



Development of Interactive Multimedia Based Lectora Inspire for Accounting Subjects on Adjustment Journal Materials

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Abstract

The use of learning media is one of the important aspects in the learning process to achieve learning objectives. However, there are still educators who only use conventional learning media so that students feel bored and do not focus on learning activities. From the validation results of material experts obtained 81%, from media experts 81% and 91.67% from the results of student response questionnaires. In conclusion, interactive multimedia adjustment journal material can be a very feasible medium so that it is expected to make it easier for students to understand adjustment journals made using Lectora Inspire.

Keywords: *Interactive Multimedia; Lectora Inspire; Adjustment Journal*

Introduction

This introductory section contains the background of research problems (research background) which explains in full the topic (subject zone) of research, research problems selected and why to carry out research on these topics and problems and is supported by concepts, theories, and research results from relevant and up-to-date library sources.

The curriculum is well prepared, programmed, and planned with content and themes related to social and community interaction in carrying out educational and learning activities in schools with the aim of achieving educational goals (Prihantini, 2018). According to the quote above, it can be concluded that the curriculum is a structured educational program created by education providers that serves as a tool in achieving the expected educational goals. In general, the learning difficulties faced by students are not only in exact subjects. Subjects of a social nature also sometimes bring difficulties for students such as accounting subjects.

Accounting material is usually made into something difficult, because the level of difficulty in learning it is higher than other social sciences because accounting material is related to numbers that demand high accuracy so that students are difficult in determining accounts and difficult to determine the nominal amount of the account in question. Factors that cause difficulties in learning include: low learning motivation, students' interest in learning accounting is relatively low, the way teachers teach is considered less pleasant, learning resources are minimal (Hariyanti, 2021).

Based on the results of my interview with the accounting subject teacher at SMK Pusaka 1 because students have difficulty in determining what account to adjust, the recognition method used, calculating the costs that have been used, and the income that still has to be received, and there are limited uses of learning media used in the learning process in school to make it easier for students to understand the material. SMK Pusaka 1 in learning activities still uses learning media in the form of teaching material power points that are obtained instantly without compiling them themselves, whiteboards, and lecture methods that are still often used in delivering learning materials, this makes it difficult for students to understand what has been conveyed because they feel bored, monotonous and often do not listen to the teacher's explanation.

There are several learning media that can be used to increase students' interest in learning. one of them is that teachers can use interactive learning media as an effective way to increase students' interest in learning adjustment journal material. According to Nursifa et al., (2018) interactive learning media is a medium consisting of many components or media that are connected to each other and are able to interact between users and computers. The purpose of using interactive learning media is to help teachers provide material to their students and help them understand the material being taught. In line with Nursifa, according to (Kusmanagara et al., 2018) Interactive multimedia is a very complex media with the combination of several media elements such as text, graphics, images, photos, videos, and animations periodically so that it becomes an interesting and distracting ability. The benefit of interactive multimedia is that abstract items can be used to convey knowledge in a concrete way, providing students with a direct meeting with ideas they have not yet learned. Interactive multimedia is easy to use and incorporates videos to aid understanding of ideas compared to other forms of media.

There are a number of diverse applications to support interactive media, one of which is Lectora Inspire. Lectora Inspire is an application supporting learning media by utilizing information technology and applications that can make presentations, founded by Timothy D. Loudermilk, 1999 in America and received an award in 2011 in the field of innovative and best e-learning (Astriani et al., 2022). Lectora has represented a complete e-learning solution for education and training organizations that have rapid built-in resources for the development of e-learning (Zahro et al., 2022).

In today's increasingly advanced era, many of us encounter paid and free technology digital-based learning media for us to use as teaching materials for learning media. However, the most important thing is that prospective teachers must be able to use technology and take advantage of technology that is now developing rapidly, especially in mathematics subjects in fractional materials. Prospective teachers must be required to have creativity in providing innovation in teaching by utilizing applications on digital platforms. However, in reality there are still teachers at the level who have not utilized their learning media in delivering the subject matter in class. With the existing problems, researchers are trying to develop interactive multimedia in the hope of increasing students' interest in learning.

