

USING INTERACTIVE LECTORA INSPIRE SOFTWARE TO IMPROVE LEARNING OUTCOMES DURING PANDEMIC COVID-19

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ABSTRAK

Salah satu kendala pengembangan media pembelajaran interaktif adalah kurang dikuasainya teknologi oleh para guru. Penguasaan teknologi yang rendah cukup menghambat dalam pengembangan media interaktif, sehingga pengembangan materi pembelajaran interaktif dengan komputer kurang optimal. Tujuan dari penelitian ini adalah untuk menguji keefektifan pembelajaran interaktif pada materi sistem gerak berbantu *software Lectora inspire* dalam meningkatkan hasil belajar. Menggunakan metode pre-eksperimen, penelitian ini melibatkan 36 partisipan. Teknik pengumpulan data menggunakan soal tes, dan kuesioner. Analisis data menggunakan uji *wilcoxon*. Hasil penelitian ini, menunjukkan bahwa keefektifan penggunaan *software lectora inspire* interaktif pada materi gerak dapat meningkatkan hasil belajar siswa dengan nilai hasil *p-value* sebesar 0,006 dimana $p\text{-value} < \alpha = 0.05$. Dengan demikian aplikasi software Lectora Inspire dapat dijadikan solusi khususnya pada pembelajaran daring sebagai bentuk inovasi pembelajaran yang efektif.

Kata Kunci: Inovasi pembelajaran, lectora inspire, hasil belajar, sistem gerak.

ABSTRACT

One of the obstacles to the development of interactive learning media is the lack of mastery of technology by teachers. Low technology mastery is quite an obstacle in the development of interactive media, so that the development of interactive learning materials with computers is not optimal. The purpose of this study was to test the effectiveness of interactive learning on movement system material assisted by the Lectora inspire software in improving learning outcomes. Using the pre-experimental method, this study involved 36 participants. Data collection techniques using test questions and questionnaires. Data analysis used the Wilcoxon test. The results of this study indicate that the effectiveness of using interactive Lectora Inspire software on motion material can improve student learning outcomes

with a p-value of 0.006 where the $p\text{-value} < \alpha = 0.05$. Thus the Lectora Inspire software application can be used as a solution, especially in online learning as an effective form of learning innovation.

Keyword: Learning innovation, lectora inspire, learning outcomes, motion system.

INTRODUCTION

Learning is assistance provided by educators so that the process of acquiring knowledge and knowledge can occur, mastering skills and character, as well as forming attitudes and beliefs in students. Teachers as learning planners are required to be able to design learning by utilizing various types of media and appropriate learning resources so that the learning process takes place effectively and efficiently [1]. In the teaching and learning process, five very important components are objectives, materials, methods, media, and learning evaluation. These five aspects influence each other. The choice of one particular teaching method will have an impact on the appropriate type of learning media, without forgetting three other important aspects, namely objectives, materials, and learning evaluation. In this case, it can be said that one of the main functions of learning media is as a teaching aid that also influences

motivation, conditions, and the learning environment [2]. From the above opinion it can be concluded that learning is an effort made by a person to obtain changes in behavior that take place in interaction with the environment which results in changes in knowledge, values, attitudes, and skills.

The use of learning media in the teaching and learning process can generate new interests and desires, generate motivation and stimulate learning activities, and even bring psychological influences on students. The use of learning media in teaching will greatly help the effectiveness of the learning process and the delivery of messages and lesson content at that time [3]. As one of the components of learning, the media cannot escape the discussion of the learning system as a whole. The use of media should be a part that must receive the attention of the learner in every learning activity. But in fact this part is still often

neglected for various reasons. The reasons that often arise include: limited time to prepare for teaching, difficulty finding the right media, and unavailability of funds. This actually doesn't need to happen if every learner has equipped himself with knowledge and skills in terms of learning media.

The success of learning is strongly influenced by the completeness of the facilities or media used. Because the more varied the media used, the message or learning material will be more optimally received by students. This is due to the variation and diversity of student learning modalities that can be accommodated from varied media in learning. The use of interactive learning media is one way that teachers can use to improve student achievement. The use of interactive learning media is expected to help students understand and accept the learning process carried out by the teacher. Interactive learning media can represent what the teacher cannot convey and the learning process will be more effective and efficient. Until now, interactive learning media has not been optimally developed in Indonesia. One of the obstacles to the development of interactive learning

media is the lack of mastery of interactive media development technology by teachers, so that the development of interactive learning materials with computers is not optimal. There are still many students who are less focused when learning takes place. This can be seen from the attitude of those who like to chat, play, sleepy during class hours, this is because the method used still tends to be the lecture method. and focusing on textbooks so that students feel bored [4]. Therefore, teachers are required to be able to create innovative and more interesting learning. One of them is by creating interactive learning media with Lectora Inspire.

