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Development of interactive media based on lectora inspire software using the addie model

[1]Dewi Pratita, [2]Yuliana FH, [3]Deskoni
[1.2,3]Sriwijaya University

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ABSTRACT
This study aims to determine the level of validity and effectiveness of interactive learning media using the developed lectora inspire software. This research is a development research using the ADDIE development model consisting of five stages, namely Analysis, Design, Development, Implementation and Evaluation. The instruments used in this study were validation sheets, questionnaires, observation sheets and test sheets. The results showed that the average value of material expert validation was 95% and the average value of design expert validation was 85.45% which means that the interactive media developed is suitable for use in the field but with revisions from some expert advice. The results of observations made on student learning activity using interactive media amounted to 87.7% with a very good category. Based on the results of an open questionnaire distributed to students in a limited trial, it was found that students were enthusiastic and enthusiastic about learning using interactive media, this means that the developed media is very well used in Digital Learning lectures. The results of field trials stated that the medial developed was feasible for use with an average student response of 87.05% answering very interested in learning using interactive learning media developed so that it could be understood by students. Based on the results of the study, it can be concluded that interactive media using lectora inspire which was developed is categorized as valid and effective so that it is very good to be used in the Digital Learning lecture process.

Corresponding Author:
Dewi Pratita
Sriwijaya University
dewipratita@fkip.unsri.ac.id

INTRODUCTION

The rapid development of science and technology makes information easier to obtain and receive from various parts of the world. In reality, this digital era requires every individual to remain able to adjust to technological and information developments. Information has an important and real role in people's lives. Through the development of technology and information, people's lives have progressed. The development of Technology and Information is very influential on the order of human life, including in the world of education. According to Law Number 20 of 2003 concerning the Education System, the definition of education, namely:

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Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and State.

The development of technology in the world of education at this time is very rapid. There are many reforms in various aspects aimed at improving the quality of education. The quality of education depends on the effective learning process that occurs between educators and students. This means that the learning process must be carried out properly so that it can achieve the planned learning objectives. The purpose of learning activities is to try to change students who have not been educated, into educated learners, students who do not yet have knowledge about something, into students who have knowledge.

Effective learning is characterized by the occurrence of a learning process in students. Learning according to Slameto (2015) is a series of efforts that a person can make to get a new comprehensive behavior change, as a result of experience in himself in interacting with all his environment. Learning activities such as those held at the higher education level also apply an effective learning system. Lecture activities designed by lecturers are expected to be carried out well and in accordance with the expected achievement goals. Many factors influence the implementation of effective learning activities including educators, learners, facilities or infrastructure, learning environment, curriculum used, input and output of the learning activity itself.

One of the things that can be developed by lecturers in carrying out the learning process in the classroom is to use interactive learning media. Learning media is one example of facilities in learning that can be used to improve the quality of learning. Interesting and creative learning media can spur the enthusiasm of learners to learn so that the absorption of the material provided will be more effective.

Technological advances at this time make learning media also diverse and diverse so that they can be selected and adjusted to the needs of the learning activities to be carried out. Azhar Arsyad (2011) stated that the classification of learning media includes four groups, namely (1) Media from print technology, (2) Media from audio-visual technology, (3) Media from technology based on computers and (4) Media from a combination of print and computer technology.

Along with the times, today there are many learning media that develop by utilizing the sophistication of computer technology such as macromedia flash, moodle cloud, google classroom, and lectora inspire and others. Lectora is an e-learning development tool developed by Triviants Corporation. Lectora is an application that can be used for easy learning media. So that it is easy to operate and use by everyone to be developed into interactive multimedia and can be used as learning media that can help facilitate learning and teaching activities.

