Development of Economic Learning Innovation Using Lectora Inspire Media on Demand and Supply Materials for Class X Muhammadiyah Senior High School 2 of Kertosono

by Evi Jansen

Research Paper

Development of Economic Learning Innovation Using Lectora Inspire Media on Demand and Supply Materials for Class X Muhammadiyah Senior High School 2 of Kertosono

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ABSTRACT

Technological developments were increasing rapidly with the more frequent use of digital devices, especially computers in everyday life, including in education, but the delivery of Economics subjects Using Lectora Inspire Media on Demand and Supply Materials for Class X Muhammadiyah Senior High School 2 of Kertosono needed development. The purpose of this study was to develop Lectora Inspire-Based Economic Learning Innovations to produce Lectora Inspire-Based Interactive Learning Media and to determine the feasibility assessment of Lectora Inspire-Based Interactive Learning Media. This study used the ADDIE development research model, with the following stages of development: 1) Analysis; 2) Design (planning); 3) Development; 4) Implementation (application); 5) Evaluation (evaluation), like development which consists of stages included analysis and design. The development stage at this stage of application development was the stage of realizing what was designed in the design stage so it became a media product. The implementation stage after the product was validated by two experts, they were media experts and product material experts, then would be tested in small groups, this small group consisted 9 students from Class X Social Sciences Muhammadiyah Senior High School 2 of Kertosono. The last stage was the evaluation stage. Evaluation was the final step of the ADDIE learning system model. Evaluation was a process conducted to provide value to a learning program. According to the results of the validation of learning design experts, media experts, and teacher validation as material experts, the results of development research in the form of learning media using Lectora Inspire Media showed very good results and were suitable for use as learning media in the classroom and independently. Student responses were also very good, motivated and enthusiastic in participating in learning.

Keywords: [Learning media, Lectora Inspire, Computer Hardware]

INTRODUCTION

Improving the quality of education is successful if the quality of education that has been set can be achieved and has an impact on increasing the quality of human resources. In facing the industrial revolution 4.0, senior high schools must be able to develop and be able to provide competency-based education so that they are able to produce competent graduates according to the fields they are engaged in. Education in the 4.0 era must be able to utilize technology in the learning process. Era 4.0 teachers must have competence in information technology. Technology can help teachers to manage material more efficiently and focus, so the learning process can run effectively. Teachers are expected to be able to design the learning process in such a way that the message of knowledge will be conveyed to students appropriately. However, the learning

carried out in Indonesia still has some problems. "Learning problems in Indonesia occur due to several factors like the approach to learning, the curriculum change factor and the teacher competency factor" (Afifah, 2015).

Learning media is a tool that facilitates the delivery of learning messages from teachers to students. The use of effective learning media will help foster motivation and overcome student learning difficulties. (Sadiman, 2015), "the use of appropriate and varied educational media can overcome the passive attitude of students". The development of interactive learning media can be done in various ways. Utilization of existing school facilities is an alternative to supporting the development of learning media that can be used by teachers. School facilities or infrastructure are realized by the existence of a theory room, practical room, library, computer laboratory, practical equipment, learning media and so on. Based on existing facilities in schools, interactive learning media can be developed on a computer-based basis. "Computer-based media is the use of computers in delivering teaching materials to students so that students are able to provide feedback. Computer-based media can be in the form of tutorials, drills and practice, simulations and games" (Anonimas, 2007) The advantages of computer-based media are: 1) computer-assisted media can stimulate students to be more active in doing things such as exercises, simulations due to pictures, animations, music etc., 2) students can control learning independently according to their level of mastery, 3) can record student activities during the use of computer-based media. (Liviu, 2011) entitled Lectora a Complete E-Learning Solution gave the opinion that Lectora Inspire is one of the solutions for creating complete interactive learning media for education with built-in resources for rapid development. Lectora is an electronic learning development tool developed by Trivians Corporation. This software can display images, music and various unique templates. Lectora Inspire also presents a variety of evaluations in the form of simple tests including multiple choices, true false and match-making questions.

