



THE COMMUNICATION SKILL OF JUNIOR HIGH SCHOOL STUDENTS IN ENVIRONMENTAL POLLUTION TOPIC LEARNING THROUGH CONTEXTUAL TEACHING LEARNING MODEL

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Abstract:

Communication skill becomes one of the parameters in determining the success of students learning improvement. The learning process has to be meaningful for the students in order to apply the results and experiences in the real situation. The Contextual Teaching Learning (CTL) is comprehensive learning which connects the learning material to real life. It aims to make the students able to implement it in real life (in family, school, neighborhood, people, workforces, and citizen context). The learning process is supported by learning devices. This research aims to describe the students' communication skill on the topic of environmental pollution through CTL learning model. This research is a research and devices development with steps that modify the 4-D model (Define, Design, Develop, Disseminate). The research occurred on January – October 2018 at MTs Muslimat Nahdlatul Ulama Palangka Raya. The communication skill data was obtained on the field test which was done by calculating the average results of communication skill indicators when the students were doing the student worksheet in groups. The data analysis was done through descriptive quantitative. The results showed that: the communication skills consist of (1) the ability to work in groups, (2) the ability to communicate verbally (delivering ideas/notions/comments), (3) the ability to ask questions, (4) the ability to answer the questions (giving explanations) and (5) the ability to value ideas, suggestions, and friends' opinions are reaching very good category.

Keywords: communication skill, contextual teaching learning model, research and development, learning devices, environmental pollution

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1. Introduction

US-based Partnership for 21st Century Skills (P21) identifies the required competencies in the 21st century, those are the 4Cs: communication, collaboration, critical thinking, and creativity. The communication skill becomes one of the required skills and competencies needed by the students to face life in the working life and as the citizen in the 21st century (Wagner, 2010). Furthermore, the intended skill is effective communication in both orally and in writing. Teachers can observe the students in understanding a concept if the students can communicate their knowledge both orally and in writing. One of the skills that can be used as an indicator of success and improve the students' learning process quality (Budiati, 2013). Communication skill can be trained in teaching and learning activity.

The Contextual Teaching Learning Model (CTL) can be an alternative to train communication skill. Komalasari (2010) stated that the learning that can involve students actively in the learning process is the learning that based on the constructivism theory. CTL stresses on the students' involvement process to be able to find the learned materials and connect it to real life, so it pushes the students to apply it in their real-life (Hamruni, 2012). This is comprehensive learning which consists of the interrelated components if it is implemented will give the based-on role results (Sukmadinata, 2012). The contextual learning stresses the relation between learning material and the reality of students, so the students can connect and implement the learning results in real life (Warno, 2015). Rusman (2013) added the CTL approach is a learning concept that can help the students in linking between taught materials with real-life and pushing the students in creating the relationship between their knowledge and its implementation in their life as a family and neighborhood member. The implementation of CTL model needed the planned learning devices which in line with the learning topic characteristics.

The environmental changes become a hot issue. The occurring environmental problems are an important issue that happens very close to human life. One of the topics on the Science subject of VII class is the Environmental Pollution topic. The learning of Biology has to be able to contextualize the objects so the students realize the facts of environmental pollution and attempt to find the solutions. The learning process has to be meaningful for the students so they can implement the results and learning experiences in real life. The essences of contextual learning are mean, meaning, be interpreted (Johnson, 2011). CTL based learning devices are needed to support the optimization of the learning process.

Learning device is a tool or equipment to do the process that makes the teachers and students possible to do the teaching-learning process. It becomes a guide for the teachers to do the teaching in the class, laboratory, or outside the class (Devi, 2009). Some researches related to CTL based learning for communication skills are Febrinal (2016) who concluded that contextual learning can improve the students learning activities and mathematical communication skill. Haji (2012) reported that the students' mathematical communication skill which was taught through contextual learning is

better than students who were taught through conventional learning. Wiyono and Budi (2018) concluded that the student group that using CTL based learning method showed higher Science and communication results than students who were taught using direct learning method.

The research using CTL concept by Pinwanna (2015) explained that the learnings using CTL have effectivity criteria of 90,09 / 81,38 which reached the criteria above 80/80, and most students have high cognitive, affective, and behavior in using CTL.

The learning of environmental pollution will be very meaningful if it is presented in CTL. Correlated with this reason, the writer emphasized the research question of "How is the communication skill of junior high school students in the learning of environmental pollution through Contextual Teaching Learning?"

