

These results indicate that all indicators in the experimental class are higher than the control. This is because in the experimental class, students use the world cafe learning method which has seven dynamic principles that are applied in the learning process according to the Lesson Plan (LP) which has been designed in such a way as to achieve the objectives of the learning process. The seven dynamic principles of the world cafe method are arranged in such a way as the LP for first and second meetings, namely setting the context, creating a friendly environment, deepening questions, encouraging the contributions of all students, connecting diverse perspectives, listening to broad ideas and insights and finally sharing collective discoveries.

During the discussion process in the experimental class, there were several principles that were not maximally played by the students according to the roles each student had, namely cafe waiters, cafe owners, and cafe buyers or visitors. It is one of the causes of the indicators of students' oral communication competence which can be seen in the graph above, between the experimental and control classes which are not too significant, only in the range 0.1 - 0.5 even though the scores are in the 'good' until 'very good' category range. There are three indicators of oral communication competence in the experimental and the control class obtained scores that were not much different, namely indicators in hearing information, answering questions and expressing agreement or disagreement with the respective scores of 88.1, 78.6 and 75 percent in the experiment class and 87.5, 76.8, and 72.6 percent in the control class.

As for the role that students did not play optimally in the learning process of the experimental class, in which some cafe hosts did not convey the rules of the game in the discussion in the last two rounds, the host cafe also did not optimally encourage discussion participants to be enthusiastic and continue to participate actively, especially in affirming their agreement and disagreement with what was conveyed by other students (cafe owner).

The host cafe could not play the timing properly, especially in the transition to the next round, which tend to be played by the teacher when switching to the next round. This made the discussion process longer and less focused, it just flowed so that the teacher was a bit inconvenient when reminding students of each discussion group to return to discussion according to the existing rules of the game. On the other hand, the timing of each shift in the last few rounds was quite time-consuming because the atmosphere of the discussion was quite noisy, causing the teacher to be quite inconvenient when switching conversations in the next round in leading students to move other cafes.

Besides the role of some of the host cafes which were not running optimally, some students who act as buyers / visitors on several occasions, especially when visited by certain groups, tend to be controlled by the cafe owner and the host cafe, they tend to prefer to be quiet and listen to what was delivered by the cafe owner and cafe host. However, this activity is not a negative subject because the activities carried out by some students who tend to listen on several occasions were positive activities to compensate for other students who were active in speaking. This is n line with the word café principle stated by Mumpuni (2015), the world cafe method is a learning method that helps students find difficulties in expressing opinions in class and can encourage students to learn more deeply.

There are eight indicators of competence used in this study. The first indicator is competence in hearing information. Both the experimental and control class, the scores obtained for this indicator were in the 'very good' category, 88.1 in the experimental class and 87.5 in the control.

This situation indicates that students are quite active when listening to information about ecosystems, such as problems related to ecosystems, factors that cause damage to ecosystems, solutions offered by students to ecosystem damage. The activeness of listening to these students can be seen when students pay attention to the speaker with their eyes focused on looking at them while conveying information without making meaningless body movements. Furthermore, Martoredjo (2014) states that in sensing, the process of listening means paying attention to the words of the message to be conveyed and also at the same time receiving nonverbal signs such as body language, facial expressions and other similar things. Students often show information listening competence in the control class, because the tendency of

students who have a low level of confidence in mastery of certain materials tends to choose to listen. While in the experimental class students' listening skills emerged because they were able to place positions/ roles when they spoke or listened according to the division of roles that were applied.

The second indicator is the skill in answering questions with a total score of 78.6 in the experimental class and 76.8 in the control class, both of which are in the 'good' category. The competence that appear in second indicator in both the experimental class and the control class were seen when students are able to answer questions, both from worksheets provided by the teacher and from other students. Students' skills in answering questions about problems that occur in the environment such as water pollution, illegal fishing, etc., in the experimental class appeared more frequently than in the control class although the difference was not too significant. The cause of this problem is explained in the research conducted by Mustika (2014), the discussion format in the world cafe method in the experimental class consists of several turns or movements from one cafe to another every few minutes. The rotation or movement from one cafe to another, which is applied in this study, trains students' competence, one of which is the competence in answering questions because the round format is able to build conversations with various insights at each round of discussion.

The third indicator is the competence in asking questions with a total score of 92.3 in the experimental class and 84.5 in the control class, both of which are in the 'very good' category. This indicates that students' curiosity was very high about cases or ecosystem problems that either occur naturally or as a result of human activities such as landslides, tsunamis, floods, and water pollution which were presented in the questions in the worksheet provided to each group. The third indicator in the experimental class is an indicator that is often shown by students. The third indicator was more often shown by students in the experimental class than in the control class because in the experimental class, not only students with high knowledge participated in the discussion forum, students who have less knowledge of the material were also carried away to be enthusiastic about the discussion forum. They also try to show activity by continuing to ask questions. The skills in asking these questions were seen when students raise their hands and ask for an explanation of the information conveyed by the speaker in each round of discussion conversations. This is in line with Widodo (2006: 2) stated that the purpose of asking questions is to get an explanation, as an expression of curiosity, even just to get attention.

