The Development of Interactive Learning Media On Learning Basic Concept Material

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Abstract. This study's aim was to determine the interactive learning media feasibility on the Learning Basic Concept material. The ADDIE model is being used in this research and development. Regarding the feasibility of the product, the researchers asked the experts who really understood and even mastered the field. For the material, the material expert gave a rating of 4.53 which falls into the "very decent" criteria. For the media, media expert gave a rating of 4.48 which falls into the "very decent" criteria.

Keywords: Interactive Learning Media, Learning Basic Concept Material, Material Feasibility, Media Feasibility.

1 Introduction

The 4.0 industrial revolution is a challenge for everyone. Various institutions and industries are experiencing rapidly disruptive technology. Science and information technology developments have a significant impact on many aspects of human existence, including education. In order to develop human potential and generate superior human resources, education is crucial. It can be reviewed in Undang-Undang No. 20 Pasal 3 Tahun 2003 concerning the National Education System, namely that national education functions to develop capabilities and shape the character and civilization of a dignified nation in the context of educating the nation's life and aims to develop the potential of students to become human beings who believe and fear God Almighty, noble, healthy, knowledgeable, capable, creative, independent and become a democratic and responsible citizen [1].

If the goals for education quality can be met and have an effect on raising the standard of human resources, then education quality improvement has been effective. No exception, higher education must also keep enhancing the human resource market competitiveness. Universities must be able to create and provide competency-based education in order to generate graduates who are competent in their respective disciplines as they face the 4.0 industrial revolution. The learning process in education in the period of the fourth industrial revolution must be able to include technology.

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Lecturers, who serve as the basis of higher education at universities, must be ready to adapt to the 4.0 industrial revolution by strengthening their expertise since they will be teaching students from the digitally native millennial age. They are familiar with various technologies that are growing rapidly so that they pose challenges for lecturers. Lecturers must continue to learn to improve their competence to face the millennial generation college students.

At the 2018 World Economic Forum, Alibaba Group CEO Jack Ma said stated that education is one of the biggest challenges. If don't change the education system, human life can face problems in the future. Education is the major issue at the moment. if don't modify the way or the teaching system then in 30 years it will be an issue [2]. Therefore, lecturers in the era of the 4.0 industrial revolution need to be proficient in information technology. Technology can assist lecturers in managing materials more efficiently so that the learning process is successful.

One of Indonesia's higher education institutions, Medan State University is tasked with producing qualified teachers who are competitive graduates. As an important element of Medan State University, the Economics Education study program contributes to the achievement of the university's purpose. According to the observations made, interactive learning materials are required to make the teaching and learning process easier. This problem became more apparent when discussions were held with KDBK lecturers for the same material that college students' mastery of the Learning Basic Concept material was relatively low. The scores of college students on the Mid-Semester Examination in the odd semester of last year show a low level of understanding of the Learning Basic Concept material. Based on the problem and reality above, optimization effort in the form of comprehensive research on interactive learning media on the Learning Basic Concept material is required to solve the problem encountered. This research is critical and must be conducted, so that mastery of the content may be accomplished comprehensively. Based on the description, the researchers are interested in carrying out research and development with the heading “The Development Of Interactive Learning Media On Learning Basic Concept Material”.

2 Method

Research and development methods are being used in this study. The research and development method is a research method used to produce certain product and test the effectiveness of the product [3]. This This research intends to provide interactive learning media on Learning Basic Concept material that is made systematically and assessed for material and media feasibility. The ADDIE model is used in this research. Mulyatiningsih suggested that the ADDIE model can be used for various forms of product development in learning activities such as models, learning strategies, learning methods, medias, and teaching materials [4]. This study lasted 11 months, from January to November 2022, at the Economic Education Study Program, Faculty of Economics, Medan State University. The subjects of this research were 1 material expert as a validator to provide an assessment or comment on the material and 1 media expert as a validator to provide an assessment or comment on the media and in order to collect data from representatives of college students enrolled in the Economic Education study program at the Faculty of Economics at Medan State University during the even semester of the 2022–2023 academic year, the trial participants were chosen at random. Sugiyono stated that data collection techniques are the most strategic steps in research, because the main purpose of research is to

obtain data [5]. In this study, observation, interviews, validation sheets, a questionnaire, and tests were employed to collect data. An observation was conducted to learn more about an issue with learning media so that the generated product would be in line with the findings of the observation. Meanwhile, validation sheets and questionnaire were employed to collect data from material expert, media experts, and college students on the produced product. While the tests are designed to collect data on college student learning outcomes before and after participation in interactive learning media based Lectora Inspire. This research had been completed till the development stage at the time this article was published, but the implementation and evaluation stages had not been completed because the lectures had only recently begun.

