



Students' Communication Skills through the Application of Learning Management System Schoology on Environmental Change Materials

Desti Sri Setianti, Mia Nurkanti, Mimi Halimah

Biology Education Study Program, Faculty of Teacher Training and Education, Pasundan University, Jl. Taman Sari no.6-8, Bandung City, Postal Code 40116, West Java Province, Country Indonesia

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ABSTRACT

Communication is one of the skills that play an important role in the scope of life. Especially in the world of education, the ability to communicate can be improved through learning with innovative media delivered by teachers during teaching and learning activities. In supporting learning, one of the sophisticated digital media that is easily accessible is the learning management system Schoology. The purpose of this research is to find out the improvement of students' communication skills on the material of environmental change in senior high school through the application of the learning management system Schoology. Learning Management System Schoology is a site that combines the features of social networking and LMS. The method used is pre-experimental in the form of one group Pretest-Posttest design and the sampling technique is purposive sampling. The subjects in this study were students of class X MIPA 7 at SMAN 1 Palimanan, totaling 30 people. Based on the results of the calculation of N-gain calculation it is known that this study has a significant developmental impact. The results showed an increase in students' communication skills by 16.92%. The average value of the Pretest is 65 which is included in the "Enough" category and increased in the Posttest with a value of 76 which is included in the "Good" category. Thus, it can be concluded that there is an increase in students' communication skills through the application of Learning management system Schoology on environmental change material in senior high school.

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INTRODUCTION

The Covid-19 pandemic still has a drastic and significant impact on the world of education. Even though the current conditions are improving, the use of online learning methods continues to develop in the school environment. Thus learning varies and makes it easier to achieve learning goals (Salmia, 2021). The development of the industrial revolution era in the 21st century causes educational institutions to continue to make the latest innovations related to learning methods and models that are able to continue to go along with developments. The rapid development of ICT or technology, information, and communication which has changed to become more modern, sophisticated, and complex in this era also requires the world of education to equip its students carefully in facing these challenges so as to be able to produce quality students. However, the technology certainly cannot be changed according to the teacher's role as it should be. The skills that are expected to be possessed by students in the 21st century are 4C (Communication, collaboration, Critical Thinking and Problem Solving, Creativity and innovation) (Astuti et al., 2019).

Communication as one of the skills that play an important role in the scope of life. Especially in the world of education, communication has not been conveyed properly and is still limited only in the classroom. Communication as a process of interaction between teachers and students should be able to continue even though the learning carried out in the face-to-face classroom has ended (Septikasari & Frasandy, 2018). Communication ability is an essential basic skill possessed by every student. The existence of student involvement as an active form such as asking, answering, conducting discussions, expressing opinions/ideas, to adding information during the learning process is a realization of the formation of communication skills, namely the occurrence of two-way interactions between teachers and students, so that learning is not only centered on the teacher but the students (Purnamawati, 2021).

However, based on the fact that the communication skills possessed by students are still at a low level, this is of course due to teachers who do not provide opportunities due to various limitations such as only relying on Whatsapp Groups as a communication medium outside of

conventional face-to-face classes or as a medium for exchanging information during the process. online learning to the use of other learning applications such as quipper which is limited in its use. Even in conventional face-to-face learning, namely where learning is generally carried out by discussion and lecture methods, without being accompanied by the implementation of the use of technology, it is considered less capable of developing students' communication skills in the digital era that continues to grow (Utari, 2021). Thus, effective communication requires channel media that are adapted to the source to be communicated.

To be able to meet the competency requirements for 21st century skills, teachers must be able to design learning activities by integrating digital literacy into them (Turiman et al., 2019). In this case, readiness in the field of education is needed to provide learning support devices, both offline and online. One of them is the learning management system Schoology which is needed to overcome the limitations of face-to-face learning. So that way, students can continue to study whenever they want/need without being limited by the classrooms provided during school hours (Pritasari et al., 2021).

In supporting online or offline learning, teachers can use more sophisticated digital media and easily accessible applications (Ferdianto & Dwiniasih, 2019). This digital media is expected to enable teachers to apply the use of technology in the classroom and provide independent study space for students so as to improve their communication skills (Garcia et al., 2018). Confusion in the implementation of technology as a new thing is a factor that is often encountered in its application, so this creates new challenges for individuals as agents of change in the field of education by implementing the Learning management system Schoology (Black et al., 2007). Learning management system Schoology is one of the learning management system platforms in the academic field. The Schoology design, is parallel to Facebook, namely interactive communication and as a medium for exchanging academic information (Sicat, 2015). Through the application of this technology, students will have greater opportunities to access learning freely without the need to wait for the next meeting

with the teacher directly at an uncertain time (Santiago et al., 2020). Schoology is expected to be able to play a role as a media for teachers to provide access to unlimited learning communication for their students to take an active role in easy-to-access virtual classes as an attractive face-to-face class companion (Purba et al., 2019)