2. Material and Methods

This is development research using the 4D model that consists of Define, Design, Develop, and Disseminate steps. This research is limited only on the Define, Design, and Develop step. The research is focused on the develop step (more specifically: field test). The research occurred on January – November 2018 at MTs Muslimat Nahdlatul Ulama Palangka Raya. The research subjects on the field test are 40 students of VII-B class. The students were divided into five groups in order to facilitate the communication skill.

The effectivity data was acquired from the students' communication skill result in the field test step. The analysis of students' communication skill was done by calculating the communication skill indicator scores during the students finishing the student worksheet in the group. The results are analyzed descriptively. The trained students' communication skills include (1) the ability to work in groups, (2) the ability to communicate verbally (delivering ideas/notions/comments), (3) the ability to ask questions, (4) the ability to answer the questions (giving explanations) and (5) the ability to value ideas, suggestions, and friends' opinions.

The learning devices consist of three meetings when the students were given the student worksheet during the meetings. The topics and goals of the practicums are 1) the impact of water pollution for life (investigating water pollution, the impact of polluted water to the life of fish), 2) the impact of land pollution to life (investigating the land pollution, land condition, land pH, and identifying the plants that can grow on the land), and 3) the trash observation that produced through everyday life (calculating the amount and type of trash produces by the students during some days).

The given scores to the communication skill are based on the adapted rubrics from Directorate General of Primary Education, Directorate General of Junior High School Education (2015). The rubrics are presented in Table 1 as follows.

Table 1: Students Communication Skill Rubrics

No	Rated Aspects	Criteria	Score
1	Ability to work in groups	Able to work with all group members	4
		Able to work with several group members	3
		Only able to cooperate with one group member	2
		Only able to work individually	1
2	Ability to communicate verbally	Able to communicate correctly and clearly	4
		Able to communicate correctly but not clear	3
		Able to communicate clearly but not properly	2
		Unable to communicate correctly and clearly	1
3	The ability to ask questions	Being able to convey questions correctly and clearly	4
		Being able to submit questions correctly but is unclear	3
		Able to convey questions clearly but not correctly	2
		Not able to submit questions correctly and clearly	1
4	The ability to answer questions	Able to answer questions correctly and clearly	4
		Able to answer questions correctly but not clear	3
		Able to answer questions clearly but not correctly	2
		Not able to answer questions correctly and clearly	1
5	The ability to respect the opinions of friends	Able to respect and listen to the opinions of others.	4
		Able to accept other people's input but unable to show respect when other students express their opinions	3
		Able to listen to the opinions of others, but rather difficult to accept other people's input	2
		Not able to appreciate and listen to the opinions of others.	1

Notes: Maximum Score = 20

The calculation method is as follows:

$$\text{Communication Skill} = \frac{\text{Total Score}}{\text{Number of Scored Aspects}}$$

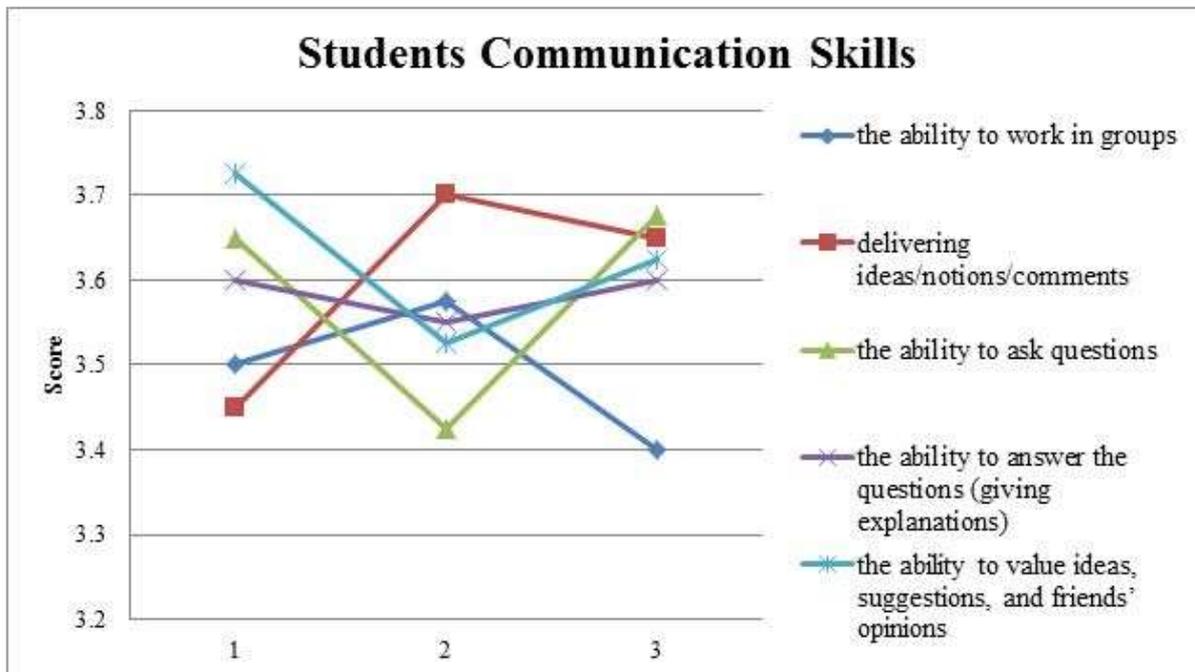
The obtained data then averaged to determine the communication skill results according the trained indicators. The communication skill score is categorized according to Table 2 as follows:

