Development of E-Learning with Schoology in Hybrid Learning Strategy for Listening Skill of Tadulako University

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Abstract

Schoology is a learning management system that helps in the teaching and learning process at a time when classroom learning is avoided. This study is focused on developing E-learning with Schoology and to find out whether Schoology improves student learning outcomes and listening skills or not. The type of research used is ADDIE from Dick and Carey. Furthermore, the pretest-posttest control group design was used, which was followed by 100 subjects who were taken by purposive sampling technique. Furthermore, the test is used to test learning achievement while exploring listening skills through interviews. Thus, data analysis was carried out quantitatively and qualitatively. After collecting data by experts, it shows that the developed Schoology media gets a score of 86 which means very good, the material gets a score of 95 which means very good and practitioner gets a score of 98 which means very good. It can be concluded that E-Learning in Schoology is valid. Furthermore, the posttest data shows that there is an increase in the experimental class after receiving treatment through Schoology, it can be seen that the final results of the Mann-Whitney test are 0.00> 0.05 for the experimental class. The implication of this article is that it has a positive impact on curriculum development that is centered on developing interactive and easy-to-implement learning media. The use of Schoology in the learning process is very easy, efficient and interactive to apply in the learning process so that it can improve learning outcomes and listening skills.

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INTRODUCTION

Indonesia defines the abilities that must be possessed by Indonesian students, namely understanding and using information, thoughts, feelings, and developing science, technology and culture using English as recorded in the Ministry of National Education (2004). "Speaking skills are said to be things that need to be understood in English even though listening skills are also skills that should not be ignored. This is caused by educators who focus on speaking skills, reading skills, and writing skills" (Adnan, 2012). In line with this opinion, it can be concluded that understanding and mastering English is very necessary, not only mastering how to speak English but also listening skills in English.

English Education has four skills that must be mastered by students, one of which is, namely listening skills in English. Asrono (2014) explains "Listening skill is a process in language skill that needs practice by using audio / technology such as a research done by Embi and Latif in 2004 in using E-Learning as a tool for learning ESL". Another opinion from Schmidts & Thron (in Nascimento, 2018) explained that "Teaching listening in a foreign language has always been a challenging experience for both teachers and students. The fact that people assume it to be a skill that is naturally acquired leads to activities that assess listening without teaching it properly, and consequently it receives less attention in the classroom". So it can be concluded that as one of the skills in English, listening skill is a skill that requires a high level of concentration in understanding the meaning of conversation and both educators and students are required to have a variety of vocabulary to make it easier to understand the meaning in audio conversations.

According to Nunan (2003) there are five difficulties that are often experienced by students in listening skills in English as follows.

1). The speaker involves more than two people, 2) The role of the listener in the context of the conversation, 3) How is a listener interested in the topic being discussed, 4) How complex is the grammar, vocabulary used by the speaker, 5) what support facilities are provided to listeners in order to understand the message conveyed, for example the media used to help listeners understand the message conveyed such as pictures, diagrams or other visual media. Seeing from the explanation above, in the learning process of listening skills, in addition to adequate skills, learners also need a media that makes it easier for students to learn these listening skills.

Kustiono (2010) explains that learning media is an important component of the delivery strategy. Learning media has an important role in teaching delivery strategies to achieve certain learning outcomes. Then, Astuti (2017) states that learning media is a tool that functions and can be used to convey learning messages so that. It can be concluded that learning media are said to play an important role in the teaching and learning process, because learning media provide various facilities for educators in channeling information in an innovative and interactive way.

Allen's (2013) explains that E-Learning is electronic learning that uses technology and information, E-Learning is developed based on learning objectives using electronic or computer systems as well to support the learning process. Furthermore, Efendi (2017) explained that E-Learning is one of the learning media that uses information technology in other terms, namely online learning virtual learning, distributed learning, virtual classes or web-based learning.

Rangganathan et al (2007) classified 6 concepts of E-Learning 1.) E-Learning without presence and without communication, 2.) E-Learning without presence but with communication, 3.) E-Learning combines occasional attendance and 4.) E-Learning is used as a learning tool in the classroom. So it can be concluded that the concept of e-learning is not only learning in educational environments both schools and colleges and without requiring interaction between learners and teachers, wherever and whenever the learning process can be carried out while supported by media that support the learning process effectively. As the opinion of Layer & Wang (2014) which states

that E-Learning provides opportunities to learn anywhere.