Previous research stated that the development of interactive multimedia assisted by lectora inspire is very aspects of media display 78.65 with decent criteria, aspects of language aspects 78.83% with decent criteria, material aspects 85.57% with very decent criteria, aspects of technological convenience 77.3% with decent creiteria, and readability aspects 84% with very feasible criteria (Kusuma & Mahardi, 2021).

This development research is focused on developing interactive mulmedia assisted by inspire lectures on accounting subjects that can be accessed through students' android smartphones which contain material from service company adjustment journals that are packaged attractively, and are equipped with several questions including true-false questions as evaluation questions and multiple choices questions that are used as a reference to find out the understanding of students. With the hope that interactive multimedia can support teachers in delivering interesting learning materials and students are more motivated to learn.

Research Methods

Martianingtiyas (2019) Research and development or Research and Development (R&D) is a type of research used to produce a product in the field of education that aims to improve the quality of learning in the classroom and its development can be in the form of media, teaching materials or learning evaluations. update to the research I did using the 4D model. According to Sugiyono (2015) the 4D model is a model used in this study which consists of 4 stages, namely the define, design, develop and disseminate stages.

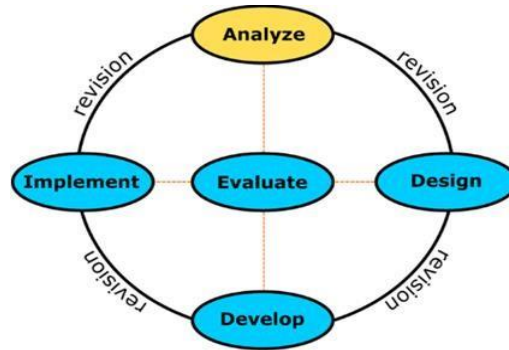


Figure 1: 4D Development Resistant

Stage one is define, at this stage activity are carried out to determine the product to be developed, as well as the specifications of the product to be developed. This stage involves conducting a needs analysis through reading and research. The act of creating a design for the product to be created that is decided on stage one is what is known as the second stage, or design. The third stage is development, at this stage is the activity of making until the product is produced in accordance with the required requirements, the design is incorporated into the product and its viability is often tested. The fourth stage, namely dissemination at this stage, is an activity to disseminate products that have been developed and have been tested to be used by others. This research technique uses observation and questionnaire as a method of collecting data. To find out more about the difficulties that teachers and students experience during learning, observations are made. Media validation, material validation, language validation, teacher answers, and student responses are all included in the use of research questionnaires.

Research Results and Discussion

The limited ability and affordability of researchers caused this study to be limited to the development stage.

A. Defining Stage

The main steps at this stage are front end analysis (beginning-end), student analysis, task analysis, concept analysis and formulation of learning objectives. In the first stage, the researcher conducts a front end analysis as the first step in the defining stage with the aim of determining the problems that are being faced by class X students of SMK Accounting precisely when learning accounting practicum. SMK Pusaka 1 Jakarta is a vocational high school that implements the 2013 curriculum, where the active role of students in learning is the main thing. The learning materials taught by teachers are in accordance with basic competencies and applicable indicators, namely KD 3.4 Analyzing service company adjustment transactions and KD 4.4 Recording adjustment transactions for service companies. However, from the results of the analysis carried out by researchers that the curriculum applicable at SMK Pusaka 1 Jakarta has not been well realized, the cause is the lack of active students in learning both asking and answering questions related to the material presented by the teacher.

The lack of activeness of students in learning affects the goals to be achieved in vocational schools, namely preparing students who are able to work independently or become productive human beings and are able to compete in the fields of education and labor, especially in the field of accounting. One of the reasons learning does not take place actively is due to the monotonous and less interesting use of media. In addition, one of the materials that is considered quite difficult to understand is the service company adjustment journal. With monotonous learning media and learning materials that are quite difficult, students' interest in learning is reduced and not excited during the implementation of learning so that learning takes place passively. The times demand that learning media can adjust to learning needs and achievements (Manurung, 2021).

