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The use of LMS Moodle to Improve Reading Comprehension Skill for the 10th Grade Students

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#### Abstrak

Tujuan dari penelitian ini adalah untuk meningkatkan prestasi belajar pada kemampuan pemahaman membaca siswa dengan menerapkan LMS Moodle pada siswa kelas X SMA Petra 4 Sidoarjo tahun ajaran 2020/2021. Penelitian Tindakan Kelas (PTK) diterapkan dalam pelaksanaan penelitian ini dari bulan Januari sampai Juni 2021. Setiap siklus PTK terdiri dari empat langkah: perencanaan, tindakan, observasi, dan refleksi. Pengumpulan data dilakukan dengan menggunakan dua instrumen yaitu observasi dan tes. Hasilnya menunjukkan bahwa siswa membuat kemajuan besar dalam kemampuan mereka untuk memahami teks bacaan. Nilai rata-rata pretes hanya 72,71, namun meningkat menjadi 79,29 pada siklus 1 dan 86,57 pada siklus 2. Nilai pretes terendah hanya 65 dan meningkat menjadi 70 hingga 75 pada siklus berikutnya. Sedangkan nilai pre-test tertinggi adalah 82,5, dan nilai post-test tertinggi adalah 92,5 dan 95. Dalam hal siswa yang lulus tes, sedangkan hanya 9 siswa (25,71%) yang lulus pre-test, ada signifikansi peningkatan pada post-test, dengan 21 siswa (60%) lulus pada post-test siklus 1 dan 33 siswa (94,29%) lulus pada post-test siklus 2. Penelitian ini dihentikan pada siklus 2 karena kriteria untuk keberhasilan terpenuhi dalam persentase 94,29%, dengan 33 siswa lulus post-test pada siklus 2, berdasarkan standar Kriteria Ketuntasan Minimal (KKM) > 76.

Kata Kunci: membaca; pemahaman bacaan, LMS, Moodle.

## Abstract

The purpose of this research was to increase students' achievement in reading comprehension by implementing the LMS Moodle to the 10th-grade students at SMA Petra 4 Sidoarjo in the academic year 2020/2021. Classroom Action Research (CAR) was applied in conducting this study from January to June 2021. Each cycle of CAR consisted of four steps: planning, action, observation, and reflection. The data were gathered through the use of two instruments: observation and test. The results indicated that students made great progress in their ability to comprehend the reading texts. The pre-test mean score was only 72.71 but improved to 79.29 in cycle 1 and 86.57 in cycle 2. The lowest pre-test score was only 65 and improved to 70 to 75 in subsequent cycles. Meanwhile, the highest pre-test score was 82.5, and the highest post-tests scores were 92.5 and 95. In the case of the students who passed the tests, while only 9 students (25.71%) passed the pre-test, there were significant improvements in post-tests, with 21 students (60%) passing in post-test cycle 1 and 33 students (94.29%) passing in post-test cycle 2. This research was stopped in cycle 2 since the criteria for success were met in a percentage of 94.29%, with 33 students passing the post-test in cycle 2, based on the Minimum Mastery Criteria (KKM) standard of > 76. Keywords: reading; reading comprehension, LMS, Moodle.

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#### INTRODUCTION

Reading ability is one of the factors that contribute to people's ability to communicate ideas, opinions, or arguments about what they see, feel, and believe, and to convey those ideas, opinions, or arguments in an effective manner. Reading serves a variety of purposes, including survival, education, and recreational reading. Reading for survival refers to our response to our environment in order to obtain information such as street signs; reading for learning is defined as the type of reading those students do in a specific classroom setting with a specific purpose; and reading for pleasure is defined as reading that is not required for any purpose (Berardo, 2006). Reading is founded on five central concepts: the concept of meaning, the transfer of meaning from one mind to another, the transmission of a message from writer to reader, the process by which we obtain meaning through reading, and the interaction of the reader, the writer, and the text (Nuttall, 1996). Reading is unquestionably necessary in the process of learning a second language because it is a source of information; as a result, building reading skills is essential.