There are various facilities provided by using e-learning, one of which is the use of Schoology which makes learning more efficient, demands more creativity and is always innovative in exploring material from the educators. As Sudarwanti (2018) argues, the use of E-Learning in higher education helps lecturers to improve the quality in the learning process. (Edmodo, Schoology, Moodle, Quipper School, Dokeos, and dotLRN are platforms E-learning is widely used today. Joshua (2016) explains that building e-learning with Schoology is more interesting than using Moodle because Schoology does not require hosting and management (easier to use).

The Schoology makes it easy to distribute materials, lessons, exams, practice quizzes and assessments. According to Abdellah (2016) Schoology introduces approach user-centric to learning, Schoology is a platform e-learning designed to engage students in an easy-to-use collaborative environment that strengthens the connection between students and their instructors. Then, Wardono et al (2018) explained that Schoology is a site that combines social networking features and LMS. Through Schoology, educators and students can interact socially as well as learn. the use of Schoology can also help the learning process because it has a positive impact on attitudes, helps students to implement autonomy in the EAP class and improves students' proficiency in business writing. (Tigowati, Efendi and Budiyanto, 2017)

Andira & Hidayat (2019) explain Hybrid learner strategies said also blended learning because it is a combination of face-to-face learning with learning online or e-learning so that it combines the characteristics of the internet-based learning model, namely time efficiency, low costs and the ease of students accessing material, assignments and quizzes anytime and anywhere.

Huda (2013) explains that the hybrid learning model can be used side by side with the use of-based learning media Schoology in an effort to increase student motivation and learning outcomes in understanding and mastering courses listening. As well as an alternative way for educators to use the facilities available in the work environment. The hybrid learning model is divided into three types of models, namely 1). Traditional Classes, 2). Real Workshop, 3). Virtual Workshop. (Huda, 2013)

The use of WhatsApp is more commonly found in the lecture process. When viewed in terms of usability, the media WhatsApp is considered not sufficiently capable of assisting the lecture process due to the fact that media WhatsApp does not have features such as question banks, tests, quizzes or timers like the tests TOEFL and IELTS. So that the use of media WhatsApp in lectures, especially in the course, listening skill cannot one hundred percent guarantee the skills of students who get good grades have actually mastered the material or not. Several previous studies that discuss the development of E-Learning in Schoology also describe the benefits of Schoology in the learning process, one of which is Hidayat and Andira (2019) with the results of research which states that the hybrid learning media assisted Schoology model is more effective for student learning outcomes, see from an increase in the experimental class given the intervention. Based on the description above, it foothold for researchers in developing Schology that can improve student learning outcomes and listening skills through a hybrid learning strategy.

METHOD

Research uses a development research model from Dick and Carey, namely ADDIE, as the flow in this model is: 1) Analysis (analysis). 2) Design (design), 3) Development (development), 4) Implementation (implementation), 5) Evaluation (evaluation), (Sugiono, 2015)

The evaluation stages of development E-learning with Schoology in Hybrid Learning Strategy use tests to measure student learning outcomes and interview techniques in assessing students' listening skills in courses listening skill 2. To test the effectiveness of this learning

model, a design is used was Quasi Experimental Design with a Non-Randomized Control Group Pretest Posttest Design. Sampling was done purposively.
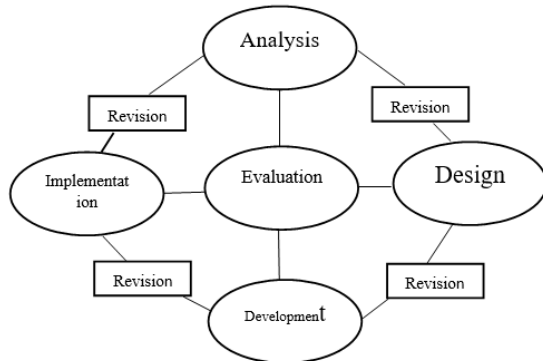

Figure 1. ADDIE approach to developing products in the form of Learning Designs (Sugiono, 2015)
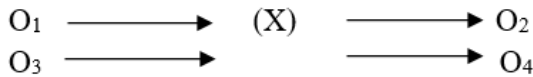

Figure 2. Research design Non randomized control group pretest posttest design

O1 and O2 mean pretest for both experimental group and control group while O3 and O4 mean posttest for both the groups, moreover, X stands for intervention. The subjects in the study consisted of the population and research sample. The population of this study were all students of the English Education Study Program of Tadulako University who took the course listening skill 2. As for the sample, they were students who programmed courses listening skills2. The total number of samples taken was 100 subjects. In determining the sampling, is used purposive with the consideration of the same lecturers and balanced basic abilities.