The final product of this interactive learning media based on Lectora Inspire is in the form of a Single File Executable with extension, exe file that makes it easy to use without having to install Lectora Inspire software. (Elena, 2013) in the International Journal of Computer Science Research and Application stated the advantages of Lectora Inspire compared to other learning media development software is the software is made with leading flash content, screenshots, recording, powerful authorization tools that make it possible to create videos and flash content quickly. Lectora Inspire has various templates that can make it easier for teachers to integrate material and evaluation in learning. The development of interactive learning media based on Lectora Inspire can make good use of school facilities and attract students' attention; the learning environment becomes more conducive, relaxed and fun so that it can help students understand the material and can involve students in the learning process. The interactive learning media based on Lectora Inspire was chosen as the right learning media, especially the material for Demand and Supply of Muhammadiyah Senior High School 2 of Kertosono, which is a senior high school in Nganjuk Regency. Muhammadiyah Senior High School 2 of Kertosono is located at Jalan Muria No. 8A Ds. Kutorejo, Kertosono District, has 6 study groups consisting of 3 study groups for the Department of Mathematics and Sciences and 3 study groups for the Department of Social Sciences. This learning media can be arranged easily and take advantage of the existing computer facilities in the school. Easy media creation and design according to developer wishes.

Based on this description, the researchers conducted a development research entitled **"Development of Economic Learning Innovation Using Lectora Inspire Media on Demand and Supply Materials for**

Class X Muhammadiyah Senior High School 2 of Kertosono". The development of interactive learning media based on Lectora Inspire is expected to help teachers deliver material in the learning process.

LITERATURE REVIEW
The Nature of Learning and Learning Process
Two things that have a very close relationship are learning and learning process. Everyone learns from birth to death. (Mudjiono, 2015a) "learning is a daily activity that is lived and experienced by people who are learning". Learning will be better if the subject learns to experience or do it, so it is not in verbal only. (Sanjaya, 2013b) "learning is a continuous process that never stops and is not limited to the classroom walls". Learning is done throughout human life which will always be faced with various problems. (Hamalik, 2011b) "Learning is a process not a result or a goal, learning is not just remembering but broader than that, called experiencing". Based on the above understanding, it can be concluded that learning is a continuous process to achieve changes in one's behavior through various activities carried out by a person so as to gain direct and indirect experience.

Learning Media
(Sanjaya, 2013a) "In general, media is the plural of "medium", which means intermediary or introduction. The word media applies to various activities or businesses, such as media in conveying messages, medium for introducing magnets or heat in the field of engineering. The term media is also used in the field of teaching or education so that the term becomes educational media or learning media. (Suryani, N., Seiawan, A., & Putria, 2018) "Learning media are all forms and means of delivering information made or used accordance to learning theory, it can be used for learning purposes in channeling messages, stimulating thoughts, feelings, attention , and the

willingness of students so that it can encourage a learning process that is intentional, purposeful, and controlled (Sudjana Nana, 2017) interprets "learning media is a teaching aid that is in the methodological component as one of the learning environments regulated by the teacher". Learning media includes hardware and software. Hardware is tools that can deliver messages such as overhead projectors, radios, televisions and so on. "Software is program contains messages such as information contained in transparency or books and other printed materials, stories contained in films or material presented in the form of charts, graphs and so on" (Sanjaya, 2017)

Based on the opinions of these experts, it can be concluded that learning media is a means of delivering messages made by teachers in the form of learning content/teachings so that they can encourage students to achieve learning goals.

Interactive Learning Media
Gerlach generally defines "media which includes people, materials, equipment or activities that create conditions that enable students to acquire knowledge, skills, and attitudes" (Sanjaya, 2017). The interactive concept in learning is most closely related to computer-based media. "Interaction in a computer-based learning environment generally follows three elements like adjustable instructional sequences, student answers/responses or work and adjustable feedback" (Arsyad, 2017). "Lectora Inspire can be used to combine flash, record video, combine images and screen capture" (Mas'ud, 2014). Lectora Inspire is specially designed for beginners, so this software is very easy to use in making learning media. Lectora learning media can be used offline or without having to install Lectora software.

MATERIALS & METHODS
The method used in this research was the R&D (Research and Development) method while the development model uses the

ADDIE model developed by Dick and Carey (1996). This method included five stages such as Analysis, Design, Development, Implementation, and Evaluation. The subjects of this research are one material expert, one media expert, one learning practitioner and students of class X social science and X Mathematics and natural science (Cross Interests) Muhammadiyah Senior High School 2 of Kertosono which consisted of 30 students. The instruments used to collect data was questionnaire, the assessment of this questionnaire used a Likert scale (scale 5).

RESULT

Research activities and information collection were carried out through field studies or observations. From the observations, it could be concluded that the problems that occur in learning, especially in class X, were no interesting learning media. Supportive learning activities and solutions were needed for problems faced by teachers and students like by using interactive learning media with Lectora inspire learning media in learning Economics of supply and demand material. Based on the results of a preliminary study on students of class X Social Sciences at Muhammadiyah Senior High School 2 Kertosono, which in the context of this research is the Development of Economic Learning Innovations Using Lectora Inspire Media on Demand and Supply Materials for Class X Muhammadiyah Senior High School 2 of Kertosono needed to be done with the aim of attracting students' attention, students easily understand the material, and invites students to think critically by observing what was in the interactive multimedia. It was hoped that it can help students understand the demand and supply material.

