



## Teacher and Student Interpersonal Communication through a Moodle-Based Learning Management System Application in Improving Student Learning Achievement in SMA Negeri Kota Depok

Siti Jainab<sup>1\*</sup>

Teddy Oswari<sup>2</sup>

<sup>1,2</sup>Gunadarma University, Indonesia.

<sup>1</sup>Email: [sitijainab.1depok@gmail.com](mailto:sitijainab.1depok@gmail.com)

<sup>2</sup>Email: [teddyoswari@gmail.com](mailto:teddyoswari@gmail.com)

### Abstract

*This study aims to determine the Interpersonal Communication of Teachers and Students through the Moodle-based Learning Management System Application in Improving Student Learning Achievement at Depok State High School. The theory used is the theory of SOR and symbolic interactional theory. The results of this study indicate that learning is done through the application of Moodle-based LMS can facilitate interpersonal communication between teachers and students in giving and receiving learning materials that teachers convey, but because learning is done online, it can be said to be still less effective than face-to-face teaching and learning activities in schools. Teacher equality in giving understanding to students can be shown through the material that teachers provide through the media contained in the Moodle-based LMS application students can more easily understand the learning materials provided so as to help students to still be able to improve learning achievement in school.*

### Keywords:

*Interpersonal communication  
LMS Moodle  
Learning achievement.*

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Corresponding Author)

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## 1. Background

Since the discovery of the first virus case in Wuhan, Hubei Province, China, around December 2019, the world has now been hit by the Covid 19 virus pandemic, and Indonesia is no exception. The Covid 19 virus is a virus that attacks the human respiratory system and is confirmed to be very dangerous. The transmission of the Covid 19 virus spreads directly between humans very quickly. Indonesia itself has been declared as one of the countries infected with the Covid-19 virus since the confirmation of 2 positive cases of Covid-19 in early March 2020 (Detikcom Team, 2021). Like other countries that have confirmed the transmission of the Covid-19 virus, the number of Covid-19 cases in Indonesia is increasing day by day.

The high and increasing number of cases of the spread of the Covid-19 virus has forced the Indonesian government to think hard about creating policies as quickly as possible. As a result, various activities such as work, school, and all activities that require humans to conduct associations must be limited to an undetermined time until now. The Indonesian government is trying to break the chain of spread of Covid-19 by issuing Government Regulation Number 21 of 2020 concerning Guidelines or LSSR (Large-Scale Social Restrictions) (Apris & Mas'amah, 2021).

The government hopes that these social restrictions can stop or at least inhibit the spread of the Covid 19 virus. The Covid 19 pandemic has resulted in problems in many aspects of life, including education. Chatarina Muliana Girsang as Expert Staff of the Minister of Education and Culture in the Regulatory Sector, delivered Circular Letter Number 15 (fifteen) to strengthen the Circular Letter of the Minister of Education and Culture Number 4 (four) of 2020 concerning the Implementation of Education in the Emergency Period of Coronavirus Disease (Covid-19).

The pandemic period makes learning activities that are usually carried out face-to-face in schools cannot be carried out. However, educators are still required to continue teaching and learning activities, even though students are at home. So, the solution is that educators are required to create innovations in learning media by utilizing online media (in the network) or can also be called DL (Distance Learning). This is in accordance with the Ministerial Regulation Number 7 of 2020 concerning the Implementation of the distance education Policy as a teaching and learning process carried out remotely through the use of various media during the emergency period of the spread of Corona Virus Disease (Covid 19).

With these problems, the world of education in Indonesia must change. Every student who is studying at the Playgroup, Kindergarten, Elementary, Middle, and High School levels as well as students must change their study habits from studying face-to-face at school or on campus to learning from home using various existing communication technology facilities. And one of the technological facilities that must be owned by students such as computers, laptops and smartphones.

The existence of laptops, computers and smartphones that are connected to the internet network, people are more likely to use these objects to meet their needs in online-based learning. According to [Gikas and Grant \(2013\)](#), online learning in its implementation requires the support of mobile devices such as smartphones, tablets and laptops that can be used to access information anywhere and anytime. Learning methods are not always face-to-face, but can interact and carry out two-way communication between teachers and students. With the internet, learning mechanisms can change in a direction that is faster, interactive and does not recognize space and time.