Table 2: The Critical Thinking Skill Percentage Category

Score	Category
0 – 1,5	Not Good
1,6 – 2,5	Less
2,6 – 3,5	Good
3,6 – 4	Very Good

3. Results

CTL learning activity using experiment method so every meeting the students do practicum activity. The students' communication skill when doing student worksheet can be seen on the Picture 1 as follow



Picture 1: Students' Communication Skill

Picture 1 shows the decrease and increase of the students' communication skill from the first until the third meeting. According to this, it can be made an inference that the students' communication skill on the Environment Pollution through CTL from five trained indicators, the indicators of asking questions is the most effective training by CTL.

4. Discussion

The assessment of communication skill is done according to Communication Skill Details that appear during the learning process which is consist of (1) the ability to work in groups, (2) the ability to communicate verbally (delivering ideas/notions/comments), (3) the ability to ask questions, (4) the ability to answer the questions (giving explanations) and (5) the ability to value ideas, suggestions, and friends' opinions. The assessment was done through observation based on the students' communication skill assessment rubrics. The students' communication skill assessment results reached the very good category; the acquired result is the role of partner teacher which was very good in implementing the match learning that in line with the goal of learning devices development.

Communication skill is one of the skills that have a strong correlation with interaction. The students' age on junior high school is considered more mature on the interaction verbally or non-verbal. Thus, communication skill is one of the skills that surely owned by students (Sardiman, 2011). Sardiman (2011) stated that communication skill is the skill of spreading news, knowledge, idea, and values with means to stir up participation, ease to tell the friends. According to that, the assessed students' communication detail is in line with the goal of communication skill in the learning process.

Communication skills as said by Budiati (2013) are one of the skills that can be used as an indicator of success and improving the quality of student learning processes. One indicator that can be used to improve student learning is communication skills. Communication makes it possible for students to be able to exchange information or ideas as they need. In addition, Bell & Carr (2014) states that through reading, discussing, listening to explanations, working in groups, and discussing science with colleagues is a way for students to develop skills to communicate in learning to significantly improve students' communication skills.

The results of Sardiman (2011), Budiati (2013) and Bell & Carr (2014) are in line with the results conducted by researchers, where researchers get excellent communication skills from students even though students' abilities vary in their level of communication skills. Communication Skill Detail which serves as a benchmark for the writer to train students' communication skills makes it possible for students to be able to exchange information or ideas as their needs through reading, discussing, listening to explanations, working in groups, and discussing science with colleagues as a way for students to develop skills.

Communication Skill Detail that appears during the research showed the different achievement level in every meeting. It is known that on the first meeting, the students tend to more dominant in mastering Communication Skill Detail on respecting other opinions.

The second meeting of students tended to be more dominant in mastering Communication Skill Detail regarding verbal communication skills. The third meeting of students tends to be more dominant in Communication Skill Detail regarding the ability to ask questions so that it can be concluded that students are more dominant in Communication Skill Detail on the ability to respect opinions, the ability to communicate verbally and the ability to ask questions.

Yoonsook (2016) states that the ability of students tends to communicate freely by expressing their ideas and feelings about topics of discussion on a material and by sharing their personal experiences and values related to these issues. Students also naturally pay attention to each other especially when working in small groups to understand the main thoughts expressed by others while connecting various points of view about the topic of discussion. Yoonsook's research results (2016) are in line with the results of research conducted by the author, where Communication Skill Detail is the dominant communication skill achieved by students regarding freedom of

communication which is reflected in the ability to respect opinions, the ability to communicate verbally and the ability to ask questions.

