JPPIPA 8(2) (2022)

Jurnal Penelitian Pendidikan IPA

Journal of Research in Science Education

http://jppipa.unram.ac.id/index.php/jppipa/index

Electronic Learning Material of Newton's Laws with Kvisoft Flipbook Maker to Improve Learning Outcomes of Students

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DOI: 10.29303/jppipa.v8i2.1222

Article Info
Received: December 29, 2021
Revised: April 4, 2022
Accepted: April 9, 2022
Published: April 30, 2022

Abstract: In the world of education, teachers can use technology in learning activities in learning material. The fact found in schools is that the learning material used by students are still low in the use of technology. This indirectly has an impact on student learning outcomes which are still low. One solution that can be done is to apply Newton's law electronics learning material with Kvisoft Flipbook. This study aimed to improve the learning outcomes of class X students of SMAN 1 Payakumbuh. This research is a quasi-experiment with a randomized posttest only control group design. The sampling technique used purposive sampling with random cluster sampling. The data collection instrument consisted of a written test sheet for the knowledge aspect, an observation sheet for the attitude aspect, and a performance appraisal sheet for the skills aspect. From the results of data analysis, it can be stated that applying Newton's law electronics learning material with Kvisoft Flipbook Maker can improve learning outcomes in the knowledge, attitudes, and skills of class X students of SMAN 1 Payakumbuh with a 95% confidence level.

Keywords: Electronic Learning Material; Newton's Law Material; Kvisoft Flipbook Maker

Citation: Asrizal, A., Ayu, D. F., Mardian, V., & Festiyed, F. (2022). Electronic Learning Material of Newton's Laws with Kvisoft Flipbook Maker to Improve Learning Outcomes of Students. *Jurnal Penelitian Pendidikan IPA*, *8*(2), 489–498. https://doi.org/10.29303/jppipa.v8i2.1222

Introduction

The 21st century is the century of the development of science and technology. The development of science and technology has led to intense competition in various fields of life (Suryanti et al., 2018). Fierce competition in the 21st century demands that humans have quality resources (Asrizal & Utami, 2021). One of these resources can be obtained by implementing digital skills-based education so that students can access and receive information quickly and responsively, think critically in problem-solving, collaborate, and interact and communicate well and effectively (Laar et al., 2018). These abilities become the standard in achieving digital skills (Laar et al., 2020). Therefore, if all of these skills can be mastered, it is hoped that humans will have adequate digital skills to compete healthily in the 21st century.

The development of the 21st century is marked by the use of technology. Technology contributes to the world of education, especially in learning. The world of education that used to be completely manual has now been converted into a more effective and efficient digital form (Gu et al., 2015). Learning material are learning tools that are very important in learning (Pálsdóttir, 2019), designed to facilitate students in learning (Chutami, 2021). Teachers who previously used printed learning material have started switching to digital learning material.

Teachers can maximize the use of technology in learning activities. The use of technology in learning activities can help teachers improve the quality and

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efficiency of learning. The use of technology in learning activities can encourage students to study independently. One form of using technology in learning activities is using learning material that can be accessed easily on the cellphones of teachers and students (Astra & Mujayanah, 2020). Learning material is one of the learning tools that can support the success of physics learning activities. Learning material is often also called modules. E-Module is learning material converted and stored in digital form and requires the internet to access it (Ratheeswari, 2018).

Electronic learning material is suitable for learning activities (Sigit et al., 2019). Electronic learning material in their use involves the sense of sight and the sense of hearing of students. Media use in learning material is essential to improve students' conceptual understanding (Yulianci & Adiansha, 2021). From text and images, the media contained in electronic learning material also consists of other exciting media such as music, photos, animations, and videos to look alive. Videos in electronic learning material can increase student involvement in learning and increase learning effectiveness (Xu et al., 2020). In addition to videos, animations in electronic learning material can make it easier for students to understand the subject matter presented (Hidayati & Ida, 2012). Electronic learning material developed with various engaging media can encourage students to engage in learning activities.

The actual conditions found are still far from the desired ideal conditions. This is known based on preliminary studies that have been carried out. There are three preliminary studies in this research: first, the average value of the questionnaire distribution to two teachers in the physics learning process is 46.32, with a low category. Second, the average value of using physics learning material in online learning is still low at 52.44. Third, the average value of physics obtained by students in the first semester of middle test is 51.67. The average value of physics from the three classes shows that the physics value of class X IPA SMAN 1 Payakumbuh District is still relatively low.