Reading is one of the most crucial components of efficient language acquisition, and it is frequently promoted as a good approach for learners to increase their proficiency as well as one of the most useful ways of obtaining new vocabulary by learners in generally. It is well-known as an interaction process that takes place between the reader and the text, with the end result being comprehension of the text (Tavakoli, Dabaghi, & Khorvash, 2010). Because reading is viewed as a primary aim in EFL situations, it is necessary to say a few words about the significance of reading in the process of language learning. In today's schools, the majority of the focus is typically placed on the 'productive' abilities of speaking and writing since they provide as simple criteria for evaluating student progress and accomplishment (Anderson, 1991). As a result, reading is one of the four English abilities that has been designated as the standard competency of the curriculum (Slamet & Sulistyaningsih, 2021). In order to achieve the instructional goal, the teacher must construct teaching and learning activities that allow students to demonstrate their reading ability.

Moreover, reading comprehension is the process of simultaneously extracting and building meaning from written language through involvement and engagement with it (Rassaei, 2015). As part of the cognitive process of interpreting a text, the reader's prior knowledge and experiences play an important role in the interpretation of the text. A meaningful representation of the text in memory is required for effective understanding of a text (Machida, 2011). The importance of metacognitive awareness of meta discourse and strategies for its use must be emphasized to students so that they can understand how to take the author's point of view, maintain schemas by connecting sentences, shift topics, recognize an introduction and a conclusion, recognize the author's attitudes and whether he is being subjective or objective, and recognize the relevance signals and circumstances (Sabat & Slamet, 2019). Readers get the ability to read independently and to represent and encode the discourse into their long—term memory as a result of this process (Crismore, 1990).

E-learning strategies (as the word is generally used) were widely taken by educators around the world (Rohwer, Motaze, Rehfuess, & Young, 2017). E-learning can be characterized as delivery of training material via ICT (Information and Communication Technology), CD-ROMs, DVDs, smartphones and other media, both in- and outside the classroom. E-learning can facilitate active learning without time restrictions and space. The contents are managed by e-learning through various learning activities and the quality of teaching can be improved; for example, the Learning Management System (LMS) can influence the involvement of the students in the environment, change collaboration and communication, and provide access to learning material (Ergün & Adıbatmaz, 2020). E-learning also offered considerable innovation in the 21<sup>st</sup> century for education contexts, profiting from web-based communication, cooperation, multimedia and the transfer of information. In conclusion, it is obvious that the usefulness of the above-mentioned usage of e-learning in terms of the use of the teaching and learning process of reading comprehension may be evaluated.

E-learning environments boost student learning by giving a wider source of interactions, make content more accessible, provide automated and flexible evaluation techniques and improve literacy in technology. Although e-learning has advantages over conventional learning environments, there can also be major constraints. The teacher may be observed in typical classrooms, and the students can readily converse with their friends through the numerous social messages in the environment (Fatimah, Elzamzami, & Slamet, 2020). In elearning contexts, however, students are typically isolated from each other and from the teacher, and community emotions can hardly form (Daniel & Schwier, 2010). In addition, the creation of Moodle (Modular Object-Oriented Dynamic Learning Environment) has enabled both teachers and students to enjoy a supportive community learning environment, helping them not just at the classroom and outside the school. This type of learning environment also allows them to interact and so activities can be focused on the students and adapted to their needs, interests, pace of learning etc.

Created in the 1990s by Martin Dougiamas, Moodle has now become the most popular open-source Learning Management System (LMS) with a multitude of educational potential, notably in language instruction. Teachers may use Moodle to construct powerful, adaptable and engaging online learning experiences. Moodle offers a complete, self-contained system that can handle all of the activities that a language class should handle, from the management of students, resources, workshops, feedback, evaluation and grading of student subjects, etc., all in one integrated system (Widodo & Slamet, 2022).

The use of Moodle in EFL is not to modify the learning behavior of students directly but to develop independent learning through familiar teaching approaches. By doing this, the students wish to participate actively through online or offline learning and to prepare themselves for independent study. It is a fundamental in language acquisition that should be addressed seriously in a language school by encouraging students to use the language outside the confines of the classroom (Brown, 2007). For example, Moodle creates an organized atmosphere that accommodates students' learning needs and learning resources in order to encourage them to take part in reading understanding class (Widodo & Slamet, 2021). Moodle also enables students to learn 'outside the walls', and so adapt their learning to their own style, pace and time by providing an online way of delivery. In turn, this can inspire them to be self-employed students.