The second step is student analysis, with the aim of understanding the character of students by paying attention to the abilities, conditions, and knowledge possessed as considerations in compiling the subject matter and determining the media to be developed. Class X AKL students of SMK Pusaka 1 Jakarta with a variety of characters are limited trial subjects. Sanjaya argues that the different abilities, interests, experiences, and learning styles of each student can be overcome using learning media (Daryanti et al., 2019)

The results of the student analysis are used as guidelines to determine the right learning media, which is able to increase the willingness of students to learn and can be used anytime and anywhere, one of them is by utilizing the existence of an Android smartphone that many students have. Learning media that utilize android makes students more motivated in learning the material quickly, and can be used at any time (Muyaroah & Fajartia, 2017).

The next step is task analysis which aims to analyze the ability of students to interpret the material that has been obtained, identify the content of the material along with the questions that will be shared with students. Through task analysis, researchers provide assignment exercises contained in learning media with multiple choice question types and true and false types to see students' understanding after using interactive multimedia.

The fourth step is concept analysis, with the aim of identifying the level of understanding and ability of students on what has been taught by the teacher, identifying the core concepts to be delivered and determining materials and questions that are relevant to the class X accounting syllabus.

B. Design Stage

Researchers hold a selection of media that is adapted to the circumstances of students so that it is easy to learn the material presented, the selection is carried out as well as possible without burdening students in various situations. The level of effectiveness of learning using interactive multimedia is higher when compared to power point media (Andari, 2020).

Based on this, researchers chose interactive multimedia as a tool to support the learning process. The preparation of display formats, materials, videos, and the presentation of questions on interactive multimedia is tailored to the needs of students and to give a more interesting impression in the learning process. In line with Hade's presentation in previous research that the use of good images and sound inputs can attract the attention of students and improve the information obtained (Gasuku, 2021)

The selection of .apk format on media developed with the aim that students can access it anytime and anywhere, whether with the help of the internet or not. Preparing the initial design of the product by determining the design of the appearance of interactive media, choosing buttons, writing, colors that are tailored to students at the SMK level.



Figure 2. Interactive multimedia initial view

Designing interactive multimedia content consisting of several menus, namely instructions, profiles, goals, materials, evaluations, exercises, bibliography. As well as preparing several reference sources, references were obtained from the class X accounting practicum book of SMK curriculum 2013 as well as the revised 2013 curriculum, and the internet.

C. Development Stage

The third stage, which is the last stage of this study, is the development stage. The purpose of this stage is to produce a product in the form of an interactive multimedia based on Lectora Inspire that can be used by teachers to help the process of delivering learning information to students properly and helping students receive information from teachers easily. The use of interactive multimedia is also able to improve students' critical thinking skills compared to using conventional methods (Potu & Poluakan, 2020).

To produce products, researchers select media and apply pre-compiled designs. Researchers determined that interactive multimedia was created using the help of the Lectora Inspire V11 program, this is based on previous research that one of the application programs that is worthy of being used as a learning medium is Lectora Inspire. The application of learning media assisted by the Lectora Inspire program can increase student learning outcomes and is effective for use (Hamdani et al., 2022; Mahliatussikah, 2022).

The results of the assessment of the product/small-scale trial for the learning media that were made got an average value of 81.66 in the very good category. in the very good category. So it can be concluded that the basic computer learning media based on the Lectora Inspire application is suitable for use as a learning medium (Ramadhani & Rumaour, 2020).

After setting interactive multimedia using Lectora Inspire, so that it can be in the form of .apk, it is built using website2apk so that it can be operated via an Android Smartphone. Before being used for product testing, applications that are already in the form of apk and can be accessed via Android need to be tested for feasibility by several experts through several stages including product review, product revision, product validation, and limited trials on students.