Based on the results of previous research conducted by Fauzyah Hasanah where the result of this research show that students' scientific communication skills in biology learning in high school during the covid-19 pandemic include: into the sufficient category (Hasanah, 2021). Likewise research by Lili Hernani et al, whose results show that the Schoology-based blended learning model and project-based learning can increase students' biology scores (Hernani et al., 2019). As well as previous research by Vincentius Tjandra Irawan, Eddy Sutadji & Widiyanti in the journal Cogent Education, it showed an increase in student learning outcomes by combining conventional learning combined with an online platform based on Schoology (Irawan et al., 2017). Thus, the lack of implementation of the use of technology-based digital media, information and communication is an inhibiting factor for innovation during the learning process. So that the research carried out is an improvement effort in developing learning methods to facilitate students in achieving learning goals as well as being an innovative solution to the low development of students' communication skills at SMA Negeri 1 Palimanan. From the description of the problems above, these are the reasons behind the researcher to conduct a study entitled "Improving Student Communication Skills Through the Application of Learning Management System Schoology in Environmental Change Materials in High School"

METHOD

This study uses a quantitative approach, where this method is used to research by collecting data using instruments from a particular population or sample which then the data is calculated or

analyzed to test and answer the established hypothesis (Sugiyono, 2019). The research design carried out is by using Pre-experimental a quasi-research in the form of One group Pretest-Posttest design and data collection techniques in the form of Purposive Sampling (Sugiyono, 2019). The population in this study is class X MIPA 7 at SMAN 1 Palimanan as many as 30 students.

Data collection in the study used a description test where the questions given in the form of Pretest-Posttest were of course already integrated with the communication skills indicators that were used as a reference framework according to Levy et al., (2009). The data obtained is then calculated by testing the question instrument and testing the hypothesis with the help of SPSS 20.

Table 1. Category Result

No	Score %	Result
1	86-100	Very good
2	76-85	Good
3	60-75	Enough
4	55-59	least
5	54	Very least

Results and Discussion

Results

The initial activities before learning based on the results of the Pretest showed results where the communication skills of students still tended to be low, this was evidenced by the obtaining of the average value of all students, namely 65.06 with the lowest score of 30 and the highest score of 92. below the value of the Minimum Completeness Criteria (KKM) that has been determined, which is 75. Furthermore, after learning by applying the learning management system Schoology on the material of environmental change, students' writing communication skills increase. This is seen based on the increase in the Posttest results with the average value obtained which is 76.03 and the lowest value is 39 and the largest value is 98. The improvement in each communication capability framework used according to (Levy et al., 2009) has increased as shown in the graph below:

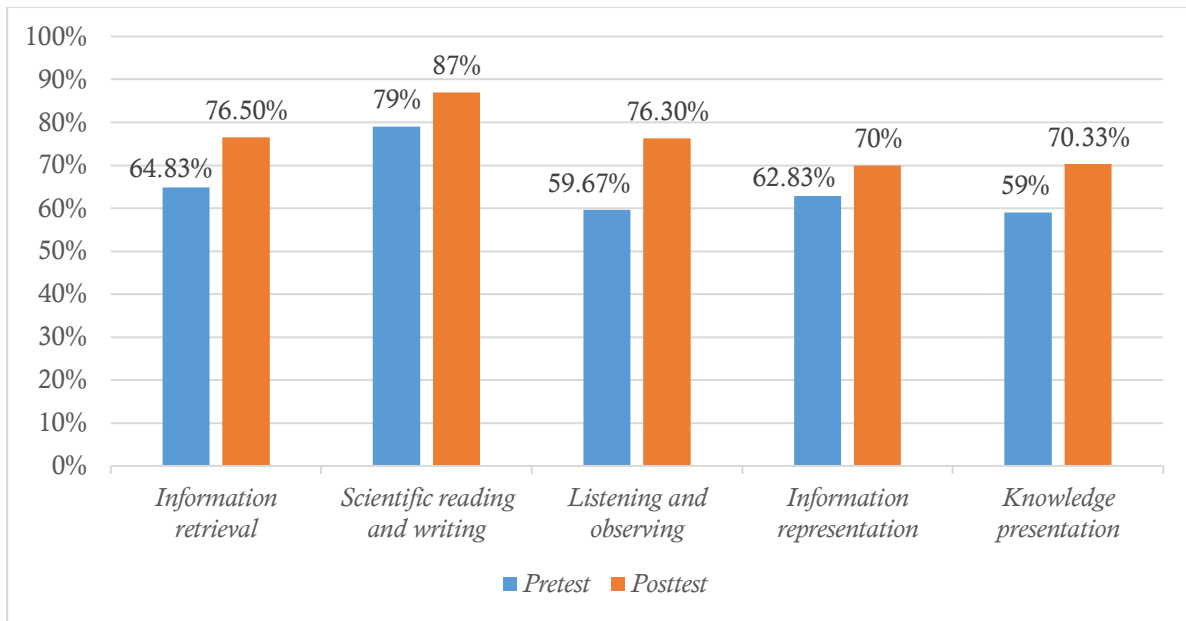


Image 1. Increasing the percentage of each communication ability framework

The results of the N-gain calculation show that the results of the Pretest and Posttest are in the medium category, it can be interpreted that the increase in students' communication skills tends to increase even though the increase that occurs is not too significant. "The posttest calculation was carried out using the Wilcoxon test because the data held were not normally distributed in accordance with the results of the normality test previously carried out and only had 1 sample from 1 study group X MIPA 7 at SMAN 1 Palimanan."