In addition, teachers are also materials developers, they are ultimately responsible for the resources that the students utilize in their classes (Ulfiati, Kurniawan, & Failasofah, 2014). Teachers may adapt materials to make them more appropriate for specific levels of students in order to assist students in improving their English reading comprehension skills. This is done because the implementation of meaningful conceptual content in reading instruction increases motivation for reading and text comprehension among students. There are a number of barriers that students may encounter while learning to read through reading texts. As a result of an observation done at the end of the first semester of the academic year 2020/2021 at SMA Kristen Petra 4 Sidoarjo, it was determined that the students' ability to read is still quite low. According to the average score that the students received in their final examination in the first semester and the pre-test conducted at the beginning of the second semester, this is the case. All average scores from the classes did not show satisfactory achievement, and they were still below the KKM (Minimum Criteria Standard), which was 76. There are a variety of factors that contribute to students' limited reading abilities. First, students are less enthusiastic about reading. Second, the majority of students think that reading is difficult because they lack sufficient vocabulary. Third, the students rarely make use of their past knowledge from a previous encounter in the classroom.

As a result of the problems mentioned, the teacher should provide new and appropriate medium to encourage students to continue their learning at home. Students' senses can be stimulated by media, which can help them learn more effectively (Widodo & Slamet, 2020). A Learning Management System (LMS) such as Moodle, which is an open-source e-learning software, can be used by teachers to manage students who are learning at home on their own, with the guidance of the teacher. LMS differ from exclusive course management systems in that they allow for the presentation of information to learners in small units, the assessment of what

they have learned, and the use of the system as an additional review of material or a transition to the next level of learning. Moodle is a compatible e-learning application to be used by teachers, and it is not intended for programmers. Additionally, there are numerous sources that the teacher can access on the internet to help him or her operate it. Moodle is a simple platform to work with. When teachers want to make changes to something, they can do so using the edit mode option, which is accessible from the same page. By inputting the menu in the item that the teacher needs to alter, the teacher will be taken immediately to the screen (Mukundan, 2018).

Because it is well-implemented by the teachers, Moodle is the most effective e-learning platform for student learning. This is supported by the findings of the two related research that were analyzed in this study. First and foremost, there is the work of Wongsate and Rutaikarn (2019). They found that the effectiveness of the Moodle e-learning medium, as measured by one way ANOVA, was only moderately satisfying to the participants in their study. Then, teachers in the classroom discovered a high level of satisfaction with Moodle e-learning in their classroom, with a statistically significant level of p 0.05 in the satisfaction with Moodle elearning in their class. In another study, Bataineh and Mayyas (2017) examined the effect of Moodle-enhanced instruction on Jordanian EFL students' reading comprehension and grammar performance using a quasiexperimental design on the 32 students enrolled in a language requirement course at a Jordanian state university. The results of the analysis, which included averages, standard deviations, ANCOVA and MANCOVA, demonstrated that the experimental group outperformed the control group (at  $\alpha = 0.05$ ) in both reading comprehension and grammar. The use of Moodle and its implementation were the topics of discussion in this study, which was identical to the previous studies. This study was a continuation of the two prior studies, which were focused on the implementation of Moodle to improve the students' reading comprehension skills at SMA Petra 4 Sidoarjo. The method used in this study differs from the methods used in the two previous studies. Classroom action research was applied in this study. Meanwhile, Wongsate and Rutaikarn (2019) used a survey questionnaire, whereas and a quasi-experimental design was applied by (Bataineh and Mayyas, 2017).

Education has evolved from face-to-face interaction to a virtual environment as a result of technological advancements. Online learning is a type of virtual environment in which to study. Online learning is a process of obtaining education through the use of an internet network or an intranet in conjunction with the usage of a learning management system (Widodo & Slamet, 2022). Institutions of higher learning bear the responsibility of providing teachers and students together with the technological infrastructure necessary for improved teaching and learning as a result of the increasing usage of technology in educational settings (Felix, 2003). Moodle is widely regarded as the world's most popular learning management system (LMS) for both learning and training in a variety of disciplines, owing in part to its user-friendliness, open-source design, and availability for free download. Moodle enhances traditional instruction by providing possibilities for further learning and teacher feedback outside of the classroom, which complements traditional instruction. When it comes to language study and teaching, Moodle is essential. Students' general language abilities, such as pronunciation, vocabulary, and grammar, are thought to be enhanced as a result of this program. It also helps teachers better administer their courses and communicate with their students, both synchronously and asynchronously, through the use of Moodle (Wu, 2008). Furthermore, it has the ability to enable learners to not only acquire knowledge and skills, but also to apply what they have learned in various contexts.