Product reviews carried out by experts have the aim of getting criticism and input for the improvement of interactive multimedia that will be developed. Several suggestions were obtained from the review process, namely adding questions with the Higher Order Thinking Skills (HOTS) question model, providing examples of illustrative questions with case studies, adding explanations to the completion of the sample questions that have been presented, and displaying designs that are more adapted to students at this level SMK. Criticisms and suggestions obtained are used as guidelines for improvement or revision of the media. After the revision process is complete and produces media according to the suggestions, then the media is validated to determine the feasibility of the interactive

multimedia. The validation of the experts produces quantitative data that is used as the basis for deciding the feasibility of the media.

a. Material Expert Validation Results

The results of obtaining media validation from material experts based on several components including the quality of content and objectives get a percentage of 82.37%, and instructional quality of 79.63%. So that the average percentage of acquisition is 81.00% so that the media is categorized as very feasible. The following is a recap of the validation results from the meter expert:

Table 1. Recap of Media Validation Results from Material Experts

No	Variable	%	Criteria
1	Content quality and purpose	82,37 %	Very Worthy
2	Instructional quality	79,63 %	Worthy
Average		81,00 %	Very Worthy

Source: data processed by researchers (2022)

b. Media Expert Validation Results

The results of obtaining media expert validation are 82% for software variables, and 80% for visual communication. So that the overall percentage obtained for the feasibility of interactive multimedia for the Lectora Inspire program is 81%, which means it is very feasible to be used as interactive multimedia. The following is a recap of the results of media expert validation:

Table 2. Recap of Media Validation Results from Media Experts

No	Variable	%	Criteria
1	Software	82 %	Very Worthy
2	Visual Comunication	80 %	Worthy
Average		81 %	Very Worthy

Source: data processed by researchers (2022)

c. Limited Trial

From the validation results that have been obtained, further trials can be carried out for students of class X AKL SMK Pusaka 1 Jakarta totaling 20 children. The experiment was carried out by researchers by sending interactive multimedia of the Lectora Inspire program in the form of .apk via WhatsApp groups and asking students to download and install the media on their respective smartphones. After the media can be installed properly, then students open and study the material that has been presented. After studying the material, students are instructed to solve some of the questions that are available in it, work on the questions is done to see the understanding of students after using interactive multimedia adjusting journal material.

To understand the responses of students to the developed media, it is necessary to conduct a limited trial and require a student response questionnaire which is filled in after the students understand the material and work on the questions. The questionnaire is presented in the form of a Google form. The student response questionnaire consists of three variables, namely the quality of the content and objectives that get a percentage of 92%, 93% instructional quality, and 90% technical quality. Presented in the table:

Table 3. Recapitulation of Student Response Questionnaire Results

No	Variable	%	Criteria
1	Content Quality and Purpose	92 %	Excellent
2	Instructional Quality	93 %	Excellent
3	Technical Quality	90 %	Excellent
Average		91,67 %	Excellent

Source: data processed by researchers (2022)

The results of the overall student response questionnaire, interactive multimedia of the Android-based Lectora Inspire program indicate that the media is very good to be used as interactive multimedia in Accounting with an overall percentage of 91.67%. These results show that learning that utilizes interactive multimedia can develop students' interest in learning, facilitate understanding, and students become more interested in learning.

This interactive multimedia is one form of the development of information technology by utilizing smartphones belonging to students, which is expected with the existence of learning media based on Android smartphones, students can learn anytime and anywhere and use smartphones more optimally, not only for entertainment.

Conclusion

This Lectora Inspire-based interactive multimedia development research uses a 4D development model. To determine the feasibility of the product, several stages are needed including product review, product revision, product validation, and limited trials on students. The suggestions obtained from the expert review process are used as a benchmark for media revision. After the revision process carried out by the researcher was completed, the next stage was media validation to determine the feasibility of the interactive multimedia.

This media is declared very worthy of the assessment of experts. From the results of the validation, material experts obtained 81%, from media experts 81%. And declared very good with a percentage of 91.67% of the results of the student response questionnaire. So that the interactive multimedia based on Lectora Inspire in the material for adjusting journals for service companies for class X SMK Accounting is very suitable to be used as an accounting learning medium.

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