From the results of research conducted by Ahmad Syawaludin, et al (2019) entitled "Comparison of Student Learning Outcomes Using Lectora Inspire-Based Learning Media with Macro Media Flash" it was found that student learning outcomes on nonelectrolyte solution materials using Lectora Inspire-based learning increased with an average pre-test

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of 50.1 and an average post-test score of 86.4. The previous research conducted by Latifah, et al (2020) with the title "Development of HOTS-Based Interactive Learning Media Using the Lectora Inspire Application" in her research stated that interactive learning media based on Lectora Inspire is very suitable to be used as a learning media. This is reinforced by research conducted by Hidayat and Jaya (2020) entitled "Development of Electronic Component Teaching Materials Based on Lectora Inspire" in which it received an average score of 65.5 out of a total score of 72. Referring to the table from the Likert scale, the score obtained provides interpretation with a very decent category. In this case the researcher is interested in conducting similar research, but with a different time and research topic.

From the preliminary study activities that have been observed in this Digital Learning lecture activity, lecturers have never tried to develop interactive learning media using Lectora Inspire software in lecture activities. In lecture activities, it has utilized e-learning combined with various quiz processing applications, such as quizizz, kahoot, live worksheets and others, and to further increase student activities in participating in lecture activities, this is what encourages lecturers to continue to innovate in developing teaching materials, one of which is developing interactive learning media using Lectora Inspire software. Based on the background described above, researchers are interested in conducting research entitled "Development of Interactive Media Based on Lectora Inspire Software in Digital Learning Courses in the Economic Education Study Program".

METHODS

The type of research carried out in this research is research and development (Research and Development), which is research that seeks to develop and validate products that will be used in education (Borg &; Gall quoted by Tegeh, et al, 2014: 2). This research aims to develop products in the form of interactive media using lectora inspire software and used in digital learning lectures by fifth semester S1 Economic Education students.

The ADDIE development model is a guideline in developing products in the form of interactive media using Lectora Inspire software in this study. The stages in development according to the ADDIE model include as shown in figure 1.1.

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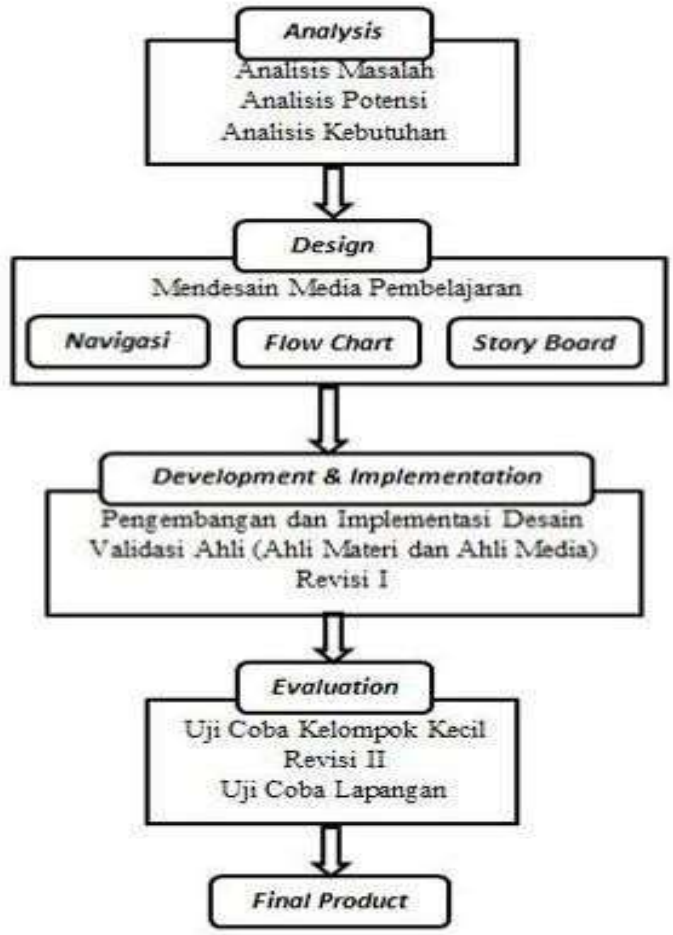

Figure 1. Stages of the ADDIE Development Model

From the picture above, it can be concluded that there are five stages in using the ADDIE development model that will be used in this study, namely (1) Analysis, (2) Design, (3) Development, (4) Implementation and (5) Evaluation. The research was carried out in the Economic Education Study Program, Faculty of Teacher Training and Education, Sriwijaya University. And the subjects in this study are students of the Economic Education Study Program FKIP Sriwijaya University who take Digital Learning courses in odd semesters (fifth semesters) of Indralaya class and Palembang class.