The assessment of students' communication skills observed during the learning process found very good results, which indicated that students were able to follow the learning well. The results of the assessment are in line with what was said by Budiati (2013) that communication skills are one of the skills that can be used as indicators of success and improving the quality of student learning processes.

Ihmeideh (2010) explained that communication skills are very influential on the maturity of students' age and cognitive abilities of students; this indicates that there are differences in communication skills between senior and junior students, as well as students who have high grades and low grades.

5. Conclusion

According to the findings, it can be concluded that the students' communication skill on the materials of Environmental Pollution through Contextual Teaching Learning achieved the very good category on the indicators of (1) the ability to work in groups, (2) the ability to communicate verbally (delivering ideas/notions/comments), (3) the ability to ask questions, (4) the ability to answer the questions (giving explanations) and (5) the ability to value ideas, suggestions, and friends' opinions

References

- Bell, M. Carr, P. (2014). Building communication skills for science students in videoconference tutorials. *International Journal of Innovation in Science and Mathematics Education*, 22 (4).
- Budiati, H. (2013). Implementasi Model Pembelajaran Learning Cycle 5E Secara Terpadu Dengan Permainan Kartu Link And Match Untuk Meningkatkan Kemampuan Komunikasi Pada Pembelajaran Biologi Siswa. *Prosiding Seminar Nasional Biologi*. Vol 10, No 2.
- Devi, K. P. (2009). *Pengembangan Perangkat Pembelajaran Untuk Guru SMP*. PPPPTK IPA. Jakarta.
- Fadjar, M. (1999). *Madrasah dan Tantangan Modernitas*. Mizan. Bandung.
- Febrinal, D. (2016). Peningkatan Kemampuan Komunikasi Matematis Melalui Contextual Teaching Learning (CTL) Di Kelas VIII Smp 44 Sijunjung. *Jurnal Kepemimpinan dan Pengurusan Sekolah*, 1(2), 181-192.
- Haji, S. (2012). Pengaruh Pembelajaran Kontekstual terhadap Kemampuan Komunikasi Matematika Siswa SMP Kota Bengkulu. *EXACTA*, 10(2), 115-118.
- Hamdani (2011). *Strategi Belajar Mengajar*. CV. Pustaka Setia. Bandung.
- Hamruni. (2012). *Strategi dan Model-Model Pembelajaran Aktif-Menyenangkan*. Investidaya. Yogyakarta.

- Ihmeideh, F. M. (2010). Attitudes toward Communication Skills among Students'-Teachers' in Jordanian Public Universities. Hashemite University, Jordan *Australian Journal of Teacher Education*. Vol 35, 4, July.
- Komalasari, K. (2010). *Pembelajaran Kontekstual Konsep dan Aplikasi*. PT Refika Aditama. Bandung.
- Pinwanna, M. (2015). Using the Contextual Teaching and Learning Method Enhance Learning Efficiency on Basic Statistics for High School Students. *Biologycal Education Program International College*. Suan Sunandha Rajabhat University. ICLEHI. Bangkok.
- Rusman (2013). *Model-Model Pembelajaran Mengembangkan Profesionalisme Guru* (Edisi kedua). PT Raja Grafindo Persada. Jakarta
- Sardiman, A. M. (2011). *Interaksi dan Motifasi Belajar Mengajar*. PT. Raja Grafindo Persada. Jakarta.
- Sukmadinata, N. S. Syaodih, E. (2012). *Kurikulum & Pembelajaran Kompetensi*. PT Refika Aditama. Bandung.
- Warno (2015). Meningkatkan aktifitas dan hasil belajar siswa melalui pendekatan CTL. *EDU-MAT Jurnal Pendidikan Matematika*. Volume 3, Nomor 2, Oktober 2015, hlm 126 – 133 ISSN 2957-9051.
- Wiyono, B. H., & Budhi, W. (2018). Pengaruh metode pembelajaran CTL terhadap hasil belajar IPA siswa kelas VIII ditinjau dari kemampuan berkomunikasi. *Natural: Jurnal Ilmiah Pendidikan IPA*, 5(1), 11-18.
- Yoonsook, C. Jungsook, Y. Zeidlerr (2016). Enhancing Students' Communication Skills In The Science Classroom Through Socioscientific Issues. Ministry of Science and Technology Taiwan. *International Journal of Science and Mathematics Education*. 14: 127.

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