The fourth indicator is the competence in expressing agree or disagree, with a total score of 75 in the experimental class and 72.6 in the control class, both of which are in the 'good' category. The competence to express agreement and disagreement can be seen when students nod and / or said the word yes when expressing agreement, while when expressing

disagreement, the student shook his head and said the word no. Even in the experimental class, when expressing agreement or disagreement, students tried to convey it by giving examples of cases such as agreeing with the speaker's opinion that there is a need for activities carried out by students in cases of illegal logging.

An example of positive activity based on the approval of other students for the speaker that needs to be carried out in cases of illegal logging is inviting all students from various levels (classes), coordinated by the Student Council, to carry out reforestation activities of the surrounding deforested forests due to the activities of illegal loggers. In line with Indriastuti (2018) in submitting rebuttal to a problem or event, it must be conveyed logically and use strong facts and opinions. However, in the experimental class, this fourth indicator is one of the indicators with the lowest value when compared to other indicators. One of the causes is the inadequacy of the host cafe in certain rounds in reinforcing other students to confirm their agreement or disagreement with some opinions regarding ecosystem cases that occur.

The fifth indicator is the competence in making messages, with a total score of 79.8 with a 'good' category in the experimental class and 72 with a 'good' category in the control class. The competence in this fifth indicator appeared more often in the experimental class when students were able to convey messages systematically, and with clear and concise short sentences. In the experimental class, the discussion process is accompanied by music that adds to the impression of being relaxed and comfortable. Students' vocabulary in the experimental class was better than in the control class so that the experimental class students were able to systematically compose sentences and choose which sentences are good so that are able to make the message conveyed to listeners. It is interesting because it can be understood by students clearly. This is also in line with Gunawan (2004: 257) stating that the use of music instruments in the learning process has many advantages, one of which is stimulating reading interest, psychomotor and vocabulary.

The sixth indicator is competence in convincing important messages, with a total score of 77.4 in the 'good' category in the experimental class and 60.7 in the 'good' category in the control class. The competence in this sixth indicator appeared when students were able to convince listeners that the message they convey is important by conveying information about ecosystem problems such as the tsunami that occurred in the Sunda Strait recently, forest fires that often occur in several areas due to illegal logging and other problems based on data from several reference sources such as books and the internet. The competence on the sixth indicator have a higher score in the experimental class than in the control class because in the learning process, the experimental class applies the world cafe principle designed by the world cafe community foundation (2015) which is listed on the first and seventh principles, namely

regulating context and sharing collective findings. This principle is a reference in designing the lesson plan (LP) for the experimental class.

In accordance with the LP designed for the experimental class, before starting the discussion process with representatives of several individuals from various groups in each cafe, students were given 10 minutes for each group to read literature from various reference sources and discuss questions according to the theme or cases obtained in each group. Meanwhile, in the control class LP, there was no special time to read the literature. The questions on the worksheet were answered during the discussion process. This made the experimental class students more competence in conveying information based on clear data and sources of information than the ones in the control class during the discussion process.

The seventh indicator is competence in encouraging students to respond with a total value of 73.8 with a 'good' category in the experimental class and 66.7 with a 'good' category in the control class. The student's competence in this seventh indicator appeared when the speaker reinforced the information or message conveyed by emphasizing the message. The emphasis that the speaker exerted was seen when the speaker raised his voice and also repeated what he was saying. Competence on the seventh indicator have a higher value in the experimental class than the control class because in the experimental class other than the cafe owner who talked, the cafe host or discussion guide had an active role in encouraging students to respond. Even on several occasions, there were some cafe hosts who did not play optimally in carrying out its role. The emphasis made by the host cafe refers to the fourth principle in the world cafe to encourage and provoke students to respond to the information presented (The World Cafe Community Foundation, 2015). Both the speaker and the cafe host in the experimental class often provoke and encourage listeners not only one listener, but almost all group members are encouraged to respond to what the speaker said. Meanwhile, in the control class, when there are students who have represented in responding to what the speaker conveyed, the speaker tends to continue the next message or information and no longer emphasizes other listeners on the information conveyed.

The eighth indicator is the competence in conveying ideas with a total value of 79.8 in the 'good' category in the experimental class and 70.8 in the 'good' category in the control class. The competence to convey these ideas can be seen when students had confidence in the arguments and ideas that arise on problems in the questions presented in the worksheet such as providing solutions to the problem of flooding which is one of the ecosystem problems that occur by giving examples such as when disposing of garbage is always in its place and providing an appeal in protecting the environment by making creative writings posted in the school environment. The eighth indicator appeared more often in the experimental class than in

the control because the questions designed in the experimental class are more in-depth than in the control class. These questions stimulate students to have the ability to analyze and the ability to provide solutions to problems presented to questions that are relevant to environmental problems in the environment. According to Schieffer et al (2004) questions that are open, simple and clear will generate new insights for students. Exploration of students' creative and imaginative thinking will be awakened when faced with critical questions about a problem. The questions on the worksheets that are directly related to real life seem to be able to train students' skills in conveying ideas.

## CONCLUSION

Based on the results of the study, it can be concluded that there is an effect of the world cafe learning method on students' communication competence on ecosystem concept. Oral communication competence scored 80.6 with a 'very good' category for the experimental class and 74 with a 'good' category for the control class. Meanwhile, the students' written communication compotence obtained a percentage score of 70 in the 'good' category for the experimental class and 54.8 with the 'poor' category for the control class.

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