The results of the preliminary study do not reflect the expected ideal conditions. This indicates a problem in the research. An alternative solution to overcome the problem in this research is to use Newton's law electronic learning material with Kvisoft Flipbook Maker. This electronic learning material is expected to stimulate students' enthusiasm for learning to improve student learning outcomes.

There are several novelties of the electronic learning material used. There are two novelties of this electronic learning material: first, this electronic learning material is a learning material that utilizes technology. Students can access electronic learning material via mobile phones online. Second, this electronic learning material utilizes the latest version of the Kvisoft Flipbook Maker software to be more practical to use in learning.

Starting from the background described, the researcher is interested in implementing electronic learning material with Kvisoft Flipbook Maker. Research that is relevant to this research is (Sriyanti, 2020). There are three differences in research relevant to the study conducted. First, the learning material used is electronic learning material using the Kvisoft Flipbook Maker application. Second, physics learning material in electronic learning material include Newton's laws of motion and Newton's laws of gravity. Third, the use of electronic learning material aims to increase the use of technology in classroom learning activities.

Electronic learning material as a product in this research has several advantages. The learning material presented is relevant to the physics learning material required in the 2013 curriculum. Worksheets in electronic learning material can be used as a guide to conduct virtual experiments using Phet Simulation to develop students' skills. Experimental activities need to be carried out in physics learning to understand physical phenomena and their characteristics (Asrizal, 2018). This electronic learning material is an exciting learning material for students where previously students only used printed learning material. Teachers can optimize the learning and assessment of students with electronic learning material.

Teachers are expected to choose suitable learning material to stimulate student activity in learning activities. The characteristics of good learning material are: 1) learning material that are made can encourage students to learn independently, 2) learning material present complete subject matter, 3) learning material can develop students' digital skills, 4) learning material is arranged on an ongoing basis. Learning material can make learning more exciting and meaningful (Onyia, 2016). Learning material packaged in such a way can be used as a guide for teachers and students in learning activities.

Electronic learning material is one learning material that teachers in learning activities can use. Electronic learning material is learning material published in digital form, consisting of text, images, and other exciting media that can be read on computers or other electronic devices (Gardiner, 2010; Chen & Su, 2019). Electronic learning material is an arrangement of material designed as attractive as possible by displaying the learning objectives to be achieved at the end of the lesson. Electronic learning material is structured and designed to hone students' digital skills.

Electronic learning material consists of several forms. Electronic learning material can be in the form of books displayed in digital format, digital journals and digital magazines that utilize technology in their use. Electronic learning material can stimulate the skills of

teachers and students in using technology in schools. Electronic learning material can support the achievement of the expected learning objectives and increase the effectiveness of learning.

Electronic learning material has several characteristics. Electronic learning material is displayed in digital form. Electronic learning material consists of various exciting media (Chou et al., 2021)Electronic learning material is in the form of text and consists of other elements that attract students' attention and motivate students to learn through pictures, music, and videos (Klement & Marešová, 2014). These learning material can be saved in various formats such as pdf, Html, jpeg, exe, etc. (Software.informer, 2021).

Electronic learning material has advantages and disadvantages. The advantages of electronic learning material include: 1) electronic learning material are practical in use, easy to carry and can be used anywhere (Waller, 2013; Bikowski, 2018), 2) the cost of producing electronic learning material is cheaper than printed learning material, 3) electronic learning material. Electronic learning material is more durable because they will not tear like printed learning material (Asrowi, 2019). Another opinion regarding the advantages of electronic learning material is that they can be read with different devices, add multimedia (Yachina et al., 2016), can be adapted to the font format (Fojtik, 2015), and are easy to update (Mouri et al., 2018) Meanwhile, the shortcomings of electronic learning material include: 1) the size of electronic learning material is usually smaller than printed learning material, 2) electronic learning material sometimes require an internet connection to operate. Meanwhile, electronic learning material can improve access to information quickly and easily in obtaining subject matter (Yaya, 2015). Interesting electronic learning material is applied in classroom learning activities.

The teacher himself should make electronic learning material. Although now there are so many learning resources and easy access for students, teachers still need to design electronic learning material that utilizes technology to stimulate students' digital skills. Teachers can design electronic learning material by using software according to the needs and characteristics of students.

One of software that teachers can use to design electronic learning material is Kvisoft Flipbook Maker (Makunti, 2018). Kvisoft Flipbook Maker can display output in the form of e-books, e-modules, e-papers, and e-magazines (Tua et al., 2021). Kvisoft Flipbook Maker is an application that can be used to display learning material in the form of a digital flipbook (Saraswati & Linda, 2019; Fahmi et al., 2019). This software can be operated online or offline on computers (Suyasa & Divayana, 2019). This software is equipped with various templates with attractive and varied colour combinations. They can be used as backgrounds in making learning material according to teachers' tastes and student characteristics.