RESULTS AND DISCUSSION

This type of research is development research. The results of developing interactive learning media using lectora inspire software will be described in accordance with the development steps carried out as described below:

Analysis Phase

The Analysis phase is carried out in three activities, namely:

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Needs Analysis

Analysis of the needs of students of the Economic Education study program FKIP Sriwijaya University for the development of learning media in this digital learning course was obtained from the results of a questionnaire that had been given through *google form*. Based on the questionnaire that has been given, data was obtained that 98.3% of students stated that the learning process in this digital learning course had been carried out in accordance with the Semester Learning Plan (RPS) prepared by the team of lecturers. They stated that participating in learning activities in this course did not have major obstacles. The obstacles faced related to the implementation of online lectures that make them sometimes difficult to understand the material presented, different signal/network limitations, and the learning process with learning resources that tend to be monotonous do not motivate students to learn. Furthermore, students revealed that various types of teaching materials needed to support lecture activities can run effectively and efficiently can be seen in figure 1.5 below:

Figure 2 Types of Teaching Materials Students Need
(Source: Data Researcher)

Based on figure 1.5, it is known that the types of teaching materials needed by students are most interactive learning media (71.7%), learning videos (71.7%), electronic modules (55%), print modules (16.7%) and other media (10%). Interactive learning media and learning videos are most widely chosen because this type of media is able to provide a fun learning experience with direct interaction, action and reaction and coordinate student learning needs and characteristics.

Curriculum Analysis

The curriculum analysis activity is carried out by paying attention to the characteristics of the curriculum that is being used by students in the Digital Learning course. Curriculum analysis is carried out by reviewing CP-MK (Course Achievements) with CPL-Study Program (Study Program Graduate Achievements) and CP-Sub MK Digital

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Learning. This activity was carried out with a team of lecturers who taught the Digital Learning course of the Economic Education Study Program FKIP Sriwijaya University.

User Character Analysis (Student)

Based on the questionnaire that has been distributed to students, it can be concluded that the selection of interactive learning media and learning videos will make the learning process easy to understand and avoid boredom in learning. Furthermore, 100% of students stated that the role of interactive learning media in lecture activities is very important, because this will facilitate the understanding of the material presented, increase learning motivation with interesting and fun learning resources.

Various content needed in an interactive learning media includes various elements, as presented in figure 1.6 below:

Figure 3 Content Needed in Interactive Learning Media (Source: Research Data)

Based on figure 1.6, it is known that students want a variety of interesting content/content to be needed in an interactive learning media, including videos (95%), text (80%), images (75%), games (61.7%), links (46.7%), and others (13.3%). These various contents can be combined into one integrated media through the use of *lectora inspire software*. This *software* can produce learning media that combines various elements of text, animation, images, and video with easy operation because it has provided various *templates* and images available according to developer needs and does not require expertise in programming languages.

Furthermore, 50% of students already know that this lectora inspire software *can be used in the development of a learning media, but their knowledge is only limited to the usefulness of* lectora inspire and they have never used it directly. In addition, they stated that *lectora inspire* is suitable when used in digital learning lectures, as expressed by Nur Azzahra Putri:

"... Lectora inspire is an application program used to make presentations or learning media, so it is suitable if used in this digital learning course..."