Many softwares support the creation of learning media, but Lectora Inspire is an authoring tool that can make it easier for teachers to create ICT-based learning multimedia. Lectora inspire is an effective program for making learning media and is an electronic learning development software (e-learning) that is relatively easy to apply or implement because it does not require understanding of sophisticated programming languages [5,6]. Lectora inspire has an interface

that is familiar to those of us who already know and have mastered Microsoft Office so that it can help overcome students' difficulties in learning [7,8].

Lectora inspire is a learning media that is designed to be as attractive as possible, can display videos, as well as animated images related to the subject matter so that students pay more attention to what is conveyed by the teacher. The learning process will be more fun and meaningful so that it will affect the increase in student learning achievement. Lectora inspire is a computer program which is an electronic learning development tool (e-learning), developed by the company Trivantis Corporation. Its founder was Timothy D. Loudernik in Cincinnati, Ohio, USA in 1999. This program was developed specifically to make interactive learning media easier to use. The use of Lectora inspire media contains various media elements such as images, text and audio media, in other words it is called multimedia. Multimedia is the plural form of the word media which means the union/combination of several media. The advantage of this program is that

Lectora inspire was created specifically for e-learning needs. Lectora inspire can be used for both online and offline learning needs which can be made quickly and easily. Lectora Inspire can be used to combine flash, record video, combine images and capture screens. Lectora Inspire can also be developed via Android [9].

Many benefits can be achieved through this software. Lectora Inspire can also help improve students' critical thinking skills, motivation and student achievement [10][11]. With the help of the Lectora Inspire software in the learning process it helps students have good learning achievements compared to students who do not use this software [12]. In addition, this software can produce products in the form of interactive learning media based on material integration-interconnection and based on inspiration in thematic learning [13][14]. Apart from learning media, this software can also be created with realistic interactive e-modules that help students understand the material [15]. Thus it is clear that Lectora Inspire can assist in the learning process with various media packaged in such a way that learning will be more interesting.

Creative teachers always provide innovative learning so that they can improve student learning outcomes. Lectora Inspire can effectively improve learning outcomes significantly and students' responses to the media that are developed are very good [16][17]. Lectora Inspire can be categorized as an innovation in learning that involves a lot of information technology in it [18]. In addition, HOTS-based interactive Lectora can be made so that it can explore students' critical thinking skills [19][20][21]. The development of learning media can be done through the Lectora Inspire software, with the development and design of good media that will foster students' interest in learning and understanding [22][23][24]. The use of learning models such as discovery learning can be collaborated with Lectora Inspire so that learning is more varied and can be used by students for distance learning [25][26]. Broadly speaking, the Lectora Inspire software can be used to develop and produce interactive media which can help students with learning difficulties [27].

METHOD

The research method used a pre-experiment using one class experiment with the One Group Pre-test and Post-test design. After gathering information, the authors then created an initial product of interactive learning media assisted by the Lectora software that inspires interesting Movement System subjects, so that it is useful for educators and students. In planning interactive learning media assisted by Lectora software, inspire the subject matter of Motion Systems using several book sources and the web as material guides. The subjects of this study were 36 students of Class XI MIPA at SMA Negeri 1 Soreang. Data collection techniques with test questions and questionnaires. The data analysis technique uses bivariate analysis. Bivariate analysis is an analysis that shows the relationship between the independent variables and the dependent variable. Bivariate data analysis to find out the effectiveness of using interactive Lectora Inspire software in improving student learning outcomes in motion material.

RESULTS AND DISCUSSION

Research data obtained from pretest and posttest and questionnaires.

Research data is processed in such a way as to analyze each component needed to test the hypothesis.

Table 1. Respondents' Descriptive Statistics on Pretest

N	Valid	Missing
	36	0
Mean		53.89
Median		50.00
Std. Deviation		23.938
Range		90
Minimum		10
Maximum		100

Based on the results of the descriptive statistical analysis shown in Table 1, a mean value of 53.89 is obtained and a standard deviation value of 23.94 indicates that the data is quite

good, but the average score is still relatively low from the KKM criteria set. by schools in biology subjects on the theme of movement system material, namely 70 of the total students.

Table 2. Frequency Distribution of Pretest Scores.

Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10	2.8	2.8
	30	13.9	16.7
	40	27.8	44.4
	50	27.8	72.2
	60	2.8	75.0
	80	8.3	83.3
	90	5.6	88.9
	100	11.1	100.0
Total	36	100.0	100.0

Table 2. Shows the frequency distribution of pretest scores. The highest frequency on scores of 40 and

50 is around 10 students. While the achievement of the maximum score was only achieved by 4 students.

Table 3. Respondents' Descriptive Statistics on the Posttest

N	Valid	Missing
	36	0
Mean		74.72
Median		85.00
Std. Deviation		24.436
Range		80
Minimum		20
Maximum		100

Based on the results of the descriptive statistical analysis shown in Table 3. a mean value of 74.72 is obtained and a standard deviation value of 24.44 indicates that the data is quite good, and the average score is quite good according to the KKM criteria. determined by the school in biology subjects on the theme of motion system material, namely 70 of the total students.