As a supplement to the online classroom, the Moodle course follows the academic outlines of reading, as applied by the 2013 Curriculum, which be used at SMA Petra 4 Sidoarjo. Its major aim is to give students understanding abilities in reading especially when facing tests. The contents offered by the Moodle are aimed towards the knowledge typically found in the examinations, such as finding key ideas and concepts of a text, obtaining information, preparing lessons, etc. The content was obtained from different sources, including text books, newspapers, magazines, web articles, etc., covering diverse topics and the sources should provide students with an opportunity to learn authentic texts. To summarize, there are several components built into the Moodle course with the intention of enriching students' learning experiences through the provision of various

activities related to reading, including but not limited to reading materials, learning resources, quizzes and tests in reading, and so on. A number of features of the Moodle-based learning management system, which is used at SMA 4 Petra Sidoarjo, can aid in the learning process. As a result, it is an excellent choice for a course management system that can manage all learning activities. Because of the reasons stated above, the e-learning platform Moodle is utilized. This study was done by the aim to what extend that e-learning Moodle for will improve the 10th grade students' reading comprehension ability at SMA Petra 4 Sidoarjo in the academic year 2020/2021.

#### **METHODOLOGY**

The goal of this study was to demonstrate how implementing Moodle as a learning management system (LMS) can help students in X IPA 2 enhance their reading comprehension skills at SMA 4 Petra Sidoarjo in the field of action research. According to Burn (2010), action research is committed to discovering and resolving problems in order to impact changes and improvements to the problems addressed. Additionally, it is suggested that a form of research is conducted methodically in gathering and analyzing data regarding the lesson in order to come at answers for some future lesson content considerations. Considering the abovementioned, it is undeniable that this research fits under the category of Classroom Action Research (CAR), which is research conducted in a classroom by a teacher. In this study, the researcher identifies many concerns impacting students' reading abilities. He then developed techniques for settling the problems. He selected to perform action research in accordance with the Kemmis & McTaggart (1982) model, as mentioned in Burns (2010), in which each cycle is comprised of four phases. The four components are: planning, action, observation, and reflection.

The subjects of this study were students in the tenth grade who participated in a reading comprehension activity at SMA 4 Petra Sidoarjo. There was a total of 35 students in attendance. They were taught and learnt about reading comprehension through the use of Moodle e-learning materials. The pretest and posttest reading comprehension tests were utilized to collect data in this study. The pretest, which was administered at the beginning of the semester in order to ascertain students' initial comprehension, consisted of eight reading passages followed by 40 multiple-choice questions. While the posttest was administered at the semester's end following the completion of the instructional treatment. The posttest contained the same number of questions and reading material as the pretest, namely 40 multiple choice questions, but the questions were formatted differently.

The data was compiled over a six-month period. The first step was to distribute the pretest before to treatment of Moodle. The instrument was constructed in around 90 minutes by the students. The second, assessing the impact of Moodle e-learning on students' reading comprehension. It lasted six months; and the third was the distribution of the posttest. The instrument was constructed in around 90 minutes by the students. Each student's comprehension score was calculated for data analysis purposes. Then, using a Microsoft Excel program, the pretest and posttest results were calculated to determine the improvement of Moodle e-learning material in terms of students' achievements as measured by the mean score, the lowest score, the highest score, and the percentage of students who pass the Minimum Criteria Standard (KKM  $\geq$  76,  $\geq$  75% as the criteria of success).

### RESULTS AND DISCUSSION

The purpose of this study was to provide an answer to the formulated problem, which was: to what extent that LMS Moodle as an e-learning open-source platform will improve the reading comprehension skills of the X IPA 2 students at SMA 4 Petra Sidoarjo in the academic year 2020/2021. This study was completed in six months, beginning in January 2021 and ending in June 2021, during the second semester. The action research in the classroom was implemented in two cycles namely cycle 1 and cycle 2.