No	Aspect	TheoryExpert	Media Expert	Learning Practitioner	Average	Category
1	Material Aspect	4,50			4,50	Very feasible
2	Questions Aspects	4,60			4,60	Very feasible
3	Language Aspect	4,00			4,00	feasible
4	Learning Design Aspect			4,40	4,40	Very feasible
5	Software Engineering Aspect		4,45	4,40	4,43	Very feasible
6	Visual Communication Aspect		4,50	5,00	4,75	Very feasible
7	Implementation Aspect	5,00			5,00	Very feasible
	Overall Average				**4,53**	Very feasible

Based on the table above, it shows that the highest average score from the validation results of all experts was obtained in the implementation aspect with an average of 5.00. The second result was obtained in the aspect of visual communication with an average score of 4.75. The third result was obtained on the question aspect with an average score of 4.60. The fourth result was obtained on the material aspect with an average score of 4.50. The fifth result was obtained on the software engineering aspect with an average score of 4.43. The sixth result was obtained in the learning design aspect with an average score of 4.40. The final result was obtained on the language aspect with an average score of 4.00. Based on table 6 regarding the guidelines for converting assessment scores into values with 5 categories, the overall average (X) shows the number 4.53 which lies in the range X > 4.20, it is "**Very feasible**". The results of the assessment indicate that the Lectora Inspire-Based Interactive Learning Media gets the "**Very feasible**" category to be used as learning media.

In the implementation phase, students of class X 3 Social Sciences 3 at Muhammadiyah Senior High School 2 became research subjects in the small group trial phase and class X Social Sciences 1 at Muhammadiyah Senior High School 2 became research subjects in the Field Trial phase. Student assessment was carried out in two stages, namely small group trials and field trials. The small group trial involved 9 students from class X Social Sciences at Muhammadiyah Senior High School 2. The field trial involved 30 students from class X Social Sciences and X Mathematics and

natural science (Cross Interests) Muhammadiyah Senior High School 2.

Based on the results of the recapitulation of the small group trial assessment (table 13), the overall average value is 4.45. The overall average (X) shows the number 4.45 which is in the range X > 4.20 with the "**Very feasible**" category, means that the small group trial of Lectora Inspire-Based Interactive Learning Media has met the needs of students, the use of clear language make students interested in trying to operate and fulfill the Field Trial requirements.

From the Field Trial obtained an average value of 4.24. The overall average (X) shows the number 4.24 which is in the range X > 4.20 which is included in the "**Very feasible**" category, means that the Lectora Inspire-Based Interactive Learning Media developed has very feasible criteria as a learning media that can used by students in the learning process.

DISCUSSION

Development of Interactive Learning Media Based on Lectora Inspire

The development of interactive learning media based on Lectora inspire is very feasible to be used as a learning medium by students. This is in line with research conducted by Kartika Bunga Nadhya Noor (2018) on Development of Interactive Learning Media Based on Computers Using Lectora Inspire Software on Basic Accounting Subject to Improve Student Learning Motivation of Class X AK, Andy Sudarmaji (2015) on Media Development Lectora Inspire Application-Based Learning for AC System Subjects at State High School 1 Klaten. Development of Interactive Learning Media Based on Lectora Inspire. The research and development procedure in this study adapts the summary of Instructional Design with the ADDIE by Robert Maribe Branch approach (2009) in Sugiyono (2017: 38-39) which consists of five stages such as: 1) Analysis, 2) Design, 3) Development, 4) Implementation and 5) Evaluation.

The results of the analysis show that there are problems such as teachers who were still monotonous in the learning process by using handouts, textbooks and power points. The concept of Lectora Inspire-Based Interactive Learning Media is in the form of material, sample questions and discussions and evaluation questions in accordance with Competency Standards (SK), Prepare Financial Reports and Basic Competencies (KD), Make Requests and Offers. Development of interactive learning media, all components such as background design, images, characters, navigation buttons, audio, materials and questions were prepared using Lectora Inspire V software. At this stage a small group trial was conducted on 9 students of class X Social Sciences 3 Muhammadiyah Senior High School 2 of Kertosono. The results of the small group trial did not find any revisions that had to be made by the researcher, so the field trial was continued. Field trials were conducted on 30 students of class social science X and Mathematics and Science X (Cross Interest) at Muhammadiyah Senior High School 2 of Kertosono. At this stage, the researcher evaluated the process by comparing the results of all the trial stages and recapitulating the results of the assessment of the feasibility of learning media by material experts, media experts, learning practitioners and students.