In addition, in this digital learning course, the use of *Inspire Reader* has never been done. Use *software* and learning applications that have been carried out in the form of use

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e-learning, quizizz, learning videos obtained through *YouTube*, application utilization *kahoot.it* To make quizzes and mentimeter to conduct interactive voting when lecturers are explaining material through *live streaming* by using *zoom meeting*. Thus, the development of interactive learning media with *Inspire Reader Software* This is a new innovation that lecturers can do to produce interactive learning media by combining various media elements, such as text, images, animations, and videos which are expected to be useful for achieving learning objectives and are suitable for use in Digital Learning courses.

Design Stage

The second stage of the ADDIE development model is the design stage. At this stage, the design of interactive learning media begins in accordance with the results of needs analysis, curriculum analysis and user analysis, in this case student needs for interactive learning media that will be used in the Digital Learning course. At this stage, instruments are also developed that will be used to assess whether the interactive media developed pays attention to aspects of the feasibility of content and presentation as well as suitability with the approach used. The instrument prepared in the form of an interactive learning media assessment sheet using the lectora inspire software will be validated to get a valid assessment instrument.

Development Phase

At this stage of development is the realization of the developed product. At this stage the development of interactive learning media using lectora inspire software will be developed according to the design. Once developed, validation will be carried out by material experts and media design experts. Validators will be asked to provide an assessment of the product that has been developed and provide suggestions and comments related to the media that has been developed. Validation is carried out until finally interactive learning media using lectora inspire software is declared feasible to be implemented in learning. At this stage, data analysis is also carried out on the results of the assessment on learning media obtained from validators. This aims to get a valid value for the interactive learning media developed. Information on the results of the analysis obtained from validators amounted to 95% with very good categories to be developed and used as interactive learning media using lectora inspire software in learning Digital Learning courses.

The average assessment results for validation given by media experts (layout) of 85.45% with the interactive learning media category using lectora inspire software are very good to be implemented in Digital Learning lectures even though there are still some comments from experts and are improvements for the media developed.

The following interactive learning media display using lectora inspire software that has been validated by material and media experts can be seen in the following picture:

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Figure 4 Front Page of Interactive Learning Media Using Lectora Inspire Software

In the picture above is the front page of interactive learning media developed using lectora inspire software. To be able to enter the menu page, students are asked to fill in their names in the user column and fill in the password as informed by the lecturer during the lecture. The name written on this page will appear later when students complete the quiz, which is why at the beginning of the lecture is informed to students to fill in the correct name.

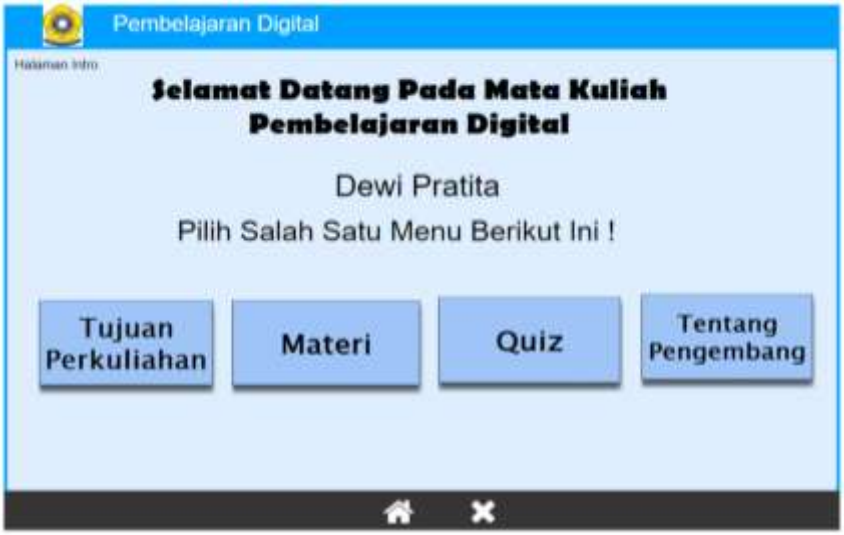

Figure 5 Menu Page on Learning Media with Using Lectora Inspire Software

After successfully logging in by logging in by filling in the student's full name user and entering the password that comes from the lecturer before the lecture activity begins, a menu page will appear as shown in figure 1.8 above. There are four menus available and can be clicked to enter each menu that has been provided. Also in the material menu can be inserted videos sourced from youtube as in figure 1.9 below.