A pre-test was conducted on Monday, January 13th, 2021 by the teacher and the researcher, who observed participants using Moodle, an open-source of online learning, at SMA Petra 4 Sidoarjo before to undertaking the research. Towards the end of the meeting, the English teacher administered a pre-test to determine the students' ability to comprehend what they were reading. The items in the test consisted of 40 multiple-choice questions, with each question requiring a different answer to be provided. There were 35 students that participated in the pre-test, and the teacher gave them 90 minutes to finish it. Following is a figure presenting the results of the pre-test:

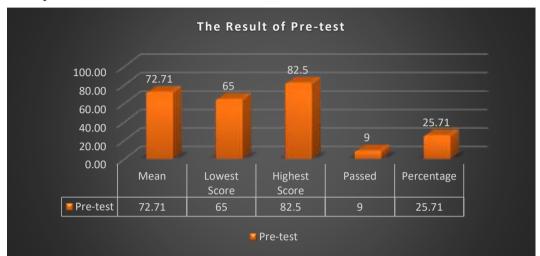


Figure 1. The Result of Pre-test

The results revealed that the students' performance was below the average. According to the KKM, 9 students (25.71%) passed the pre-test. The highest possible score was 82.5, and the lowest possible score was 65, with the mean of the pre-test being 72.71. According to the findings of the pre-test, it appeared that the majority of the students had difficulty comprehending the reading texts they were assigned. Accordingly, only nine students completed the test when the Minimum Mastery Criteria (KKM) was  $\geq$  76. As previously indicated, Moodle was introduced in two phases, beginning in January 2021 and completing in June 2021, for a total of two cycles. Cycle 1 was completed in three months (from January to March), and cycle 2 was completed in three months (from April to June). The implementation of Moodle as an e-learning platform was aimed at increasing the reading comprehension of the students in the lesson. As a result, the reading materials were delivered as needed by the teacher and the researcher. The teacher administered the test, which consisted of 40 items of reading comprehension, towards the completion of cycle 1, which served as the mid-term (post-test). They were given 90 minutes to finish the assignment. Later, the post-test cycle 2 was administered as the final exam at the conclusion of each semester. According on the result of the research, Moodle assisted students in improving their comprehension skills. According to the findings of Classroom Action Research (CAR) in the implementation of Moodle, as shown in the following table and figure, the reading comprehension results of students in the first cycle and second cycle were statistically significant when compared to the results of the preresearch that was carried out.

Table 1
Students' Reading Comprehension Scores Pre-test & Post-tests

Student's Code	Pre-test	Post-test (Cycle I)	Post-test (Cycle II)
X IPS 2-1	75	80	95
X IPS 2-2	72,5	75	82,5
X IPS 2-3	77,5	82,5	92,5
X IPS 2-4	75	85	95
X IPS 2-5	70	75	80