The Covid-19 pandemic has also had an impact on the technology sector. There is the use of technology in almost all lines of life, especially in the field of education. Various application-based media are used in distance learning in schools or colleges. For example, virtual classes utilize Learning Management System (LMS) services, Google Classroom, Edmodo, and Schoology ([Ellis, 2009](#); [Enriquez, 2014](#); [Iftakhar, 2016](#); [Sicat & Ed, 2015](#)) and instant messaging applications such as WhatsApp ([So, 2016](#)). Distance learning can also be done through social media such as Facebook and Instagram ([Kumar & Nanda, 2019](#)).

The definition of a Learning Management System in general is a software specifically designed to distribute, create, and manage learning content. One of the best free/open source Learning Management System/LMS available in 2015 is Moodle.

Moodle stands for Modular Object-Oriented Dynamic Learning Environment. Moodle is a platform that was created specifically as a learning management system. The history of Moodle development actually started in 1970. However, it was only officially released in 2002. Martin Dougiamas is the person behind one of the best e-learning platforms. This platform is open source and can be used for free. Thus, it can be a solution for teaching and learning that is cheap but still effective. Not surprisingly, many schools, colleges and educational institutions use Moodle. However, there are also many large companies in the world that use Moodle as a learning medium for their employees. Moodle's popularity has grown rapidly since its release. To date, there are more than 190 million Moodle users worldwide.

The success of education during the COVID-19 pandemic cannot be separated from the establishment of smooth and good communication between teachers and students. Communication is very important and a necessity in individuals, especially when socializing. Likewise, an educator, of course, requires good communication with his students so that learning objectives can be achieved. There needs to be good interpersonal communication between teachers and students. The Moodle-based Learning Management system application is one of the media used in the world of education to facilitate the online process of bridging interpersonal communication between teachers and students to improve student learning achievement during this pandemic.

Some of the roles of interpersonal communication in order to create happiness in human life, namely interpersonal communication helps intellectual, social development, identity and our identity is formed in and through communication with other people. The features contained in the Moodle-based Learning Management system application are used to make it easier for application users to communicate interpersonally between teachers and students in delivering learning materials.

Currently, there are two Depok City Public High Schools that are already using Moodle-based Learning Management applications, namely Senior High School Negeri 1 Depok and Senior High School Negeri 5 Depok. Therefore, based on this description, the researchers are interested in conducting further analysis to find out "Interpersonal Communication of Teachers and Students through Moodle-based Learning Management System Applications in Improving Student Learning Achievement in Depok City Senior High School". Through this research, it is hoped that it can be one of the references in helping and encouraging students to stay enthusiastic in undergoing distance learning during the Covid-19 pandemic that still hits Indonesia.

## **2. Method**

This study uses a qualitative research method with a descriptive approach. In this study, the researcher uses a constructivist paradigm which assumes that the real reality is in the mind of the subject under study. Researchers interact with teachers and students as informants who can provide information in this study.

The subjects of this research are teachers and students of SMA Negeri 1 Depok City and SMA Negeri 5 Depok. A total of 46 people, consisting of 12 teachers, 24 students and 10 parents. The subjects used in this study were teachers and students consisting of:

- a. 12 Students of SMA (Senior High School) Negeri 1 Depok.
- b. 12 Students of SMA (Senior High School) Negeri 5 Depok.
- c. 6 Teachers of SMA (Senior High School) Negeri 1 Depok.
- d. 6 Teachers of SMA (Senior High School) Negeri 5 Depok.
- e. 10 Parents of SMA (Senior High School) Negeri 1 Depok and SMA (Senior High School) Negeri 5 Depok

In a study requires a research focus. So that researchers in conducting research become more focused. The object of this research is the interpersonal communication of teachers and students through the Moodle application in improving student achievement at SMA Negeri Depok City during the pandemic.

This research was conducted only in Depok City Public Senior High Schools that used Moodle-based Learning Management System applications, namely SMA (Senior High School) Negeri 1 Depok and SMA (Senior High School) Negeri 5 Depok. Researchers want to see how the interpersonal communication of teachers and students through the Moodle-based Learning Management System application in improving student achievement at SMA (Senior High School) Negeri Depok City during the pandemic. This research was conducted from September 2021 – March 2022.

## **3. Result**

The research results obtained using qualitative research, and additional data obtained by the author by using the data search method through observation and interviews, as well as documentation carried out by the author and informants. The following is a description of the research results which are arranged based on the aims and objectives of the study.