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Figure 6 Inserting Videos Sourced from Youtube on the Material Menu

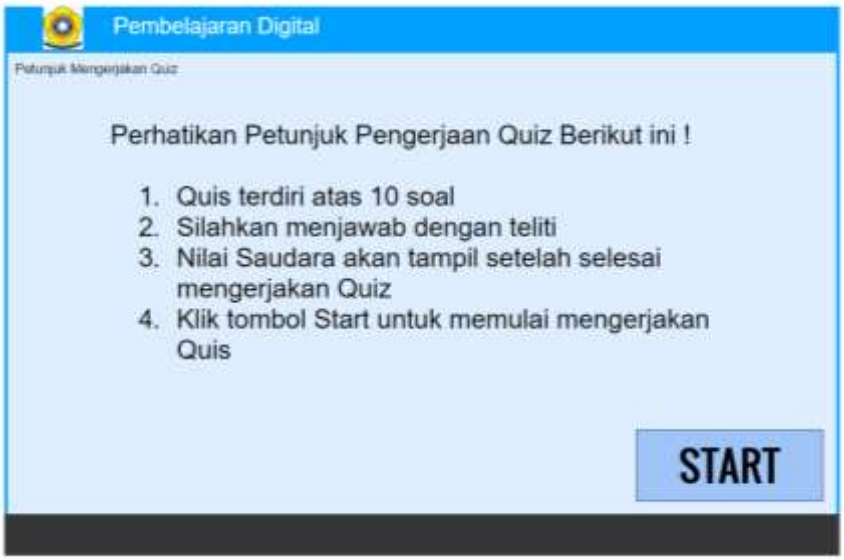

Figure 7 Instructions for Taking a Quiz

For learning media that has been developed, it is also equipped with feedback in the form of quizzes at the end of each meeting. The quiz questions given in the form of multiple choice are 10 questions. Before doing the quiz questions, students can read the instructions for doing the questions first as shown in picture 1.10 above.

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Figure 8 Quiz display if students answer the correct question

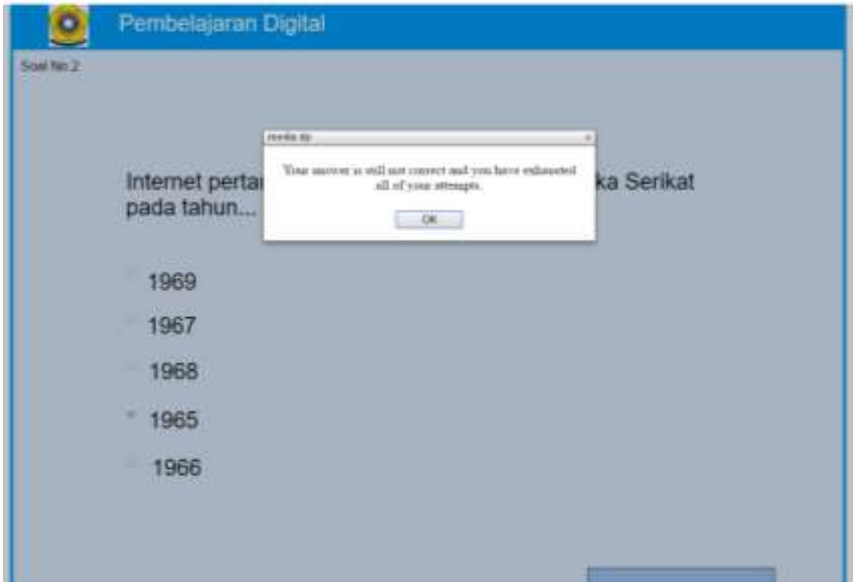

Figure 9 Quiz Display If Students Answer Questions Incorrectly

Figures 1.11 and 1.12 display the information if students answer the question correctly or answer the question incorrectly. If you have answered the question, you can click the continue button to be able to continue answering the next question. In the last quiz question, a see score button will appear to see how many scores are obtained after completing the quiz questions that have been given as shown in figure 1.13 below.

