The Development of LMS-Moodle based Virtual Classroom for *Hör-Sehverstehen* Learning

Irma Permatawati[*], Pepen Permana, Dani Hendra

German Language Education Department, Indonesia University of Education
[*]Corresponding author. Email: irma.permatawati@upi.edu

ABSTRACT

The lack of time available for Hör-Sehverstehen learning at face-to-face meetings in the classroom, the underutilization of the use of the internet for Hör-Sehverstehen learning, and the less innovative learning of German Hör-Sehverstehen are the main backgrounds of this research. This study aims to determine whether the Learning Management System (LMS) - Moodle can be used for Hör-Sehverstehen learning. LMS is a way that can be used in developing online learning or e-learning, which is a web-based learning management application that facilitates learners to learn as they should in a virtual classroom. The LMS used in this research is the Moodle-based LMS available at http://vkz.jerman.upi.edu. This research uses a quantitative approach in the form of a weak experimental design, namely The One-Shot Case Study Design. The data needed in this study was obtained from three treatment phases. The result of this research creates a web-based form of learning with the LMS application which can be applied in Hör-Sehverstehen learning.

Keywords: Hör-Sehverstehen, LMS-Moodle, virtual classroom

1. INTRODUCTION

As technology advances, there is a new language skill that combines information in the form of images and sounds. This skill is called *Hör-Sehverstehen*. Sources of information used for this skill are usually in the form of films (Meiβner, 2014). Teaching materials for *Hör-Sehverstehen*'s skills can be found in various German language textbooks, one of which is the German textbook used at the FPBS UPI German Language Education Department, namely the *Netzwerk* textbook series. The four language skills are taught at the German Language Education Department in courses whose names are adjusted according to the name of each language skill, except for *Hör-Sehversten* skills. These language skills are taught in an integrated way into listening courses, so that sometimes the time allocation available to practice *Hör-Sehverstehen*'s skills is not sufficient, or even the material for these skills is simply passed.

Another factor that causes *Hör-Sehverstehen*'s skills to not be discussed optimally during face-to-face class meetings is the availability of supporting media, such as screens, LCDs and speakers. Apart from the availability of supporting media, it takes a lot of time to prepare this media. The time that should be used to discuss lecture

material is often consumed by media preparation. Another factor that also influenced the implementation of *Hör-Sehverstehen*'s skills learning was the condition of the classrooms, namely the availability of sufficient curtains to cover the incoming light. Not all classrooms are equipped with this facility.

On the basis of this, it can be argued that a form of learning *Hör-Sehverstehen* skills is needed that can overcome various obstacles so that learning of *Hör-Sehverstehen* skills can be carried out. In addition, this form of learning is also expected to attract students' interest to facilitate students to be more actively involved in the learning process which will have an impact on improving student achievement. *Hör-Sehverstehen's* learning using film as the medium can also improve students' ability in language skills and vocabulary. This is in line with the opinion of Violeta and Darja (2015, p. 15) which states that: "The results indicate that most ESP teachers are aware of the benefits of using video materials for the development of the four skills, in particular the productive skills of writing and speaking, and vocabulary."

An active and interactive *Hör-Sehverstehen* German language skills learning concept needs to be developed and applied. With such learning, students can play an

active role in the learning process and be able to interact both with fellow learners and with other learning components.

Internet-based learning or e-learning can support learners to be actively involved in the learning process and interact in learning, both interactions with fellow learners, with teachers or interactions with the learning content itself. In addition, compared to traditional learning which relies on face-to-face learning in class, e-learning can provide flexible learning, meaning that it is not limited to space and time. Learning can happen anytime and anywhere. In other words, learners can choose the time and place to study that best suits their condition, both physically and mentally. The form of e-learning applied in this is based on Moodle, which is the second most widely used LMS world-wide and is used in a great variety of educational and training contexts across the globe (Jones, 2012).

The efforts to improve the quality of *Hör-Sehverstehen* learning are not only done through LMS-Moodle based virtual classroom. The selection and arrangement of tasks given also play an important role in the success of learning. Regarding the learning of *Hör-Sehverstehen*, Rösler and Würffel (2014) revealed that there are three types of tasks that can support the teaching of auditive and visual skills (*Hör-Sehverstehen*). These three types of tasks constitute a series of assignments divided according to their objectives. The first task is a type of task that prepares an understanding of the text, in this case the task aims to open the learner's initial insight. The second type of task aims to support learners' understanding of the content of the text, in this case the text in the form of films and videos. The last type of assignment is a task that aims to deepen the knowledge that learners have obtained from the texts they discuss. This third type of task is usually in the form of productive tasks. In this research, learning materials for *Hör-Sehverstehen* will be packaged online by carrying out the principles of the three types of tasks.