RESULTS AND DISCUSSION

1. Development E-Learning with Schoology
a. Analysis
1) Analysis of Lecturer Needs

In courses listening skills still use media speaker, teaching materials and books. Lectures with large classes require a medium that can reach all students in the class. Media that convey audio well, interactive tests and giving interesting assignments.

2). Analysis of Student Needs

The results of the student need analysis show that almost 90% of students want new media in teaching learning process that is more interactive and innovative in courses skill listening. This encourages researchers to develop E-Learning with Schoology as a new, more interactive medium in courses Listening Skill.

b. Design E-Learning with Schoology.

At this stage, the researcher designed the material views, quizzes and tests according to the default design from Schoology.

c. Development

E-learning development with Schoology is divided into several parts, namely media development, material development and lesson plan development. After the three stages have been completed then the validity is tested by experts.

d. Implementation of Product Trials

When conducting product trials, students are asked to do practice questions through Schoology. Then, Researchers gave a questionnaire to fill in. After all the data has been collected, Next, the researcher makes revisions based on the questionnaire that has been filled in.

1. Validity Test by Experts

Validity test was done by three experts. That was summarized as table 1

Table 1. Validity Test by Experts

Validator	Result	Interval	Note
Expert of Media	86	86<100	Very Good
Expert of Material	95	95<100	Very Good
Expert of Practitioner	97	97<100	Very Good

Table 2. Table of Criteria

Interval	Criteria
$84 \leq$ score ≤ 100	Very Good
$68 \leq$ score ≤ 84	Good
$52 \leq$ score≤ 68	Good Enough
$36 \leq$ score≤ 52	Not Good
$20 \leq$ score≤ 36	Very Not Good

Based on Table 1, the results of the validity test of media experts obtained results of 86 which according to the criteria table were included in the very good category, so there was no need for revision, while for the results of the validation of material experts, the results were 95 <100% which according to the criteria table was included in the very good category without the need of improvement. Furthermore, the researcher conducted a validity test by expert practitioners who obtained results 97 <100%, meaning that the lesson plan made was very good without the need for revision.

Seeing from these results, it can be said that the media developed has been very good and can be used to see the improvement in listening ability and student learning outcomes in the listening skill 2 course.

After conducting a validity test by a team of experts, then the test validity test is carried out. The basis for decision making is if $r_{count} > r_{table}$ then the test is said to be valid and if $r_{count} < r_{table}$ then the test is said to be invalid. Based on the results of the test validity test, there were 2 tests in the section preparation in valid of 10 valid tests, and in the section multiple choice there was 1 invalid test out of 5 valid questions and from the gap fill test all the tests were valid.

Then, the researchers tested the reliability test. The results of the reliability test are summarized in Table 3

Table. 3. Result of the reliability test

Category	Cronbach's Alpha on Standardized items	N of Items
Matching	0.929	10
Multiple choice	0.899	6
Gap Fill	0.749	6

The basis for decision making is that if the Cronbach Alpha value is > 0.60, then the question item is declared reliable, while if the Cronbach Alpha value is <0.60 then the question item is declared unreliable.

Based on Table 3, the reliable test results obtained in the item section Matching get a result of 0.929> 0.60 so that the item in the section is matching reliable. Furthermore, in the item section multiple choice, the results obtained

were 0.899> 0.60, the results were assumed that the questions were reliable and in the questions section, the gap fill results were 0.749> 0.60 so it could be concluded that the three parts of the questions were reliable.

Furthermore, the researcher conducted a normality test in the experimental class and control class. The results of the normality test are summarized in Table 4. The results of the Normality Test are as follows

Table 4. Result of Normality Test

Class	Sig (2-tailed)	Note
Experimental	0.00	Not Normal
Control	0.00	Not Normal

Based on Table 4, the normality test results show that in the experimental class 0.00 <0.05 means that the experimental class is not normally distributed, while in the control class the results are 0.00 <0.05, which means that the control class is also not normally distributed. Based on these data, the suitable test for use is the Mann-Whitney Test. Furthermore, the homogeneity test is carried out in both classes, and the results are summarized in Table 5.

