

Development of Interactive Learning Media Assisted by Lectora Inspire Application in Science Subjects Class IV SDN Baru 03 Pagi

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ABSTRACT

Less than optimal utilization of media in learning and limited facilities and infrastructure to support learning resulted in decreased motivation and understanding of students towards learning materials. This study examines the development of learning devices with media assisted by the Lectora Inspire application in science subjects in class IV SDN Baru 03 Pagi. This type of research is R&D (Research and Development), with the 4D model, namely: Define, Design, Develop, and Disseminate. The purpose of the study was to determine the feasibility of the media made and determine the response of students to the learning media which was validated by lecturers and teachers as media and material validators and then for user response by students as respondents. This study obtained the results of the average percentage of material feasibility with a value of 92.78% which is included in the "Very Feasible" criteria, then the average of media feasibility is 91.78% which is included in the "Very Feasible" criteria, and also the average of the feasibility of the teacher expert is 85.00% which is included in the "Very Feasible" criteria, and for the response of fourth grade students got an average of 89.52% which was included in the "Very Good" criteria. It can be concluded that the interactive learning media assisted by the Lectora Inspire application is feasible to use and develop. And this media is made with the aim of helping educators and students in the learning process.

ABSTRAK

Kurang optimalnya pemanfaatan media dalam pembelajaran dan terbatasnya sarana dan prasarana penunjang pembelajaran mengakibatkan menurunnya motivasi dan pemahaman peserta didik terhadap materi pembelajaran. Penelitian ini mengkaji pengembangan perangkat pembelajaran dengan media berbantuan aplikasi *Lectora Inspire* pada mata pelajaran IPA di kelas IV SDN Baru 03 Pagi, Jenis penelitian ini adalah R&D (*Research and Development*), dengan model 4D yaitu: *Define, Design, Develop, and Disseminate*. Tujuan penelitian adalah untuk mengetahui kelayakan dari media yang dibuat dan mengetahui respon peserta didik terhadap media pembelajaran yang

dilakukan validasi oleh dosen dan guru sebagai validator media dan materi lalu untuk respon pengguna oleh peserta didik sebagai responden. Penelitian ini mendapatkan hasil rerata presentase kelayakan materi dengan nilai 92,78% yang masuk pada kriteria “Sangat Layak”, kemudian rerata dari kelayakan media yaitu 91,78% yang masuk pada kriteria “Sangat Layak”, dan juga rerata dari kelayakan ahli guru yaitu 85,00% yang masuk pada kriteria “Sangat Layak”, serta untuk respon dari siswa kelas IV mendapat rerata yaitu 89,52% masuk pada kriteria “Sangat Baik”. Hal ini dapat disimpulkan bahwa media pembelajaran interaktif berbantuan aplikasi *Lectora Inspire* layak untuk digunakan dan dikembangkan. Serta media ini dibuat dengan tujuan untuk membantu pendidik dan peserta didik dalam proses pembelajaran.

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INTRODUCTION

Education is an effort to educate the lives of the nation's children. Education is also considered as one of the effective ways to overcome various problems in Indonesia, such as social inequality and poverty. To remain competitive, Indonesia's education system must adapt to changing demographics and technological realities. The effectiveness of the learning process depends on several factors, including the educator or instructor, learning media and tactics, curriculum, and learning resources, all of which contribute to the overall quality of education.

In technology, especially Information and Communications Technology (ICT), has experienced a very rapid development boom and has a huge impact on various areas of life, including education. Technology in Education serves as a tool to assist student learning and a resource to enhance educators' pedagogical skills. The role of the teacher facilitated by technology, and consequently students have easier access to educational materials. Using a combination of computer technology, audio and video, this learning multimedia successfully captures and engages students' attention.

The development of technology has also driven the fourth industrial revolution in various fields, including education. Using learning multimedia Interactive multimedia is one way technology used in the classroom has been shown to maximize students' willingness, activity, and ultimately their learning

outcomes. Students can customize their learning to their own pace and strengths with the use of multimedia that encourages interaction and collaboration. As a result, instructors today are required to use cutting-edge software such as Lectora Inspire to produce various ICT-based teaching materials for their students.

Athiyah suggests Lectora Inspire is a user-friendly software package that facilitates instruction and visual retention. Lectora Inspire's simplicity in creating learning media and test or assessment materials appeals to a novice target audience. This software has advantages in the field of education, such as displaying teaching materials in various animations, saving materials on CDs, and increasing students' enthusiasm for learning through attractive features and tools. This is consistent with research findings which found that using Lectora Inspire to enhance classroom materials improved student recall, attention and motivation.