Table 4. Frequency Distribution of Posttest Scores

Frequency	Percent	Valid Percent	Cumulative Percent
Valid 20	3	8.3	8.3
40	4	11.1	19.4
60	3	8.3	27.8
70	2	5.6	33.3
80	6	16.7	50.0
90	13	36.1	86.1
100	5	13.9	100.0
Total	36	100.0	100.0

Table 4. Shows the frequency distribution of posttest scores. The highest frequency is at a score of 90 around 13 students. While the achievement of the maximum score was only achieved by 5 students. The lowest frequency is at a score of 70.

Table 5. Hypothesis Testing with the Wilcoxon Test

POSTEST	PRETEST
Z-2,744 ^b Asymp. Sig. (2-tailed)	.006
a. Wilcoxon Signed Ranks Test	
b. Based on negative ranks	

Based on Table 5., the results of the Wilcoxon test statistic, a p-value of 0.006 was obtained where the p-value $< \alpha = 0.05$. It can be concluded that H₀ is rejected and H_a is accepted, which

means the effectiveness of using interactive Lectora Inspire software on motion material can improve student learning outcomes.

Table 6. Interpretation of the Wilcoxon Test Output

N		Mean Rank	Sum of Ranks
POSTEST- PRETES	Negative Ranks	7 ^a	127.50
	Positive Ranks	26 ^b	433.50
	Ties	3 ^c	
	Total	36	

- a. Postest < Pretest
- b. Postest > Pretest
- c. Postest = Pretest
- a. Negative Ranks or the (negative) difference between the learning outcomes of motion system material for the Pre Test and Post Test is 7. This 7 indicates a decrease (reduction) from the Pre Test scores to the Post Test scores for 7 students.
- b. Positive Ranks or difference (positive) between learning

- outcomes of movement system material for the Pre Test and Post Test. Here there are 26 positive data (N), which means that the 26 students experienced an increase in learning outcomes for the motion system material from the Pre-Test scores to the Post-Test scores.
- c. Ties is the similarity of the Pre-Test and Post-Test scores, here the Ties score is 3, which means that there are 3 students who do not experience

any effect in the learning outcomes of motion system material from Pre-Test scores to Post-Test scores.

Based on the test results obtained which can be seen in Table 5 that interactive learning media using Lectora Inspire has a positive impact on increasing students' understanding of the motion system material and indicators and standard learning achievement criteria set by the school. In addition, based on the results of data processing, descriptive statistics also showed a very significant difference in mean values after implementing interactive learning media using Lectora Inspire, where the mean value at the beginning of the pretest only obtained a value of 53.89 to 74.72 or an increase of 16.19%. Thus it can be concluded that interactive learning media using Lectora Inspire has a positive impact on increasing students' understanding of student learning material.

In addition to having a positive impact, using Lectora Inspire can also improve student learning outcomes. With an interactive media design based on Lectora Inspire it can help improve student learning outcomes [16][17]. Students will understand learning material better if they use interactive

media, in line with that [24] argues, using Lectora Inspire can help students understand the material well because students prefer learning using interactive media. With the help of the Lectora Inspire software in the learning process it helps students have good learning achievements compared to students who do not use this software, students who use this software get good learning outcomes [12]. Thus it is clear that the Lectora Inspire software can be used as a reference for developing interactive and innovative media that is relevant for use by teachers in the future.

Based on the test results obtained which can be seen in Table 5 that interactive learning media using Lectora Inspire has a positive impact on increasing students' understanding of the motion system material and indicators and standard learning achievement criteria set by the school. However, not 100% of all students can absorb the implementation of this method. This can be seen from the results of the interpretation of the Wilcoxon test output in Table 4.6. the results of the pretest to posttest comparison and 3 students who did not have any impact on their learning outcomes were only a minority. This

can be caused by various factors including student psychology, technological facilities used such as the availability of laptops that support and low sustainability of knowledge from previous material, causing posttest results to be lower than posttest results. So it can be concluded that this method is still quite effective in increasing students' understanding of the motion system material. In line with this [16][17] argues that Lectora Inspire can effectively improve learning outcomes significantly and students' responses to the media that are developed are very good.

CONCLUSION

Based on the results of research that has been done regarding the implementation of interactive learning media with Lectora Inspire to improve student learning outcomes in motion system material during a pandemic. The average mean value of students during the pretest and before the

implementation of interactive learning media with Lectora Inspire obtained a value of 53.89. The average mean score of students at the time of the posttest and after the implementation of interactive learning media with Lectora Inspire obtained a value of 74.72. There is the effectiveness of using interactive Lectora Inspire software on motion material that can improve student learning outcomes as seen from the value of the hypothesis test results with a p-value of 0.006 where the p-value < $\alpha = 0.05$. Based on the interpretation of the Wilcoxon test output, 26 students experienced an increase in learning outcomes, 7 students experienced a decrease, and 3 students did not experience any impact from the implementation of the interactive learning media method using Lectora Inspire. Thus it is clear that Lectora Inspire can improve student learning outcomes and can be used as an interactive online learning solution.

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