Discussion

Based on the data from the statistical analysis above, that the research conducted at SMAN 1 Palimanan in class X MIPA 7 as many as 30 students showed an increase in communication skills through the application of the learning management system Schoology on environmental change material in the high school. That way, the treatment by applying the Learning management system Schoology has a positive effect on improving the student's communication skills. The findings obtained based on this study certainly strengthen the findings of previous researchers conducted by (Hasanah, 2021), (Hernani et al., 2019), and Irwan et al., (2017). This is of course also evidenced by the increase in the percentage value of students'

communication skills through the application of the learning management system Schoology on environmental change material in high school conducted through the Pretest-Posttest, which increased by 16.92%. In addition to an increase based on the average value obtained, this value is also related to the increase in the category of student communication skills 1 level higher based on predetermined criteria.

To determine the category of communication skills that have been achieved, then based on the calculation of communication skills at the Pretest students are included in the "Enough" category, while communication skills at the Posttest are included in the "Good" category. Not only that, the percentage of each indicator or framework of communication skills used also increased. The increase in the percentage obtained on indicators of communication skills, namely:

Table 2. Indicators Communication Skills (Source: Levy et al., 2009)

Indicators	Percentage
Information Retrieval (Describe the knowledge of the material obtained based on relevant reference sources)	11.66%

Scientific Reading and Writing (Linking learning materials obtained based on various reading sources and scientific articles)	8%
Listening and Observing (Evaluating the material provided in the form of learning videos and other explanations as a form of observation results which are the responded to)	16.63%
Information Representation (Processing information in the form of graphs/tables/pictures/charts into the mind and conveying it as new ideas in their own language)	7.17%
Knowledge Presentation (Communicating the knowledge possessed about a problem in the environment through various media)	11.33%

So it can be concluded that the largest increase occurred in the indicator of listening and observing which was 16.63%, where it is interpreted that students' communication skills after being given learning by applying the learning management system Schoology, students are increasingly able to evaluate related material. given in the form of learning videos and other explanations as a form of observation results which are then responded to. During the observation, a learning video was given. However, students still have not maximized their ability to process information in the form of graphs/tables/pictures/charts into their minds and convey them as new ideas/ideas in their own language, this is evidenced by the low increase in indicators of information representation.

Students' communication skills measured during learning activities are certainly supported by various elements related to communication itself (Redi, 2018). The success of improving students' communication skills certainly depends on how these communication elements can play a maximum role in carrying out their functions to achieve the indicators used as learning objectives. Students' communication skills will be better, of course, if educators or teachers as communicators

can provide learning messages and information to students who act as communicants using media that support learning such as the learning management system Schoology by minimizing various obstacles that may occur so as to have a good effect as a impact on ongoing communication and students can provide positive feedback on the learning gained.

However, in the communication element it is also explained that there are things that are inseparable, namely the existence of obstacles (Redi, 2018). The existence of all the conveniences provided in the use of communication media such as learning management system Schoology, of course, in conveying this communication cannot be separated from obstacles.

That way, the emergence of obstacles in the process is a natural thing, such as obstacles that occur in the implementation of the Posttest that is carried out, where there are android devices and internet signals that do not support the collection of answers in the form of images in the learning management system Schoology so that there is a decrease in the Posttest scores obtained by students. The improvement of students' communication skills which are included in the medium category in the calculation of N-gain is associated with various research findings where there are various factors such as the diversity of students both in terms of economy, thinking patterns, and learning motivation and ICT (Information and Communication Technology) abilities of students and teachers are not very influential during learning activities.

But this obstacle does not limit students to continue learning to develop their communication skills,- but provides opportunities for students to improve their abilities to be even better to minimize the obstacles that have been passed as a form of learning. Thus, students and teachers are able to maximize the impact of both learning management systems Schoology on communication skills in the context of learning and teaching or learning for convenience in the future (Sriyanto & Kaniadewi, 2019).

CONCLUSION

There is an increase in students' communication skills through the application of the Learning management system Schoology on the material of environmental change in high school. This is evidenced by the results of the N-gain calculation at a moderate level and hypothesis testing which shows a significance value of 0.000.

The improvement of students' communication skills through the application of the Learning management system Schoology on the material changes in the environment in high school that occurred was 16.92%. The details of the percentage increase based on the difference between the results of the Pretest and Posttest obtained on each indicator of communication skills, namely Information retrieval of 11.66%, scientific reading and writing of 8%, listening and observing of 16.63%, information representation of 7.17% , and knowledge presentation of 11.33%.

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