3 Results and Discussion

3.1 Analysis Stage

This analysis aims to find out what is needed in the The purpose of this analysis is to determine what is required in the production of interactive learning media based on Lectora Inspire. of interactive learning media based Lectora Inspire. Things that need to be done are: a. needs analysis, b. analysis of learning devices, c. student analysis, and d. material analysis.

3.2 Design Stage

At this stage, the researchers collect information that supports the development of the interactive learning media created. The results of the information are:

a. Design storyboard. The storyboard contains an overall picture of interactive learning media that will be loaded into interactive learning media based *Lectora* Inspire. Storyboard serves as a guide in making interactive learning media based *Lectora* Inspire. In general, part of the interactive learning media based *Lectora* Inspire can be described as follows: a) Instructions section. This instruction section contains a description of learning media, general instructions for using media and computer specifications that can be used to operate learning media. b) Sub CPMK section. This section contains the Sub CPMK that must be achieved by college students. c) Material part. This section contains material, sample questions and discussion in Sub CPMK Basic Concepts of Learning. d) Evaluation section. This section consists of instructions for working on questions, evaluation questions. e) Library section. This library section contains books, audios and pictures used by researchers to create interactive learning media based *Lectora* Inspire. f) Profile section. This profile section contains profiles of media designer, material expert and media expert.

b. Making materials, questions and answer keys. At this stage, materials regarding Sub CPMK Basic Concepts of Learning are compiled. The basis for choosing this material is because there are difficulties in understanding the material experienced by college students. In addition, the material, questions and answers in this media are compiled from various references. To make it simpler for college students to learn the content, it is divided into sub-materials.

3.3 Development Stage

The third stage is the development stage which includes product creation, product validation

1. Making product. The creation of interactive learning media is prepared using Lectora Inspire software in accordance with the storyboard design created in the previous step. of interactive learning media is prepared using Lectora Inspire software according to the storyboard design that has been made in the previous stage. After all the components are made in the Lectora Inspire software, then they are saved in .awt format. The .awt format can still be edited if there is a revision. The final product is an offline file published with a Single File Executable .exe, which may be utilized on a PC or laptop without first installing Lectora Inspire.

2. The validation carried out by material expert is reviewed from the material aspect, question aspect, language aspect and implementation aspect. Validation sheet is used to examine the material's feasibility. The assessment of the feasibility of the material uses a validation sheet. A Likert scale with five possible responses: very decent, decent, quite decent, less decent, and very not decent was used to create the validation sheet. This validation sheet for material expert has 4 aspects. Here is the material expert's feasibility assessment.

Table 1. Material Expert Validation Result

No.	Aspect	Total Score	Average	Criteria
1	Material Aspect	36	4,50	Very Decent
2	Aspects of Questions	23	4,60	Very Decent
3	Language Aspect	8	4,00	Decent
4	Implementation Aspect	15	5,00	Very Decent
Overall Average			4,53	Very Decent

According to the table, the material expert gave a rating of 4.53 which falls into the "very decent" criteria.

The validation carried out by media expert is reviewed from the software engineering aspect and visual communication aspect. Validation sheet is used to examine the media's feasibility. A Likert scale with five possible responses: very decent, decent, quite decent, less decent, and very not decent was used to create the validation sheet. This validation sheet for material expert has 2 aspects. Here is the media expert's feasibility assessment.

Table 2. Media Expert Validation Result

No.	Aspect	Total Score	Average	Criteria
1	Software Engineering Aspect	49	4,45	Very Decent
2	Visual Communication Aspect	63	4,50	Very Decent
Overall Average			4,48	Very Decent

According to the table, the media expert gave a rating of 4.48 which falls into the "very decent" criteria.

The research that has been done proves that the development of interactive learning media based Lectora Inspire is very feasible to be used as a learning media by college students. This is in line with Amri's opinion which states that the feasibility aspect refers to the extent to which the device design is developed. [6]. The procedure in this research and development adapts from the summary of Instructional Design with the ADDIE Robert Maribe Branch approach (2009) in Sugiyono which consists of five stages, namely 1) Analysis, 2) Design, 3) Development, 4) Implementation and 5) Evaluation [7]. Interactive learning media based Lectora Inspire has gone through a feasibility assessment stage by one material expert and one media expert. The feasibility assessment by material expert is 4**,**53 which is classified as very decent and by media experts is 4**,**48 which is classified as very decent. The results of the assessments indicate that the interactive learning media based Lectora Inspire is very feasible to be used in the Economic Education Study Program, Faculty of Economics, Medan State University.

4 Conclusion

This research and development uses ADDIE development model. The analysis stage is the initial stage for needs analysis, analysis of learning devices, student analysis, and material analysis for the learning media to be developed. The design stage consists of designing storyboard and making materials, questions and answer keys. The development stage includes product creation and product validation. The feasibility assessment by material expert is 4,53 which is classified as very decent and by media experts is 4,48 which is classified as very decent.

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