### *3.1. Interpersonal communication carried out by teachers and students through the Moodle-based Learning Management System application*

From the results of interviews that communication between teachers and students through Moodle-based LMS can run well because of the desire to build communication so that students can still carry out the teaching and learning process even though it is done online with long distance and flexible time because it can be accessed anytime and anywhere. However, with the Moodle application, it can make it easier for students to get access to information regarding the delivery of learning materials, test notifications and others through the features contained in the Moodle application.

### *3.2. Moodle-based Learning Management System Application*

From several statements in interviews stating that interpersonal communication between teachers and students during the pandemic through this Moodle application, students can easily receive various kinds of learning information from teachers such as test schedules, zoom/google meet schedules, or assignment collection limits.

### *3.3. Moodle Advantage*

From several statements that have been put forward by several teachers regarding the advantages of this Moodle-based LMS, among others, that it can facilitate the teaching and learning process both online and offline with a simple display, it can make it easier for teachers to use the application in addition to being easy to configure, willingness to its features are also very diverse and flexible because it can be used anytime and anywhere.

From several statements that have been put forward by informants from the students above, it can be concluded that the advantages felt by some students include facilitating communication between teachers and students and also making it easier for them to get learning materials with work that is easier, faster and in less time. flexible.

### *3.4. Learning media contained in the Moodle-based Learning Management System application*

According to Rusman (in Sartika (2018)) suggests that there are five types of media that can be used in learning:

#### *3.4.1. Visual Media (Image)*

From several teacher statements regarding the visual media used by the teacher in conveying material to students through the Moodle application, namely with the visual media the teacher can display learning content in the form of images, simply by uploading images directly or by including links on desired image.

The visual media used in the teaching and learning process according to some students stated that the visual media contained in the Moodle application was able to support learning activities carried out online with this visual media making learning more interesting making it easier for students to understand the content of the material presented by the teacher. The following is an example of visual media in a Moodle-based LMS.

Figure 1 Describe of Visual media in a moodle-based LMS.



Figure 1. Visual media in a moodle-based LMS.

### 3.4.2. Audio Media

Based on statements from several teachers, the audio media contained in the Moodle application can actually be used in the learning process but in the use of this audio media there are several obstacles such as the amount of memory that must be used.

From the results of interviews with several students, researchers stated that the Moodle-based Learning Management System application can display audio media (sound) that is able to support learning activities, especially in certain subjects such as English and Japanese subjects through this audio media. The following is an example of audio media in a Moodle-based LMS.

Figure 2 Describe of Audio media in a moodle-based LMS.

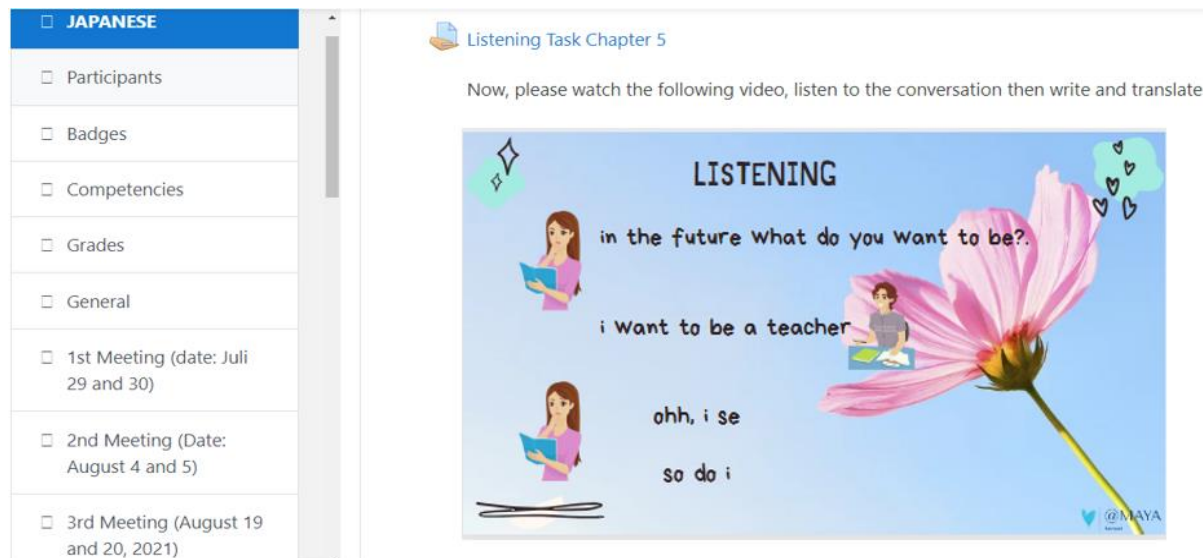


Figure 2. Audio media in a moodle-based LMS.