Table 5. Result of Homogeneity Test

Lev Statistic	Sig. (2-tailed)	Not
14.293	0.00> 0.05	Not Homogeneous

Based on the table. 5 Homogeneity test results obtained results of 0.00 <0.05 This means that the data comes from subjects who are not homogeneous. However, the homogeneity test is not an absolute requirement. Because the data are not normally distributed and not homogeneous, the Paired t test is very unlikely, based on basis for decision making, the test Mann-Whitney can be used. Next, the results of the test Mann-Whitney are summarized in Table 6

Table 6. Mann-Whitney Test

Class	Sig (2-tailed)
Experimental	0.000<0.05
Control	0.130<0.05

Based on Table 6, the test results Mann-Whitney in the experimental class show a significant value of 0.00 <0.05, which means

that there is a significant difference between before and after the intervention in the form of Schoology, while the class control does not show a significant difference between before and after being given media WhatsApp. Seeing these results, the researchers then analyzed more deeply by comparing the influence of the media Schoology and WhatsApp. Furthermore, the researcher conducted the N-Gain test, the results of the N-Gain test value are attached in Table 7.

Table 7. Result of N-Gain Test

Class	Mean	Min	N-Gain
Experimental	7.02	-2.47	g>7.02
Control	0.7	-471	g>0.7

Based on Table 7, it shows the results of the calculation of the average N-Gain in the experimental class using E-Learning with Schoology with a score of g> 7.02, these results fall into the high category. Meanwhile, the class control using media WhatsApp showed an average result of N Gain with a score of g> 0.7 included in the medium category with a-Gain score minimum of -4.71 and a maximum of 10.34.

From the results of the N-Gain test, there is a very significant difference between the use of Schoology and WhatsApp. Next, in the test Mann-Whitney, it can be seen that there is no difference in the control class after being given the intervention, this explains that the use of media WhatsApp actually has a good effect but is not better than the use of Schoology in the lecture process.

DISCUSSION

Development E-Learning with Schoology following ADDIE (Analysis, Design, Development, Implementation and Evaluation). Each stage has been carried out in accordance with development needs. Each stage in this research is very important to develop media in accordance with existing needs. Development Schoology is intended to facilitate both teachers and learners in the learning and teaching process. As Lopez (2014) argues, The Schoology tool serves as a free educational platform for the

work also known as LMS, easy to use and applicable that efforts to reinvent the technology applied so far in learning. E-Learning with Schoology is designed with a purpose that is intended to facilitate the learning process so that the process of working on questions is designed to test the ability of students to understand the topic of discussion given by the educator.

The development of E-Learning with Schoology through Hybrid Learning Strategy on student learning outcomes and listening skills in the Listening Skill 2 course is seen from two indicators, namely validity and effectiveness. The validity indicator can be seen from the results of expert validation and empirical trials, namely the valid results are obtained. The quality of media development is Schoology assessed by experts to get a score of 86 which is in the very good category so media Schoology that the developed is valid and can be used.

The validation test from material experts and practitioners fall into the very good category. So that the material and lesson plans developed by researchers are valid and usable. The quality of the effectiveness stage is seen from the increase in student learning outcomes before being given intervention and after being given intervention. From the Mann-Whitney test conducted, it was found that the experimental class experienced an increase after getting good intervention using Schoology and there was no difference before and after getting the intervention in the control class using media WhatsApp.

The test N Gain, it was found that using media the Schoology increase in student learning outcomes was in the high category while using media was WhatsApp only in the medium category. This explains that Schoology is an interactive and innovative E-Learning platform in the learning process. These results are in line with Aminoto & Pathoni's (2014) research which concluded that the application of -E-Learning based Schoology media effectively increases student activity and learning outcomes.

There was an increase in listening ability in the Listening Skill 2 course after conducting

interviews with several students who were selected purposively as seen from the acquisition of high, medium and low scores. After conducting the interview, it was found that the five interviewees gave the same answer, namely by using media Schoology they felt that their listening ability had increased compared to using media WhatsApp and speaker. They also feel more concentrated in answering questions in the Listening Skill 2. The results are in line with Rama's (2018) opinion, which explains that the design course. These Schoology instead encourages students to volunteer inside and outside the classroom of relying on the old method, combined learning. in today's digital era, it is possible to help learners be more involved in their learning.

CONCLUSION

The development of E-Learning with Schoology is a media that is valid and suitable for use in the lecture process as evidenced by the results of validity tests by experts of media, experts of material and expert of practitioner experts). Schoology has also been shown to improve student learning outcomes and students' listening ability. Furthermore, design of Schoology is almost the same as Facebook's that makes the use of e-learning attractively easy to use. So that Schoology becomes one of the innovative and interactive media in the learning process.