2. METHOD

This research is an empirical study using the One-Shot Case Study. According to Fraenkel and Wallen (2006, p. 271), the objectives of this research design are as follows: "In the one-shot case study design, a single group is exposed to a treatment or event and a dependent variable is subsequently observed (measured) to assess the effect of the treatment." The LMS-Moodle based virtual classroom for *Hör-Sehverstehen* learning consists of three treatments, each consisting of the three tasks, namely, preparatory task (*vorbereitende Aufgabe*), supporting task (*unterstützende Aufgabe*) and further and in-depth task (*weiterführende und vertiefende Aufgabe*). The LMS-Moodle based virtual classroom for *Hör-Sehverstehen* learning can be found online at https://vkz.jerman.upi.edu.

This research is divided into two stages, namely the analysis of the *Hör-Sehverstehen* material contained in the textbook *Netzwerk A2* based on the types of tasks according to Rösler and Würffel and the trial of the *Hör-Sehverstehen* learning material which has been developed in the LMS-Moodle based *Hör-Sehverstehen* learning virtual classroom. The first stage is carried out with the help of research instruments in the form of analysis tables to analyze chapters, scenes, and types of tasks. From the analysis results 3 scenes are selected and will be developed and tested in stage two. The second stage in this study involved 25 second semester German students as research respondents. They were asked to do *Hör-Sehverstehen* assignments contained in the LMS-Moodle based virtual classroom.

The first treatment contains a discussion of scene 5. This scene consists of 3 supporting tasks and 1 further and in-depth tasks. No preparatory task is found in this scene. To complete the tasks, a discussion forum about new and old media is presented as a preparatory task. Students are asked to write down the names of the media showed in the pictures, group them into new or old media, and write down activities that can be done using these media. The scene chosen for the second treatment is scene 13. This scene discusses the theme: The Way is very easy. This scene initially consisted of 2 supporting tasks and 1 further and in-depth tasks. In this research, scene 13 is equipped with 2 preparatory tasks in the form of matching questions. Scene 14 was chosen as the material discussed in the third treatment and addresses the theme: I also have to practice! Initially, this scene consisted of 1 preparatory task and 1 supporting task. To complete the tasks of *Hör-Sehverstehen'*, an in-depth task was chosen, namely writing a simple text about the experience of learning German and other things by self-teaching. The final task of all scenes is a questionnaire to reveal student opinions and experiences regarding the material and online learning tasks they have done.

3. FINDINGS AND DISCUSSION

This research involved 25 German Language Education students in the second semester. The textbook used in this semester is *Netzwerk A2*. This research is divided into two stages. In the first stage, an analysis of the *Hör-Sehverstehen* material contained in textbooks is carried out. The results of the analysis at this stage are used as the basis for compiling the LMS-Moodle-based *Hör-Sehverstehen* learning content which is held online. As for the second stage, trials were carried out on the *Hör-Sehverstehen*-based LMS-Moodle learning content that had been compiled. At these stage three treatments were carried out.

Table 1. Hör-sehverstehen materials in the textbook netzwerk A2 based on the type of tasks

Chapter	Scene	Preparatory Task(s)	Supporting Task(s)	Further and In-Depth Task(s)
1	Trailer	-	1	-
	1	-	2	2
	2	-	1	1
2	3	1	1	-
	4	1	2	1
3	5	-	3	1
	6	1	2	1
4	7	1	2	3
	8	-	2	-
	9	-	1	2
5	10	-	2	1
	11	-	1	1
6	12	1	1	1
	13	-	2	1
7	14	1	1	-
	15	-	3	1
8	16	1	2	1
	17	-	3	1
9	18	1	1	1
	19	-	2	2
10	20	2	2	-
	21	-	2	1
11	22	-	2	1
	23	1	2	1
12	24	-	2	-
	25	-	1	3
TOTAL	**26**	**11**	**45**	**23**

The first stage of this research is to analyze the *Hör-Sehverstehen* material contained in the textbook used. The results of the analysis of the 12 chapters contained in this book can be seen in table 1.