### 3.4.3. Audio-Visual Media (Video)

It can be stated that the audio-visual media (video) contained in the Moodle application can help in providing material to students, among others, by including video links to be submitted from various sources such as YouTube and so on due to the limited size of data capacity that can be uploaded on Moodle.

From the results of the researcher's interviews with several students, it can be stated that Moodle can display audio-visual media (video) either by displaying videos directly or by using YouTube or Gdrive links, so that with this audio-visual media (video) students can more easily in understanding objects, events, or materials needed in learning.

### 3.4.4. Presenting Media Group (Document)

Several teachers stated that this Moodle-based LMS application could display media in the form of documents in both word and pdf form. Documents that can be shared can also be more than one as long as the document does not exceed the specified size limit.

As for the statement from the students that Moodle can display media in the form of presentations (documents), according to some students this media is a medium that is often used during online learning. Because all learning, starting from giving materials, questions, collecting assignments, important files such as the Integrity Pact, mostly use document media. The following is a view of a document from a Moodle-based LMS.

Figure 3 Describe of Moodle-based LMS document view.

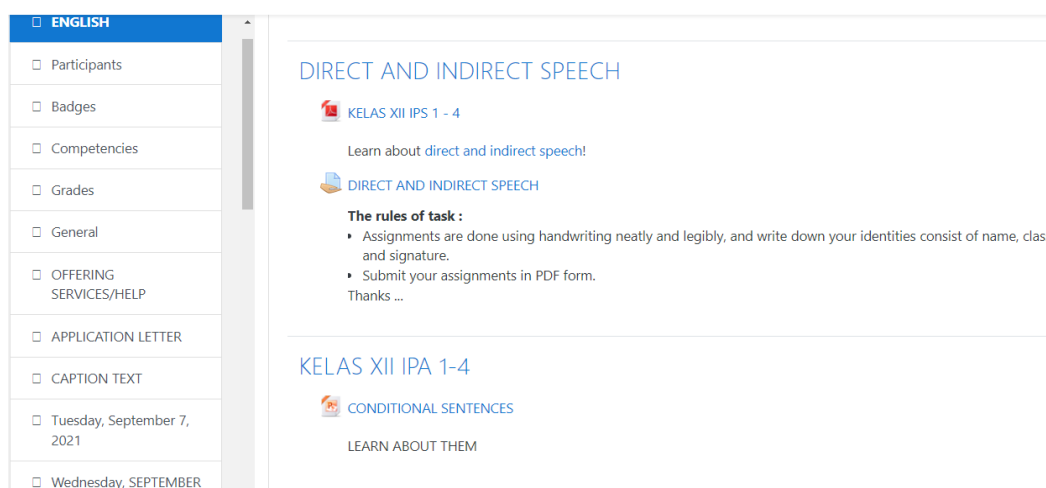


Figure 3. Moodle-based LMS document view.

### 3.4.5. Object Media and Computer-Based Interactive Media

According to some teachers, a Moodle-based Learning Management System can display media objects but the display can only be in visual form (images). Then the results of interviews from several students who stated that the Moodle-based Learning Management System Application could display the desired media object in the form of media efficiently. The material in the form of objects that the teacher gives is usually like finding the volume / area of a tube, looking for the dose of a substance, the 3-dimensional shape of a hollow cylinder, then also media objects such as the size or weight of an object.

Figure 4 Illustrates of material display on moodle-based LMS.