X IPS 2-15       75       75       87,5         X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5         Lowest Score       65       70       75         Highest Score       82,5       92,5       95				
X IPS 2-8       72,5       77,5       80         X IPS 2-9       75       90       90         X IPS 2-10       80       92,5       95         X IPS 2-11       72,5       80       82,5         X IPS 2-12       70       85       85         X IPS 2-13       67,5       85       87,5         X IPS 2-14       82,5       85       92,5         X IPS 2-15       75       75       87,5         X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5	X IPS 2-6	70	80	80
X IPS 2-9       75       90       90         X IPS 2-10       80       92,5       95         X IPS 2-11       72,5       80       82,5         X IPS 2-12       70       85       85         X IPS 2-13       67,5       85       87,5         X IPS 2-14       82,5       85       92,5         X IPS 2-15       75       75       87,5         X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       72,5       85         X IPS 2-21       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90       95         X IPS 2-29       70       72,5       80 <td>X IPS 2-7</td> <td>65</td> <td>82,5</td> <td>85</td>	X IPS 2-7	65	82,5	85
X IPS 2-10       80       92,5       95         X IPS 2-11       72,5       80       82,5         X IPS 2-12       70       85       85         X IPS 2-13       67,5       85       87,5         X IPS 2-14       82,5       85       92,5         X IPS 2-15       75       75       87,5         X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-21       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-30       70       72,5	X IPS 2-8	72,5	77,5	80
X IPS 2-11       72,5       80       82,5         X IPS 2-12       70       85       85         X IPS 2-13       67,5       85       87,5         X IPS 2-14       82,5       85       92,5         X IPS 2-15       75       75       87,5         X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80	X IPS 2-9	75	90	90
X IPS 2-12       70       85       85         X IPS 2-13       67,5       85       87,5         X IPS 2-14       82,5       85       92,5         X IPS 2-15       75       75       87,5         X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-21       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72,71       79.29       86.5°	X IPS 2-10	80	92,5	95
X IPS 2-13       67,5       85       87,5         X IPS 2-14       82,5       85       92,5         X IPS 2-15       75       75       87,5         X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-24       65       72,5       85         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-30       70       72,5       80         X IPS 2-30       70       72,5       80         X IPS 2-30       70       70       80         Mean       72,71       79.29       86.5'	X IPS 2-11	72,5	80	82,5
X IPS 2-14       82,5       85       92,5         X IPS 2-15       75       75       87,5         X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-21       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-26       82,5       90       95         X IPS 2-26       82,5       90       95         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95 <td>X IPS 2-12</td> <td>70</td> <td>85</td> <td>85</td>	X IPS 2-12	70	85	85
X IPS 2-15       75       75       87,5         X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95	X IPS 2-13	67,5	85	87,5
X IPS 2-16       72,5       72,5       87,5         X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72,71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-14	82,5	85	92,5
X IPS 2-17       75       75       85         X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-15	75	75	87,5
X IPS 2-18       70       70       75         X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-16	72,5	72,5	87,5
X IPS 2-19       77,5       80       90         X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-17	75	75	85
X IPS 2-20       80       82,5       90         X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-18	70	70	75
X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-19	77,5	80	90
X IPS 2-21       67,5       70       77,5         X IPS 2-22       67,5       72,5       85         X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-20	80	82,5	90
X IPS 2-23       72,5       72,5       85         X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5°         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-21	67,5		77,5
X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-22	67,5	72,5	85
X IPS 2-24       65       72,5       75         X IPS 2-25       77,5       85       90         X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-23	72,5	72,5	85
X IPS 2-26       82,5       90       95         X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-24		72,5	75
X IPS 2-27       75       82,5       92,5         X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-25	77,5	85	90
X IPS 2-28       65       72,5       87,5         X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-26	82,5	90	95
X IPS 2-29       70       72,5       80         X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5'         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-27	75	82,5	92,5
X IPS 2-30       70       70       80         Mean       72.71       79.29       86.5°         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-28	65	72,5	87,5
Mean       72.71       79.29       86.57         Lowest Score       65       70       75         Highest Score       82,5       92,5       95         Passed       9       21       33	X IPS 2-29	70	72,5	80
Lowest Score         65         70         75           Highest Score         82,5         92,5         95           Passed         9         21         33	X IPS 2-30	70	70	80
Highest Score         82,5         92,5         95           Passed         9         21         33	Mean	72.71	79.29	86.57
Passed 9 21 33	Lowest Score	65	70	75
	<b>Highest Score</b>	82,5	92,5	95
Percentage 25.71 60.00 94.29	Passed	9	21	33
9	Percentage	25.71	60.00	94.29

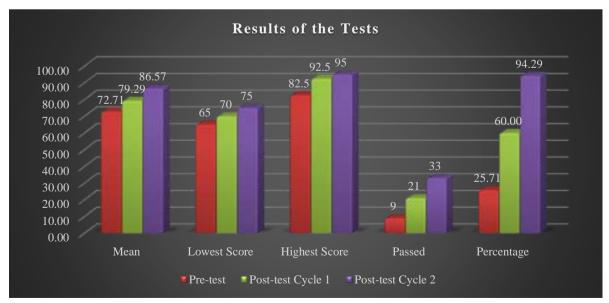


Figure 2. Students' Reading Comprehension Scores Pre-test & Post-tests

Table 4.1 and Figure 2 present the findings of the pre-test, post-test cycle 1 and post-test cycle 2 tests. It is now possible to argue that the students of class X IPA 2 at SMA Petra 4 Sidoarjo did better when the