In the Table 1, it can be seen that of the 12 chapters contained in the textbook *Netzwerk A2*, 26 scenes were found. Each chapter generally consists of 2 scenes. Only 2 chapters are consisting of 3 scenes, namely chapters 1 and 4. Based on the type of task, it can be seen that the preparation task and the in-depth task are not always available in every scene presented. The supporting task always appears in every scene. This is because this type of task is directly related to the film or scene being watched. This is in accordance with the opinion of Rösler and Würffel (2014, p. 109) which states that: *"Auf Aufgaben mit diesen Zielen werden Sie in Lehrwerken bei der Bearbeitung von Texten immer wieder stoßen, wobei es natürlich Variationen gibt und nicht immer alle Aufgabentypen vorhanden sind."* Furthermore, Rösler & Würffel (2014, p.115) explained that: *"Nicht immer werden Ihnen die in Ihrem Lehrwerk zu den Texten angebotenen Aufgaben für Ihre Lerngruppe ausreichend oder sinnvoll erscheinen. Dann müssen Sie selbst überlegen, wie sie z.B. den Text vorentlasten, Verstehensprozesse für reale Situationen trainieren oder eine Anschlusskommunikation anregen können"*. The following can be concluded from the quotations: 1) It is possible that not all types of tasks can be found in the textbook. 2) As a teacher you can

change or adapt the tasks in the textbook. 3) The teacher can add tasks to the three task types as required. These three points are used as the basis for the preparation of *Hör-Sehverstehen's* tasks in this research.

In the second stage, *Hör-Sehversetehen's* tasks were tested which had been compiled into LMS-Moodle based online learning materials. This second stage consists of 3 treatments. The following are the results obtained from the three treatments.

3.1. First Treatment

The first treatment was carried out on August 26, 2020 and was attended by 25 respondents. The scenes discussed in this treatment are scene 5 which consists of 1 preparatory task, 3 supporting tasks, 1 further and in-depth task and a questionnaire. The preparatory task uses the module forum. Students are asked to discuss the names and uses of the 2 new media and 2 old media that are displayed. 20 respondents did this task on Wednesday, while 5 respondents did it the next day due to problems with the network. The use of the module forum for this type of task is in accordance with the opinion of Costa, Alvelos and Teixeira (2012) regarding the function of the module forum, namely represent a communication tool where students and teachers can exchange ideas by posting comments. Soliman (2014) stated that this module is also allowing students to share and exchange their ideas and experiences independently, namely without their instructor's participation.

In the first supporting task, students were asked to watch scene 5 without sound and make assumptions about the content of the film with the help of the 4 questions provided. As for the second supporting task, students were asked to watch a film with pictures and sound and check the assumptions they had made about the content of the film by answering back the four questions raised in the first supporting task. In the third supporting task, students are asked to watch the film with pictures and sound, then write down activities that can be done with an iPad. Below is a table containing the results of supporting tasks in the first treatment, complete with the number of correct answers and the duration of time required by students to work on the series of supporting tasks.

In the Table 2, it can be seen that 7 out of 25 respondents did not complete the task. The time for carrying out this series of supporting tasks is not limited and it can be seen in the table that respondents need different times to complete this task. This shows that they are working on tasks according to their pace. Regarding the results of the first and second supporting task, the number of correct answers shows that in the second supporting task there are more correct answers. This is in accordance with the results of the questionnaire which showed that 54% of respondents

disagreed with the statement that they could easily make guesses about the contents of the film by watching the film without sound. Meanwhile, 75% of respondents completely agree with the statement "Watching films with pictures and sound makes it easier for me to make assumptions about the contents of the film." This can also be proven by the number of correct answers on the third supporting task. Respondents who successfully completed this task received more than half of the correct answers. Even 5 out of 25 respondents got the maximum score.

Table 2. Results of supporting tasks in the first treatment

R	ST 1 (4)	ST 2 (4)	ST 3 (5)	Time	Info
1	-	-	-	-	not finished
2	2	3	5	1h 41m	1 attempt
3	1	2	4	1h 36m	1 attempt
4	0	3	3	56m 35s	1 attempt
5	2	4	3	1h 29m	1 attempt
6	1	3	4	59m 28s	1 attempt
7	1	4	4	30m 20s	1 attempt
8	-	-	-	-	not finished
9	0	2	3	43m 41s	1 attempt
10	2	3	5	42m 26s	1 attempt
11	1	2	4	23m 23s	1 attempt
12	2	3	5	34m 37s	1 attempt
13	1	3	5	2h 34m	1 attempt
14	4	-	-	-	not finished
15	1	-	-	-	not finished
16	1	-	-	-	not finished
17	1	4	4	54m 22s	1 attempt
18	0	2	4	36m 25s	1 attempt
19	1	2	4	13m 21s	1 attempt
20	0	4	4	10m 5s	1 attempt
21	2	3	5	1h 57m	1 attempt
22	1	1	-	-	not finished
23	0	3	3	44m 46s	1 attempt
24	0	3	4	25m 50s	1 attempt
25	3	-	-	-	not finished