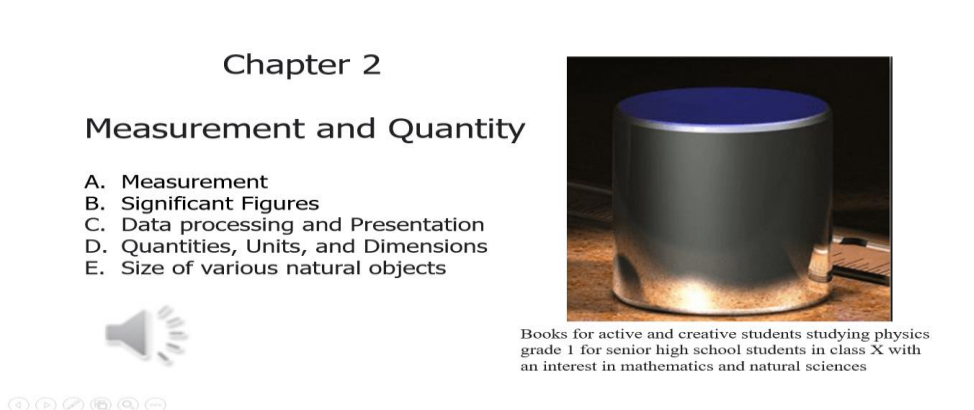


Figure 4. Material display on moodle-based LMS.

### 3.5. Obstacles

From some of the teacher's statements above, the obstacles found in the Moodle application are that the first needs adaptation for the first time using the application, while the obstacles other than the network are that the teacher must always be active in making varied materials and assignments so that students are more interested and happy in understanding and doing assignments. -Assigned job.

Constraints felt by students in using the Moodle application, such as images that cannot be seen, the server is down, there is a maximum limit of the capacity of the file to be uploaded, there are also many students who have limited quota, the server cannot be accessed for full 24 hours, namely in the middle of the day. night and no notifications.

## 4. Result

Based on the results of interviews conducted with all informants, it is known that interpersonal communication between teachers and students through the Moodle-based Learning Management System application is very helpful, especially during the pandemic. In this way the teacher can still provide material in a complete and structured way during the teaching and learning process. The security of the Moodle application is also quite good so that it can provide a sense of security during the use of the application besides that the data storage capacity is not limited.

With the simple appearance of the Moodle application, it makes it easier for teachers to use the application, besides being easy to configure, the availability of its features is also very diverse, starting from attendance where students can easily take attendance every day through the absence column contained in the application. In addition, there is a timeline feature where the function tells students what assignments must be submitted along with the deadline so that it can help students be more disciplined in doing assignments, exams and others, students can also re-examine assignments that have been assessed by the teacher.

In this Moodle application, there are a lot of media that can be used according to Rusman quoted (in Sartika (2018)) revealing that in learning we can use 5 types of media:

1. Visual Media (Pictures), this media focuses on the sense of sight. So that by using visual media learning becomes more interesting and easy to remember.
2. Audio Media (Sound), this media focuses on the sense of hearing. However, this audio media is more often used only in certain subjects, for example in English and Japanese "listening" lessons, this media is able to help develop imagination and increase students' motivation because of its recording nature so that it can be played repeatedly anywhere and anytime.
3. Audio-Visual Media (Video) is a media that displays sound and images, for example YouTube and so on, with this audio-visual (video) media students can more easily understand objects, events, or materials needed in learning.
4. Presenter Media (Documents), this media is a medium that is often used during online learning. Because all learning, starting from giving materials, questions, collecting assignments, important files such as the Integrity Pact, mostly use document media. Uploaded documents can also be in various forms ranging from PDF (Portable Document Format), doc, docx, ppt, pptx, and others. so that students can more easily understand the explanation through the material that the teacher has given because the discussion is more conceptual.
5. Object media and computer-based interactive media, this media is used to convey information through the characteristics of its size, shape, weight, color, arrangement, function, and so on. However, in the Moodle application this media can only be in visual form (pictures), usually this media is used by the teacher to provide material in the form of objects such as finding the volume / area of a tube, finding the dose of substances, 3-dimensional hollow cylinder shapes, then also media objects such as size. or the weight of an object.

Therefore, by utilizing these 5 types of media, the teaching and learning process becomes easier, faster and the learning time is very flexible because it can be done anywhere and anytime, the use of paper can also be minimized because of the Moodle application, with the features contained in the application.

The Moodle application makes it easier for students to access information regarding the delivery of learning materials, test notifications and so on.

However, there are several obstacles, such as problems with the network, servers that are down, many students who have limited quotas, there is a maximum limit of the capacity of files to be uploaded, cannot be accessed full 24 hours (at midnight) and due to the learning system This is done virtually and online based, the interaction between teachers and students as well as between students with one another is still less effective, so that when face-to-face meetings at school teachers do not recognize their students. In addition, there are also some teachers who have not fully mastered the Moodle application so they cannot use it optimally in delivering learning material to students.