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assignments were completed. At the pre-test, the mean score was just 72.71, but from cycle 1 (from 72.71 to 79.29) to cycle 2 improved significantly (which was from 79.29 to 86.57). To prove that, the score was 71.71 at the beginning of the trial and improved to 86.57 at the end of the study. In comparison to the pre-test, the lowest score students also shown considerable improvements in their post-test results. Pre-tests scored 65, and post-tests ranged between 70 and 75. The highest scores have also risen from 82.5 (pre-test) and 95 (cycle 1) to 92.5 (cycle 2). The students who passed the tests received some improvements. Only 9 students who passed the test in pre-test (25.71%). The number of students who passed the tests rose to 60% (from cycle 1) and 94.29% (from cycle 2) in posttests, improvements were made in the number of students who passed the tests. Successful learning suggests 75% or more of the grade point average of students is 76 or higher. The use of Moodle seemed to have worked to improve students' reading comprehension. In accordance with the KKM criteria, which is  $\geq$  76 ( $\geq$  75% passed), 33 students were represented (94.29%) who passed post-test in Cycle 2. The research findings showed that LMS Moodle is successful in enhancing the reading comprehension of the students in class X IPA 2 at SMA Petra 4 Sidoarjo in the academic year 2020/2021.

## **CONCLUSION**

According to the research findings, the process of improving students' reading comprehension skills through the implementation of LMS Moodle for students in class X IPA 2 at SMA Petra 4 Sidoarjo in the academic year 2020/2021 significantly improved. Students' improvements can be seen in the process of improving students' reading comprehension in each cycle, as well as in the increase in students' mean scores and the percentage of students passing the tests administered during preliminary research, cycle 1, and cycle 2. The mean score at pre-test was only 72.71, but it increased to 79.29 in cycle 1 and in cycle 2 (86.57). Following that, the highest pre-test score was only 82.5 and improved from 92.5 to 95 in subsequent cycles. Meanwhile, the lowest pre-test scores were 65, and the lowest post-test1 and post-test 2 scores were 70 and 75. In case of the number of the students who passed the tests, only 9 students passed the pre-test (25.71%). While post-tests revealed an increase in the percentage of students who passed, with 21 students (60%) passing in post-test cycle I and 33 students (94.29%) passing in post-test cycle 2. This research was stopped in cycle 2 because the criteria for success was met in a percentage of 94.29%, with 33 students passing the post-test in cycle 2, based on the Minimum Mastery Criteria (KKM) standard of  $\geq$  76.

In this study, the discussion about the implementation of Moodle to improve reading comprehension skills for tenth grade students at SMA Petra 4 Sidoarjo was limited to the implementation of Moodle itself. Using the e-learning platform Moodle, the researcher recommends that teachers encourage other students' involvement in the learning process. This is because Moodle may be used to promote other competencies such as listening and writing in addition to offering reading comprehension assignments. Teacher preparation is essential while utilizing Moodle for lessons. Since the integration of technology and the internet in education, teachers should be provided with a seminar on how to organize this learning management system (LMS), and the school's principal should allocate funds for this technology used.

## **REFERENCES**

- Anderson, N. J. (1991). Individual Differences in Strategy Use in Second Language Reading and Testing. *Modern Language Journal*, 75(4), 460–472. doi:https://doi.org/10.2307/329495
- Bataineh, R. F., & Mayyas, M. B. (2017). The Utility of Blended Learning in EFL Reading and Grammar: A Case for Moodle. Teaching English with Technology, 17(3), 35-49. Retrieved from http://www.tewtjournal.org
- Berardo, S. A. (2006, September 6). The Use of Authentic Materials in the Teaching of Reading. *The Reading Matrix*, 6(2), 60-69.