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Figure 10 View Value View Display

Implementation Phase

The implementation phase is carried out on a limited basis for students using interactive media assisted by the Lectora Inspire software that has been developed. One of the research members served as an observer and saw if the data on the observation sheet could be used as an improvement of the developed media. After the lecture process is complete, students take a test by answering questions contained in interactive learning media that has been developed using lectora inspire software. At this stage, questionnaires were also distributed to students containing questionnaire items for responses about the use of interactive learning media. It aims to obtain data related to the practicality value of using the module. In addition, students are asked to provide comments as a reference for the second revision according to responses from students. After disseminating questionnaires and conducting tests, the data was analyzed. The data to be analyzed is the result of the response. This analysis aims to determine the practical value of the interactive media developed. In addition to the practicality value at this stage, an assessment of the effectiveness of interactive media is also carried out. Effectiveness data is obtained from student learning outcome test scores when using interactive learning media in Digital Learning lectures.

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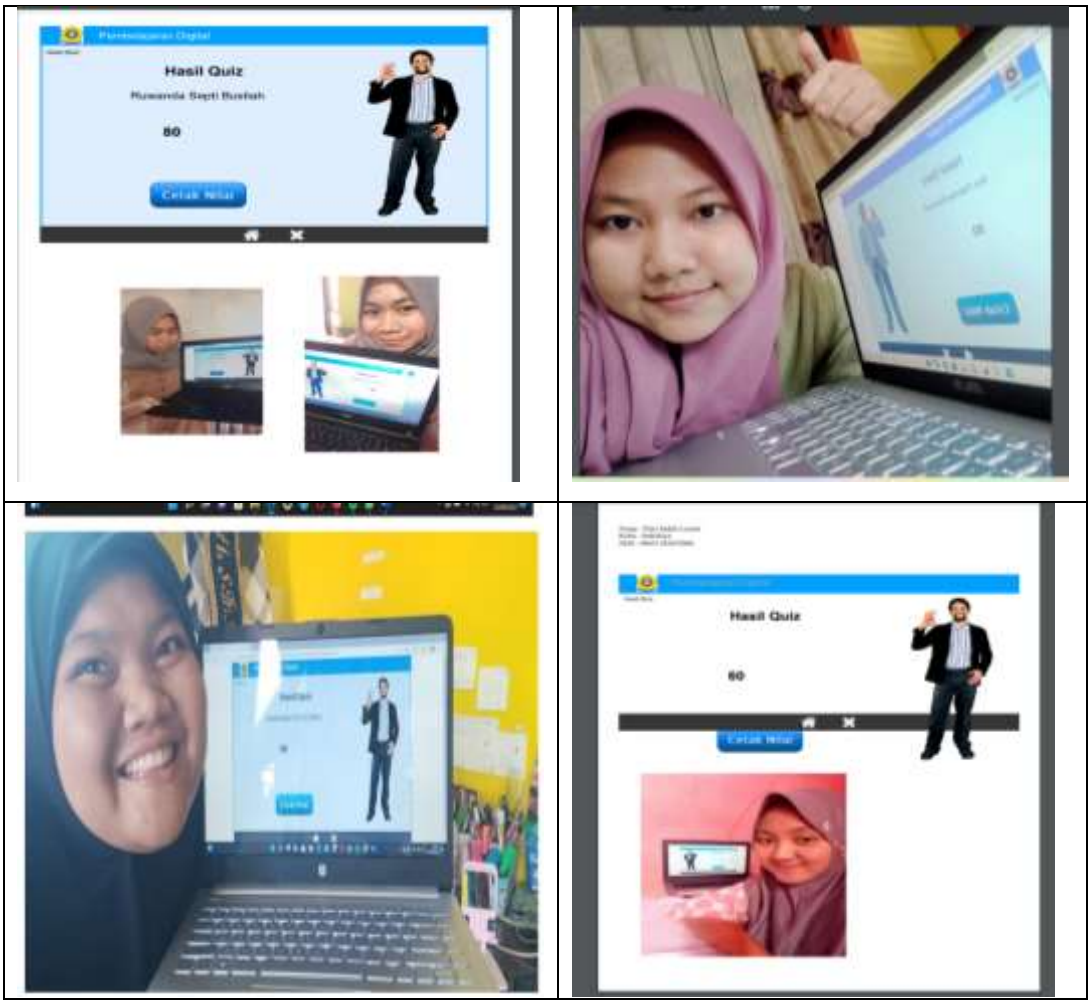