Regarding the function of the preparatory task, which is to prepare learners' understanding of the contents of the film, 67% of respondents stated that they strongly agreed with the statement "The preparatory task helps me to recall vocabulary related to the theme to be discussed" and 63% of respondents agreed with the statement "Preparatory task makes it easier for me to make guesses about the contents of the film". Regarding the number of respondents who did not complete the series of supporting tasks, this can be indicated by the opinion of 46% of respondents who strongly agreed and 38% of respondents who agreed with the statement "I prefer to watch and discuss films in class rather than doing them online". Some of the reasons that can be put forward regarding this opinion are network and quota problems. This can also be related to the form of the module used. In this series of supporting tasks, lesson modules that ask for answers in the form of exposures

are used, so that students need more time and effort in writing their answers.

3.2. Second Treatment

The second treatment was carried out on August 27, 2020 and was attended by 25 respondents. The scenes discussed in this treatment are scene 13 which consists of 2 preparatory tasks, 3 supporting tasks, 1 in-depth task and a questionnaire. A series of preparatory tasks using a quiz module, namely the form of matching questions. The module selected for the series of supporting tasks in the second treatment is the same as the module used in the first treatment, namely lesson. Only the form of answer that was asked in the second treatment was not in the form of a long exposure, but students were asked to write down the order in which the photos appeared based on the film. In the first supporting task, students are asked to watch the film without pictures and in the second supporting task they can check their answers by watching movies using pictures and sound. The further and in-depth task of this treatment is a simple dialogue containing questions and answers about directions. At the end, students are asked to fill out a questionnaire to assess the material and learning process they have done. The Table 3 contains the results of the second treatment.

Table 3. The results of the second treatment

Task	Attempt(s)	Maximum Score and Attempt(s)	Not Finished
Preparatory 1	32	1x (17) 2x (6)	-
Preparatory 2	37	1x (13) 2x (7) 3x (1)	-
Supporting 1	25	5	-
Supporting 2	25	14	2
Further and In-Depth	22	22	3

Based on the Table 3, it can be seen that there were students who tried to answer the preparatory tasks more than once. In the first preparatory task, there were 32 attempts and from these attempts, 17 respondents got the maximum score from the first attempt and 6 respondents got the maximum score after the second attempt. In the second preparatory task, it was found that there were more trials than the number of respondents, namely 37 times. 13 respondents got the maximum score from the first attempt, 7 respondents after the second attempts, and 1 respondent after the third attempt. Regarding supporting tasks, only 5 respondents got the maximum score on the first supporting task and 14 respondents got the maximum score on the second supporting task. As for the second supporting task, there were still two respondents who did not complete this task, even though the form of the

module chosen for this task did not require an answer in the form of a long exposure. In the further and in-depth tasks, only 22 attempts were found. This means that 3 respondents did not complete this task.

Regarding the function of the preparatory task to activate vocabulary that will be discussed in the second treatment, 84% of respondents stated that they strongly agreed and 16% stated that they agreed. In the first supporting task, students are asked to determine the order in which the places appear in the film by watching the film without pictures. This means that they are asked to use listening skills in doing this task. 56% of respondents agreed with the statement "I can easily sort pictures based on their appearance in the film by watching movies without pictures". Meanwhile, 84% of respondents strongly agree and 16% of respondents agree with the statement "Watching movies with pictures and sound makes it easier for me to understand the contents of the film". From the results of this questionnaire, we can see the role of sound and pictures in supporting understanding.