The Lectora Inspire application has been researched by experts according to Dewi Lectora Inspire has a significant impact on increasing interest and motivation to learn, in contrast to Firmansyah Lectora Inspire learning media proved more successful, in contrast to students who used presentation learning media in improving students' understanding of biological concepts, according to an analysis comparing the two. However, interactive learning media assisted by Lectora Inspire application has not been widely researched in elementary school learning. Based on the results of the researcher's experience when conducting PLP at SDN Baru 03 Pagi, it is known that teachers are still not maximizing the use of technology-based learning multimedia. Teachers more often ask students to use print media and PowerPoint presentations. So the problem of phenomena that occur in class IV SDN Baru 03 Pagi can be concluded that the lack of use of interactive media that has not been maximized by the teacher so that students are not enthusiastic in the teaching and learning process. This causes students' interest in learning to tend to be passive in the learning process. This activity has an impact on the acquisition of student learning outcomes that do not achieve maximum results. Lectora Inspire application is one example of interactive learning media that researchers are interested in developing. Learning tools abound in the many options available in Lectora Inspire media, which can be utilized in the creation of more interesting educational content. Therefore, although the main function of a teacher in the classroom is as a facilitator, it is reasonable to assume that the teacher has the ability to create educational content. relevant influence on their students' academic performance. Joko Kuswanto's research findings shows that learning multimedia has several benefits, including being interesting and fun because it is presented by adjusting the characteristics of students, easy to use by

users with simple commands, and allows users to actively choose the menu that is suitable for them desired. Practice questions are provided to reduce The possibility of students memorizing answers, and evaluation reports can be used to assess learning outcomes. Given the solution, evaluation reports can be printed based on the results and grades of the students concerned. This is in line with what Rahmawati, Buchori, and Hermawan revealed showing that interactive learning media has a significant effect on improving student learning outcomes. With this, teachers can optimize and design Lectora Inspire media which aims to make students more interested and Lectora Inspire can also be used to develop learning multimedia content and test materials easily, without requiring high design and strategy skills. Based on this, the researcher is interested in developing the Lectora Inspire application in learning Science Material Substance Forms and Changes in class IV SDN Baru 03 Pagi.

RESEARCH METHOD

The research approach uses R&D (Research & Development) development, which is described as research conducted to create a product and evaluate its feasibility. Basic research, applied research, product development, and process development are the four main components of R&D. In the research of developing interactive learning media supported by the 4-D model on the Lectora Inspire application which consists of four stages of definition (Define), design (Design), development (Develop), and dissemination (Dessiminate). (Thiagarajan, 1974).

This research leads to the creation of interactive learning media using Lectora Inspire on the material of the form of substances and their changes for grade IV students, which is then rigorously evaluated for its practicality in terms of content, media, and teacher adoption. Teachers' and students' reactions to new learning resources can be measured by looking at the data collected through evaluation tools. The values received by way of confirmation from media experts and material experts will be processed using the following formula to determine the feasibility value of the resulting media.

$$P = \frac{f}{N} \times 100$$

Description:

P: Validity Percentage

f: Total Score of Data Collection Results

N: Maximum Number of Scores

This formula takes into account not only how feasible the product is, but also how many times it has been revised. The eligibility requirements are outlined in the table below.

Table 1. Criteria for questionnaire interpretation

Percentage	Criteria
81% - 100%	Very good
61% - 80%	Good
41% - 60%	Good enough
21% - 40%	Not good
0% - 21%	Not very good

(Ulya and Rofian 2019)

RESEARCH RESULTS AND DISCUSSION

The development of interactive learning media assisted by the Lectora Inspire application in this study uses the Research And Development (R&D) model. With the 4D research process by Thiagarajan which consists of "define", "design", "develop", and "disseminate". According to Reinita and Fitria, the results of this performance test were carried out to ensure the performance of the developed product. The findings from the analysis and discussion of each phase are as follows:

First, the defining phase (Define) learner analysis, concept analysis, task analysis, and definition of learning objectives become the basis of the objectives used. The purpose of the work done in this phase is to determine the scope of the development project. Several levels of analysis are conducted at this point, including: **Front-end Analysis**, This is the first phase, where preliminary research is conducted in preparation for the design of teaching materials. A fundamental problem was found based on the PLP experience at SDN Baru 03 Pagi, that the school was still implementing learning with printed media in the form of books and presentations using powerpoint. As a result, passive learning occurs due to boring and uninteresting media. Thus, researchers are interested in developing the Lectora Inspire application at SDN Baru 03 Pagi school. In response to these problems, researchers produce interactive teaching tools that are proven to increase students' enthusiasm to succeed by using the Lectora Inspire application. Learner analysis, A student analysis is conducted to learn about demographics such as age and interest in certain disciplines. The more teachers know about their

students' personalities, the more they can customize their lessons them with their specific needs in terms of content, context, and media. Based on researcher's findings, grade IV students at SDN Baru 03 Pagi are on average 10 years old. At this age students tend to favor learning that is fun and not monotonous. When participating in learning, many students tend to lack focus and are busy chatting with other students so that they do not pay attention to the teacher's one-way explanation. Based on the findings of this research, students at SDN Baru 03 Pagi need learning tools that are interesting and interactive, so that there is two-way communication and interaction from both teachers and students. Specifying Instructional Objectives As the last stage in the defining process, the creation of core competencies serves as the basis for learning objectives and independent curriculum indicators. What this research developed in the development of learning media on the material form of substances and their changes. This learning material must be conveyed contextually with language that is easily understood by students. Examples taken; must be close to student life. Through teaching tools developed by researchers, it is hoped that students can understand the material of the form of substances and their changes in class IV with focus and completion. In addition, the emergence of more innovative and integrated learning media innovations to be developed in achieving learning goals, especially in the material of the form of substances and their changes.

Second, the design process begins with the researcher deciding on the product, format, and initial design. The product was chosen so that the Lectora Inspire-based interactive teaching materials fit the needs of the students. Industry professionals' preferences were taken into account during the selection of the Lectora Inspire learning media format. Students' needs and interests were taken into account while designing the display layout, and the learning objectives, goals, resources, movies, and question presentation in the interactive media were modified accordingly. The results of the designed and piloted product are shown below:



Figure 1. E-Module Cover



Figure 2. E-Module Contents

Third, the development stage (Develop) in this process, validators consisting of subject matter experts, media experts, teacher responses, and student responses. Learning media assisted by the Lectora Inspire application includes validating the designed learning media, revising the learning media based on the validator's comments and suggestions for improvement, and finally testing the product with grade IV students at SDN Baru 03 Pagi to determine its feasibility and effectiveness carried out by material expert validators by PGSD Science Lecturers, media expert validators by PGSD Lecturers, teacher responses by Grade IV Teachers and student responses.

The following are the results of validation from material experts, media experts, and teacher and student respondents with suggestions and input that must be improved: **Material Expert Validation**, material expert validation of content aims to ensure whether or not the media produced is feasible. The evaluation was obtained using a material expert instrument provided by the researcher. The following is a summary of the findings of the material experts who conducted the validation:

Table 2. Material Expert Validation Results

Aspects	Score Acquisition	%	Category
Format	28	93,33%	Very Feasible
Content	19	95,00%	Very Decent
Language	9	90,00%	Very Decent
Format			
Average Percentage		92,78%	Very Decent

Experts in the field rated the acquired media for several factors, including format and content quality, resulting in an average percentage gain of 92.78%, placing it in the "very feasible" category, although there is still room for improvement.

Media Expert Validation, the purpose of learning media validation is twofold: first, to ascertain whether the media can be used for the purpose for which it was developed intended or not, and secondly, to ensure that the

presentation is clear and accessible to the intended audience. The following is a brief summary of the media expert validation results:

Table 3. Media Expert Validation Results

Aspects	Score Acquisition	%	Category
View	46	92,00%	Very Feasible
Programming	14	93,33%	Very Decent
Completeness	18	90,00%	Very Decent
Average Percentage		91,78%	Very Decent

The validation findings show that the eligibility criteria of the offered media have a success rate of 91.78% based on the replies and evaluations from media experts. Based on this research, it can be said that the interactive learning media assisted by the Lectora Inspire application has Very Good criteria (very feasible), although by revising first some parts that need to be improved.