Feasibility of Lectora Inspire-Based Interactive Learning Media.

Lectora Inspire-Based Interactive Learning Media went through a feasibility assessment staged carried out by one material expert (Drs. Nurul Yaqin, M. Pd), one media expert (Budi Setiyo Utomo, S.Pd.) and one learning practitioner (Dra. Empi Suhartini, M. Pd.). Based on the recapitulation of the overall expert assessment in table 15, an overall average score of 4.53 lies in the range X > 4.20 so that it gets the "**Very feasible**" category. The results of the assessment indicate that the Lectora Inspire-Based Interactive Learning Media is very

feasible to be used as a learning medium in high school.

Student Assessment of Lectora Inspire-Based Interactive Learning Media.

Student assessment was carried out in two stages, they were small group trials and field trials. Small group trial involving 9 students from class X Social Sciences Muhammadiyah Senior High School 2 of Kertosono Field trial involving 30 students from class X IPS and X MIPA (Cross Interest) Muhammadiyah Senior High School 2 of Kertosono. Based on the recapitulation of the small group trial assessment, the average value was obtained overall average of 4.45. The overall average (X) shows the number 4.45 which lies in trying to operate and fulfilling the test requirements for the X> 4.20 range with the "**Very feasible**" category, meaning that the small group trial of Lectora Inspire-Based Interactive Learning Media is good. Meet the needs of students; the use of clear language makes students interested. From the Field Trial obtained an average value of 4.24. The overall average (X) shows the number 4.24 which lies in the range X > 4.20 which is included in the "**Very feasible**" category, means that the Lectora Inspire-Based Interactive Learning Media developed has very feasible criteria as a learning media that can be used by students in the learning process.

Limitations in the Development of Lectora Inspire-Based Interactive Learning Media

Some of the limitations in the development of Lectora Inspire-Based Interactive Learning Media as learning media are the material contained in this learning media is only limited to Demand and Supply, Learning media can only be used on laptops and computers, so the operation is less practical and flexible, Evaluation of the development of this learning media only limited to assessing the feasibility of the media not to assess the effectiveness of the use of learning media additional.

Advantages and Disadvantages of the ADDIE Learning Model

According to Pribadi (2009:125) the advantages and disadvantages of the ADDIE learning model are the model is simple and easy to learn and has a systematic structure, while the Disadvantages of this design model is the analysis stage takes a long time. ADDIE learning model is a model that has 5 interrelated components and is structured systematically so that this application should not be done randomly, but must be systematic; starting from analysis, design, development, implementation, and evaluation and also this learning model pays attention to 3 domains in assessment, they are the cognitive, affective and psychomotor domains. Based on the description of the development model above, the research on the development of Lectora Inspire-Based Interactive Learning Media uses the ADDIE model as a basis for research. Researchers chose the ADDIE model because it is structured, systematic and easy to apply in the development of learning media.

CONCLUSION

Based on the results of research and discussion, it can be concluded that the development of interactive learning media based on Lectora inspires with demand and supply material using the ADDIE development model can be applied. The analysis stage is the initial stage for analyzing student needs and analyzing material for the learning media to be developed. The design stage consists of designing learning design concepts, making materials, questions and answer keys, as well as selecting backgrounds, images, characters and background sounds. The development stage includes the creation of learning media, assessment by material experts, media experts, and learning practitioners. The media is the result of the revision of expert advice, then the Lectora Inspire-Based Interactive Learning Media on Demand and Supply material is ready to be implemented. The implementation phase

consisted of small group trials (9 students) and field trials (30 students). The evaluation stage is carried out by comparing the results of the trial stage and recapitulating the assessment results from material experts, media experts, learning practitioners and students.

Assessment of the feasibility of Lectora Inspire-Based Interactive Learning Media on Demand and Supply materials based on Material Experts, obtained the average value of all aspects of 4.53 which is categorized in the "**Very feasible**" to be used as Economics learning media. based on Media Experts, obtained the average value of all aspects of 4.48 which a is categorized in the "**Very feasible**" to be used as learning media. Based on learning practitioners (teachers), obtained an average of all aspects of 4.60 which is categorized in the "**Very feasible**" to be used as a medium for learning Economics.

Students' assessment of the Lectora Inspire-Based Interactive Learning Media on the Demand and Supply material in the small group trial obtained an average value of all aspects of 4.45 which was included in the "**Very feasible**" category and the assessment in the Field Trial obtained an average value of all aspects of 4.24 which are included in the "**Very feasible**" category. Based on this assessment, the Lectora Inspire-Based Interactive Learning Media is very suitable to be used as a learning medium for high school students.

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