REFERENCES

Adnan, A. (2012) Pengajaran Menyimak Bahasa Inggris: Masalah Dan Solusinya, Liingua Diidakttiika, 6 No 1(Liingua Diidakttiika), pp. 1–9.

Abdellah, A. (2016). The Effect of a Blended Learning Program Using Schoology LMS on Developing EFL Preservice Teachers' Teaching Knowledge and Reducing Their Writing Anxiety. South Valley University. Vol. 2, No.3 July 2016.

Aminoto, T. & Pathoni. H. (2014). Penerapan Media E-Learning Berbasis Schoology untuk Meningkatkan Aktivitas dan Hasil Belajar Materi Usaha dan Energi dikelas XI SMA N 10 Kota Jambi. Jurnal Sainmatika Vol 8 No.1 2014. ISSN 1979-0910.

Asrono. (2014). Improving Students Listening Skills through Interactive Multimedia in Indonesia. Academy Publisher Manufactured in Finland. doi:10.4304/jltr.5.1.63-69.

Astuti, I. A. D. (2017) 'Pengembangan Media Pembelajaran Fisika Mobile Learning berbasis Android', JPPPF - Jurnal Penelitian & Pengembangan Pendidikan Fisika, 3 Nomorr 1(2017), pp. 1–6. doi: doi.org/10.21009/1.03108.

Allen's, M. (2013) Micha el Allen's Guide to E-learning. Canada.

Efendi, A. (2017) 'E-Learning Berbasis Schoology Dan Edmodo: Ditinjau Dari Motivasi Dan Hasil Belajar Siswa Smk', Elinvo (Electronics, Informatics, and Vocational Education), 2(1), p. 49. doi: 10.21831/elinvo.v2i1.16416.

Hidayat, A. (2013). The use of songs in teaching students' listening ability. Journal of English and Education 1 (1) 21-29.

Huda, M. (2013) Model-Model Pengajaran dan Pembelajaran : Isu-Isu Metodis dan Paradigmatis. Cetakan II. Edited by S. Z. Q. & A. Fawaid. Malang: Pustaka Pelajar.

Kustiono. (2010). Media Pembelajaran: Konsep, Nilai Edukatif, Klasifikasi, Praktek Pemanfaatannya dan Pengembangan. Buku Ajar. Semarang: Unnes Press.

M.A. Lopez-Ocampo. (2014). Experience en el Uso de la Plataform Schoology Como Estrategia De Accompanamiento Docente en lis Cursis de Ciencias Basicas de la Funlam. in Memorias del Encuentro Nacional de Intevestigacion, Vol. 1, PP, 383-392.

Nascimento, M., R,. (2018). The Effect of Listening Journals in the Development of University Students' Listening Skills. ACE Action Research.

Nunan, David. (2003). Listen in. Teachers's Edition. Singapore: Thomson Heinle.

Rama, A.,N. (2018). The Use of Schoology to Enhance Students' Reading Comprehension at Lakidende University. Journal of Language Education and Educational Technology Vol 3 No 1, 2018. E-ISSN: 2502-3306.

Ranganathan, S., Negash, S., & Wilcox, M.V. (2007). "Hybrid Learning: Balancing Face to Face and Online Class Sessions". In Proceedings of the Tenth Annual Conference of The. Southern Association for Information Systems Jacksonvill, Florida

Tigowati, T., Efendi, A. & Budiyanto, C. W. (2017) 'The Influence of E-learning Use to Student Cognitive Performance and Motivation in Digital Simulation Course', IJIE (Indonesian Journal of Informatics Education), 1(1), p. 127. doi: 10.20961/ijie.v1i2.12812.

Sudarwanti, N. (2018). Evaluating E-Learning as a Learning Media a Case of Entrepreneurship E-Learning using Schoology as Media. https://doi.org/10.3991/ijet.vl3i09.7783.

Sugiono, (2015). Metode Penelitian & Pengembangan. Bandung: Alfabeta.

Wardono et al. (2018) 'Literasi Matematika Siswa SMP pada Pembelajaran Problem Based Learning Realistik Edmodo', Prisma, 1, pp. 477–497. Available at: https://journal.unnes.ac.id/sju/index.php/prisma/article/view/20138.

Wu, D. & Hitltz, R. (2004). Predicting Learning from Asynchronous Online Discussion. Journal of Asynchronous Learning Network. 8(2), 139-152.