Teacher Expert Validation, the credibility of the final product's usefulness from the instructor's approval. rating scores, recommendations, and researcher comments for educator expert users were used to obtain evaluations. The following is a brief summary of the results of the validation conducted by experienced educators:

Table 4. Teacher Expert Validation Results

Aspects	Score Acquisition	%	Category
Ease of Use	8	80,00%	Very Feasible
Product Attractiveness	8	80,00%	Very Decent
Easy to interpret	20	100,00%	Very Decent
Language	4	80,00%	Very Decent
Average Percentage		85,00%	Very Decent

The validation results showed that an average score of 85.00 was obtained from teachers' comments and assessment of the media eligibility criteria given to them. Based on these numerical data, it can be seen that the Lectora Inspire learning media produced has a great chance of successfully achieving the expected goal of helping fourth grade students' learning. This is in line with with research according to Nada, Fatih'Adna, the e-learning media assisted by Lectora Inspire made is considered suitable for use based on the findings of trusted media and material validators.

Learner Response Validation, the testing phase followed the product validation by the validators. Twenty-six participants, all fourth grade students at SDN Baru 03 Pagi, participated in the study. Summarized below are the findings from the student responses used for validation:

Table 5. Results of Learner Response Validation

Aspects	Score	%	Category
Acquisition			
Ease of Use	239	91,92%	Very Feasible
Product	212	81,54%	Very Decent
Attractiveness			
Easy to interpret	480	92,31%	Very Decent
Language	120	92,31%	Very Decent
Average Percentage		89,52%	Very Decent

The media quality criteria used to evaluate the presentation obtained an average score of 89.52% based on student responses. The results of the data show that the learning materials produced with the help of Lectora Inspire software meet high standards (Very Feasible). The feasibility results are supported in the research study "Development of Lectora Inspire-Based Learning Media for High School/MA Response Level Subjects" by Budi provides support for the feasibility findings. The results showed that the instructor response questionnaire and student responses had an average score of 96.67% and 97.3% respectively, while media experts and material experts had an average verification score of 95.63%.

Fourth, the Disseminate stage at this point, researchers share the learning media assisted by the Lectora Inspire application that they have made to the classroom. At this stage, researchers will conduct validation tests to study materials that have been updated and improved to the field to be used by teachers and students in science subjects in class IV SDN Baru 03 Pagi. The output resulting from the development research is in the form of learning media that is considered feasible to use as an alternative media to support the learning process. At this stage the researcher also measures the success of the product development objectives and is declared very feasible. This research and development is based on the problems that occur in learning activities, namely the lack of maximization of the learning process in the classroom. In addition, the learning media used has not fulfilled the integrated, contextual, and interactive elements in science learning *Lectora Inspire* chosen as one of the *Authoring Tools* media because it is suitable for used by beginners, and has been equipped with a variety of templates. The resulting media is also multimedia and can be integrated directly with practice questions. This is in line with Sadiman's opinion that learning media as a means of capturing, processing, and compiling visual and verbal information. This

development research is in line with the results of previous development which received a very decent product rating: (1) Irwandani et al. who conducted research on three high schools / equivalent in Ambon city by integrating Problem Base Learning in the media with very good validation results; (2) Mahmudah and Pustikaningsih with the results of the assessment obtained an average overall score of 4.24 which is included in the very feasible category; (3) Ramadhani and Rumaur obtained the results of the assessment of the product trial / small scale on average of 81.66 and the usage trial / large scale got an average score of 82.70 in the very good category; (4) Latifah, Yuberti, and Agestiana who developed HOTS-based interactive learning media with validation results and field trials in very good criteria; (5) Tasrif who designed Lectora Inspire-based media with the results of the analysis of learning multimedia design in the valid, feasible, easy to use, and very friendly categories. So that the design of this learning multimedia greatly contributes to the process of delivering learning information in the classroom.

CLOSING

Based on the results of research conducted by researchers, it can be concluded that interactive learning media assisted by the Lectora Inspire application in science subjects are very feasible to use and develop. The Lectora Inspire application is the right choice for making interactive learning media on the material of the form of substances and their changes in grade IV SD with a very feasible category. Through the development of this learning media, it is hoped that the teacher will not be dominant in the classroom, the two-way interaction between students and teachers can run well and students are complete in learning the material. The development of this learning media can also be an alternative teaching tool that is integrated and complements teaching tools based on printed books and PowerPoint. The author suggests that other researchers reference Lectora Inspire software to develop interactive learning media. It is also anticipated that this work may inspire other authors to develop relational and functional based media. The resulting product is then distributed with the effectiveness of the developed media aimed at increasing students' engagement, motivation, activeness and performance in the classroom in science learning.

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