The following is an explanation of the general quality of interpersonal communication effectiveness in implementing learning using Moodle-based LMS applications based on the general qualities proposed by Devito (2011), namely:

1. Openness

Based on the results of interviews conducted, the Moodle application can actually be used by students to communicate or convey a message openly to the teacher because the Moodle application has a direct message feature that students can use to convey their aspirations and feelings related to the material the teacher conveys, the message is private. and will be read directly by the teacher concerned. However, based on the statements that have been put forward by some students, it can be concluded that communication between teachers and students through this Moodle application can be seen that only a few students dare to express opinions openly to the teacher.

2. Empathy (Caring)

Based on statements from several sources that the Moodle application can provide space for teachers to show a sense of teacher concern, among others, by providing feedback on the tasks that students are doing. The feedback can be in the form of input regarding the incorrect part of the assignment or a file that shows the wrong part of the student's work. then the teacher can also provide a special approach/solution for students who have difficulty. An attractive form of presentation of learning is also a form of teacher concern so that students can easily understand the subject matter that the teacher provides.

3. Supportive attitude (motivation)

Based on the results of interviews, researchers show that learning through the Moodle-based LMS application, teachers can still motivate students both from the counseling side, homeroom teachers and other teachers, namely by taking approaches such as encouraging, inviting praying together and providing motivation by giving comments that can motivate students to stay enthusiastic in learning and doing the assigned tasks even in distance learning. However, from some student statements, in fact not all teachers do the same thing, namely the teacher only provides material and assignments without giving an approach or motivation to students.

4. Positive Attitude (Help/Respond to students)

The results of the study reveal that the use of the Moodle-based Learning Management System application, in fact, the teacher can show a sense of willingness to help and respond to students by conducting questions and answers through the discussion feature or comment column contained in the Moodle application as a form of feedback from the assigned task, but according to some students this feature is very rarely used.

5. Equality (Gives Understanding)

Based on the results of the interviews, it can be concluded that with the Moodle-based LMS application the teacher is able to provide understanding to students according to what is meant by the teacher because through Moodle, the teacher can upload videos, files, images, or audio related to the material being taught. so that students' understanding can increase, the use of Moodle allows the teacher to write more detailed and detailed material so that the possibility of students understanding the material according to what the teacher means is very large and if there are still questions that need to be asked, the teacher is also ready to explain again until the student understands the material being taught. given but some teachers are not optimal but that is sometimes because there are obstacles from the application.

So, it can be concluded that online learning using the Moodle-based LMS application can facilitate interpersonal communication between teachers and students in giving and receiving learning materials but it is still less effective than face-to-face teaching and learning activities in schools.

*4.1. Interpersonal Communication of Teachers and Students Through Moodle-Based Learning Management System Applications in Improving Student Achievement in Depok City State Senior High Schools seen from the SOR Theory*

Based on the definition of SOR (Stimulus Organism Response), it can be understood that this communication is very important to be applied by a teacher because this communication can have a positive impact on students and can also improve the quality of learning. The quality of learning is influenced by many factors and the teacher is a determinant of success in determining the quality of learning. Teachers are at the forefront of quality education. Therefore, a teacher needs to be good at translating what is desired in the curriculum, must be creative and innovative in communicating learning to students so that they can achieve learning goals.

Based on some of the things above, it can be stated that the ability to carry out effective communication (one of them by using the Stimulus Organism Response model of communication) is one of the competencies that must be possessed and mastered by teachers. Based on the results of the study showed that:

- 1) Stimulus (message) that can be conveyed by the teacher is by providing an attractive form of learning presentation and providing enthusiasm and motivation to students through the features contained in the Moodle application.
- 2) Communicant (Organism), the communicator's attitude towards the stimulus provided by the communicator, in this case based on the results of the study, showed that the teacher always gave feedback and attention to students and also always gave understanding to students who did not understand the material provided.

- 3) Effect (Response), the impact of the communication effect, namely changes in student attitudes/behaviors such as, students can understand the material that the teacher conveys through the media and the features contained in the Moodle application, then students also become more enthusiastic in doing assignments which are given.