3.3. Third Treatment

The third treatment was held on August 28, 2020 and was attended by 25 respondents. The scenes discussed in this treatment are scene 14 which consists of 1 preparatory task, 1 supporting task, 1 further and in-depth task and a questionnaire. In the preparatory task, students are asked to write in a forum about the activities being carried out by the three figures in the picture and make guesses about the content of their conversation. In the supporting task, students are asked to watch a film with pictures and sounds, then answer 5 questions about the film in the form of true-false questions. In the further in-depth task, students were asked to write simple texts about their experiences of learning German and learning something by themselves. In the end, students were again asked to fill out a questionnaire to assess the material and online learning process in the third treatment. Below is presented a table containing the results of *Hör-Sehverstehen's* learning in the third treatment.

In the table 4, it can be seen that all respondents performed the three types of tasks and they generally got maximum scores. As for the supporting task, there were 39 attempts. When compared with the results of the first and second treatments, in the third treatment there were no respondents who did not complete the tasks. This is thought to have occurred due to the selection of a different module, namely modules that do not require answers in the form of long exposures, especially for supporting tasks. In the third treatment, the module chosen for the supporting task was a quiz with true-false questions consisting of 5 questions.

Table 4. The results of the third treatment

Task	Attempt(s)	Maximum Score and Attempt(s)	Not Finished
Preparatory	25	1x (25)	-
Supporting	39	1x (6) 2x (11) 3x (1)	-
Further and In-Depth	25	1x (25)	-

The preparatory task in the third treatment was to make assumptions about the contents of the film based on the photos displayed. Based on the questionnaire results, 48% of respondents stated that they disagreed with the statement "I have no difficulty making assumptions about the contents of the film with the help of photos". Judging from the comparison of the number of types of tasks in the textbook *Netzwerk A2*, preparatory tasks are types of tasks that rarely appear. This indicates that this type of task is rarely trained, so that learners are not used to doing it. Judging from its urgency, the assumptions that learners make about the content of films can help them understand what they will watch later. This is evidenced by the results of a questionnaire which shows that 68% of respondents agreed with the urgency of making assumptions from the contents of the film, which can help them understand the content of the film they watch later.

Another finding from the third treatment is about the importance of pauses and repetitions in film screenings to understand the content of the film. 72% of respondents disagreed with the statement "I can answer true-false questions about the content of the film by watching the film without pauses and repetitions." This shows that in working with films, learners have different speeds in understanding film content. Therefore, we need learning media that can accommodate the needs of learners related to learning speed. To the statement "By studying online, I can determine for myself when I do the assigned assignments." 60% of respondents strongly agree, and 36% of respondents agree. Regarding the statement "By studying online I can adjust to my learning speed, for example repeating or pausing a film to understand the content." 68% of respondents strongly agree and 32% agree.

There are two other statements put forward in the questionnaire on the three treatments outside the context of *Hör-Sehverstehen's* tasks, namely about the function of films to motivate learners to learn German and to provide an overview of the state of Germany. Regarding the first statement, namely "I can get a picture of the situation in Germany from the film that is shown." 71% of respondents in the first treatment, 52% of the respondents in the second and third treatment agreed. For the second statement, namely "Watching movies motivates me to learn German.", 54% of respondents in

the first treatment, 60% of respondents in the second treatment and 44% of respondents in the third treatment stated that they strongly agree. Meanwhile, 56% of respondents in the third treatment agreed to this statement. This shows another function of the application of films in learning German, namely so that students get a "direct" picture of the situation in Germany, so that they are motivated to learn German.

4. CONCLUSION

Based on the results of the treatments and questionnaires, it can be concluded that *Hör-Sehverstehen's* tasks which are compiled online and integrated into the LMS-Moodle-based virtual classroom can be used in *Hör-Sehverstehen* learning. However, we need to pay attention to the module selection for a specific type of task. For example, it is known that the lesson modules that require answers in the form of long exposures are not suitable to be applied to supporting tasks. This is because students need more time to write down answers while watching movies and have to be able to share their concentration well.

Network and quota constraints need attention. We can overcome this obstacle by implementing blended learning, which combines self-study with valuable face-to-face interaction with a teacher (Banditvilai, 2016). In this context, it can be done by doing preparatory and supporting tasks in class and doing further and in-depth tasks online. If our choice is to do the whole series of *Hör-Sehverstehen* tasks online, then it is necessary to pay attention to the duration of the film to be discussed and the form of the tasks given. Chudak (2012) thinks it is from advantage if the individual units, namely the films shown are short.

Another function of using films in learning is to provide students with an overview of the situation in Germany, as to motivate them to learn. Teachers need to optimize the use of film and related exercises available in the textbooks. Or we can look for films related to the themes discussed and convey them to students as part of the teaching material (Khan, 2015).

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