Figure 11 Product Implementation in Digital Learning Lectures

Evaluation Phase

The product is an interactive media developed with *lectora inspire software and* product revisions have been carried out in accordance with the results of validation, suggestions and input provided by a team of media, material and language experts. Furthermore, at this evaluation stage, product trials will be carried out in small groups and extensive trials.

Small Group Trials

Small group trials were conducted on 10 students who used interactive media *lectora inspire* when attending the Digital Learning course. Where these 10 students after using the media product will be given a questionnaire to find out their responses regarding the use of interactive media *lectora inspire and* provide suggestions related to improvements and improvements to the product.

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Table 1 Results of Recapitulation of Lectora Inspire Interactive Media User Questionnaire in Small Group Trials

No	Aspects	Total Score Obtained ($\sum n_i$)	Total Score Maximum ($\sum N$)	Percentage (%)	Average Grade Percentage	Category
1	Isi/Materi	228	250	100%	91,2%	Excellent
2	Display and Presentation	216	250	100%	86,4%	Excellent
3	Media Effectiveness and Practicality	214	250	100%	85,6%	Excellent
Final Score					87,7%	Excellent

Extensive Trials

Interactive media products *Inspire Reader* which has been revised according to suggestions and input from small group trials, then a broad trial was carried out involving 42 students of the Economic Education Study Program who took the Digital Learning course. Based on the trials that have been carried out and the questionnaires that have been carried out, interactive media user responses are obtained *Inspire Reader* on extensive trials with the following results:

Table 2 Results of Interactive Media User Questionnaire Recapitulation Inspire Reader on Extensive Trials

No	Aspects	Total Score Obtained ($\sum n_i$)	Total Score Maximum ($\sum N$)	Percentage (%)	Average Grade Percentage	Category
1	Isi/Materi	951	1050	100%	90,6%	Excellent
2	Display and Presentation	900	1050	100%	85,7%	Excellent
3	Media Effectiveness and Practicality	905	1050	100%	86,2%	Excellent
Final Score					87,5%	Excellent

Source: Data Researcher

N-Gain Analysis of Improved Student Learning Outcomes

Researchers used test instruments to measure the potential effects of lectora inspire-based learning media developed in improving student learning outcomes. The test was conducted at the beginning and at the end of the learning activity by giving multiple choice questions as many as 10 questions and obtained pretest and posttest results obtained an average pretest score of 74.44 and an average posttest

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score of 90.56. The overall analysis results that obtained an N-Gain value of 0.53 with a medium category. Thus, it can be said that the use of interactive learning media based on lectora inspire can improve student learning outcomes in digital learning courses.

CONCLUSION

Interactive learning media using lectora inspire software provides benefits for lecturers and students in filling out Digital Learning lecture activities because it can be a guideline for students in understanding the material being studied. Students are very enthusiastic in participating in Digital Learning lecture activities with material guides compiled and delivered using interactive learning media lectora inspire so that they do not have difficulty understanding the material that has been learned. The level of validity, practicality and effectiveness of interactive learning media using lectora inspire software that has been developed is met.

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