#### *4.2. Interpersonal Communication of Teachers and Students Through Moodle-Based Learning Management System Applications in Improving Student Achievement at SMA Negeri Depok City as seen from the Symbolic Interaction Theory*

The results of the researcher's analysis of symbolic interaction according to West and Turner, there are three core thoughts of George Herbert Mead related to symbolic interaction, namely:

- 1) Mind (Mind):

Mead defines mind as the ability to use symbols that have the same social meaning, and Mead believes that humans must develop thoughts through interactions with other people. In this case, the writer sees that learning that is done through the Moodle application, students can still receive the learning materials that the teacher provides and students are able to understand the explanations given by the teacher through various forms of media such as explanations through pictures and videos provided. Furthermore,

- 2) Self:

The ability to reflect on each individual's self from the assessment of the point of view or opinions of others. This phase focuses on the importance of self-concept. Where in this case students are expected to still be able to follow the rules that apply during online learning. In the results of the study, it can be seen that students must continue to take attendance every day and do each task according to the predetermined deadline. Then,

- 3) Social (Society):

Mead argues that interaction takes place within a dynamic social structure—culture, society, and so on. Individuals are involved in society through their chosen behavior actively and voluntarily. Thus, society describes the interconnectedness of several sets of behaviors that individuals continue to adjust. Society existed before the individual, but it was also created and shaped by individuals by acting in concert with other people.

Society is made up of individuals and Mead speaks of two important parts of society that affect the mind and the self. Mead's thoughts about particular others refer to individuals in society who are significant to us. These people are usually family members, friends, and colleagues at work. We look to other people specifically to gain a sense of acceptance and a sense of self.

Regarding this, it can be seen that even during the pandemic, both workers and students are expected to continue to carry out activities, one of which is learning at school for students to still be able to receive material and carry out learning even though online with various media that can be used to facilitate the process of interaction between students. teachers and students in member and receive learning and in this case the teachers and students of SMA Negeri 1 and 5 Depok City agreed to use the Moodle application to make it easier for teachers and students to receive the messages conveyed.

#### *4.3. Comparison of Past Research*

Previous research is an attempt by researchers to find comparisons and then to find new inspiration for further research. In addition, previous studies help research to be able to position research, and show the originality of the research. In this section, the researcher lists the results of previous studies related to the research that the researcher did. The following is a previous study that is still related to the theme that the researcher is studying.

First, research conducted by Pratiwi (2020). This type of research is descriptive research, using a qualitative approach. In this study the theory used interpersonal communication strategies, the results of this study are 1) communication as action or one-way communication by instructing students to be quiet during the learning process and activating the mute button during virtual classroom learning, 2) communication as interaction or two-way communication by making video calls and private chats with students, and 3) multi-way communication or communication as transactions, by creating groups between teachers and students on WhatsApp social media, holding sharing classes, creating groups between teachers and students and parents of students. The similarity of the above research is that they both use qualitative research methods and discuss interpersonal communication in distance learning, the difference is in the theory used and the place of research.

Second, research conducted by Fathurrohman (2018). This type of research is descriptive research, using a quantitative approach method. The theory used in this study is the theory of the effectiveness of interpersonal communication proposed by De Vito by looking at the aspects of openness, empathy, support (supportiveness). The results of testing the main hypothesis in this study can be concluded that interpersonal communication between teachers and students has a significant positive effect on learning behavior. students in realizing student achievement.

This article concludes that to achieve good student learning achievement can be done by improving student learning behaviour and must be improved the implementation of the interpersonal communication function



between teachers and students. The similarity of the above research is that both discuss interpersonal communication between teachers and students and the theory used, the difference is in the research method used and the place of research.

Third, research conducted by Skařacka and Pajestka (2021). This type of research is descriptive research, using a quantitative approach method. The theory used in this research is communication theory. The results of this study indicate that face-to-face communication benefits mental health in people aged 60 years more than digital communication.

The older a person gets, the less digital communication benefits their mental health, especially during interactions with their child. The similarity between the research above and this research is that they both discuss interpersonal communication during the pandemic, the difference is in the theory, research methods used and the place of research.

## 5. Conclusion

Based on the analysis that researchers have done, namely regarding the interpersonal communication of teachers and students through the Moodle-based Learning Management System in improving student achievement at Senior High School Negeri Depok, it can be seen that the Moodle-based LMS application can provide convenience for teachers to communicate with students even online. With this application the teacher can still provide material in a complete and structured way during the teaching and learning process because this application can display various types of learning media, both in the form of visual media (images), audio media (sound), audio-visual media (video), renderer media (Document) and object media.

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