- 3916 The use of LMS Moodle to Improve Reading Comprehension Skill for the 10th Grade Students Tyas Oetomo, Lailatul Musyarofah, J. Priyanto Widodo DOI: https://doi.org/10.31004/basicedu.v6i3.2652
- Brown, H. D. (2007). *Teaching by principles: An interactive approach to language pedagogy (3rd ed.)*. White Plains, New York: Pearson Education.
- Crismore, A. (1990). Metadiscourse and discourse processes: Interactions and issues. *Discourse Processes*, 13(2), 191-205. doi:10.1080/01638539009544753
- Daniel, B., & Schwier, R. A. (2010). Analysis of Students' Engagement and Activities in a Virtual Learning Community: A Social Network Methodology. *International Journal of Virtual Communities and Social Networking (IJVCSN)*, 2(4), 31–50. doi:https://doi.org/10.4018/jvcsn.2010100103
- Ergün, E., & Adıbatmaz, F. B. (2020). Exploring the Predictive Role of E-Learning Readiness and E-Learning Style on Student Engagement. *Open Praxis*, 12(2), 175–189.
- Fatimah, S., Elzamzami, A. B., & Slamet, J. (2020). Item Analysis of Final Test for the 9th Grade Students of SMPN 44 Surabaya in the Academic Year of 2019/2020. *JournEEL (Journal of English Education and Literature)*, 2(1), 34-46. doi:https://doi.org/10.51836/journeel.v2i1.81
- Felix, U. (2003). Language Learning Online: Towards Best Practice 3. Lisse, The Netherlands: Swets & Zeitlinger.
- Mukundan, S. (2018). *Moodle Your Way to E-learning*. Retrieved from https://www.academia.edu/4318076/Moodle\_Your\_Way\_to\_E\_learning
- Nuttall, C. (1996). Teaching Reading Skills in a Foreign Language. Bath: Heinemann.
- Rassaei, E. (2015, October 14). Effects of Three Forms of Reading-Based Output Activity on L2 Vocabulary Learning. *Language Teaching Research*, 76-95. doi:https://doi.org/10.1177%2F1362168815606160
- Rohwer, A., Motaze, N. V., Rehfuess, E., & Young, T. (2017). E-learning of evidence-based health care (EBHC) to increase EBHC competencies in healthcare professionals: a systematic review. *Campbell Systematic Reviews*, *13*(1), 1–147. doi:https://doi.org/10.4073/csr.2017.4
- Sabat, Y., & Slamet, J. (2019). Students' Perception towards Written Feedback of Thesis Writing Advisory at STKIP Sidoarjo. *JET ADI BUANA*, *4*(1), 63-79. doi:https://doi.org/10.36456/jet.v4.n1.2019.1885
- Slamet, J., & Sulistyaningsih, S. (2021). Students' Difficulties in Answering "Structure and Written Expression" TOEFL-like at STKIP PGRI Sidoarjo. *E-Structural (English Studies on Translation, Culture, Literature, and Linguistics)*, 4(01), 17-27. doi:https://doi.org/10.33633/es.v4i01.4410
- Tavakoli, M., Dabaghi, A., & Khorvash, Z. (2010). The Effect of Metadiscourse Awareness on L2 Reading Comprehension: A Case of Iranian EFL Learners. 3(1), 92–102. *English Language Teaching*, 3(1), 92–102.
- Ulfiati, L., Kurniawan, D., & Failasofah. (2014). Moodle and Reading Comprehension Materials for the EFL Students. *The 61 TEFLIN International Conference, UNS Solo 2014* (pp. 962-967). Solo: UNS Solo.
- Widodo, J. P., & Slamet, J. (2020). Students' perception towards Google Classroom as E-Learning Tool (A Case Study of Master of English Education of the Second Semester at STKIP PGRI Sidoarjo). *Magister Scientiae*, 2(48), 99-109.
- Widodo, J. P., & Slamet, J. (2021). Lecturers' Perspectives Through E-learning by Using Moodle for Post-Graduate Students at STKIP PGRI Sidoarjo. *International Seminar on Language, Education, and Culture (ISoLEC 2021)* (pp. 167-171). Atlantis Press.
- Widodo, J. P., & Slamet, J. (2022). Developing A Moodle-Based Learning Management System (LMS) for Slow Learners. *Jurnal Inspirasi Pendidikan*, 12(1), 1-10. doi:https://doi.org/10.21067/jip.v12i1.6346
- Wongsate, D., & Rutaikarn, S. (2019). Effectiveness of Moodle E-learning for Student Enrolment of GENL 1101 Learning Resources and Skills at Asia-Pacific International University. *Abstract Proceedings International Scholars Conference*. 7, pp. 1661-1676. ISC International Scholars Conference. Doi: https://doi.org/10.35974/isc.v7i1.1776

- 3917 The use of LMS Moodle to Improve Reading Comprehension Skill for the 10th Grade Students Tyas Oetomo, Lailatul Musyarofah, J. Priyanto Widodo DOI: https://doi.org/10.31004/basicedu.v6i3.2652
- Wu, W. (2008). The application of Moodle on an EFL collegiate writing environment. *Journal of Education and Foreign Languages and Literature*, 7(1), 45-56.