Research on the application of electronic learning material with Kvisoft Flipbook Maker is essential. On this basis, researchers are interested in conducting research. Therefore, the title of this research is "Electronic Learning Material with Kvisoft Flipbook Maker to Improve Learning Outcomes of Class X High School Students". The purpose of this study was to determine the significant effect of using electronic learning material with Kvisoft Flipbook Maker to improve student learning outcomes.

The research hypothesis states tentative assumption about the research. Based on theoretical studies and relevant research, hypotheses can be formulated. The idea of this research is: "There is a significant difference in learning outcomes between students who use Newton's law electronic learning material with Kvisoft Flipbook Maker and students who do not use them in class X SMA".

Method

The type of research used is quasi-experimental. This design is influenced by other variables and not solely by treatment (Gopalan, 2020). The research design applied in this study was the randomized posttest only control group. The research design can be seen in Table 1.

Table 1. Design of the Randomized Posttest Only Control Group

Group	Pretest	Treatment	Posttest
Experimen	-	X	O_2
Control	-	-	O_2

(Ary et al., 2010)

Description:
X = Using Newton's law electronics with Kvisoft Flipbook Maker
O_2 = Posttest after being given treatment

Variables are all symptoms that vary and become the object of research. Research is based on a variety of data sources or objects. In this study, there are three research variables. The variables in this study were the independent variable, the dependent variable, and the control variable.

The independent variable is the variable that affects the dependent variable. The independent variable of this research is Newton's law electronic learning material with Kvisoft Flipbook Maker. The dependent variable is a variable that changes as the independent variable changes. The dependent variable is influenced by other variables but cannot affect other

variables. The dependent variable of this research is the learning outcomes of class X students of SMAN 1 Payakumbuh District. Student learning outcomes assessed in this study were student learning outcomes in aspects of knowledge, attitudes, and skills.

Control variables are variables that are used as a way to control. The control variable is kept constant in the study so that the research results are not influenced by external factors. Control variables can make research results more accurate. The control variables in this study are subject matter, time allocation, teacher, number and types of questions tested, and assessment.

This electronic learning material has been validated with a validity value of 89.43, with a very good category. Electronic learning material was revised during the validation process based on input from the validator team. Some inputs from the validator team for the improvement of electronic learning material include: 1) the cover of electronic learning material must be relevant to the learning material, 2) the material in electronic learning material should be more contextual, 3) sentences in electronic learning material is written according to the subject, predicate, object, and adverb (SPOA) structure, 4) the information given on the image is adjusted to the image displayed, 5) the symbols for physical quantities are written correctly, especially in writing vector quantities, 6) the mathematical steps are written in a coherent way so that they are easier to understand. Revision of electronic learning material is carried out to get a better product. The cover of electronic learning material after revision can be seen in Figure 1.

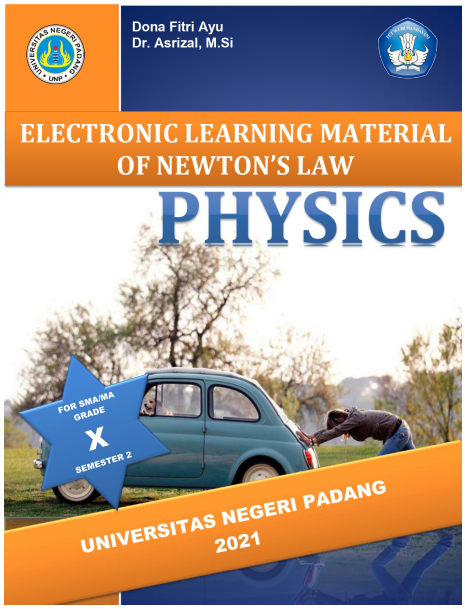

Figure1. The Cover of Electronic Learning Material

The population is the whole object in an area to be studied. The population in this study was all students of class X IPA SMAN 1 Payakumbuh District who were registered in the second semester of the 2020/2021 academic year. Two classes will be sampled. The sample in this study was class X IPA 1 and X IPA 3.

Data is a collection of information in the form of facts and figures that can be used as the basis for the study. The data in this study were obtained from three aspects, namely data from parts of attitudes, knowledge, and skills. The instrument used was an observation sheet for the attitude aspect, a written test in multiple choices, which was carried out at the end of the study for the knowledge aspect, and a performance sheet for the skill aspect. The data obtained during the research will be processed and analyzed to prove the research hypothesis.

The data in the study were analyzed using several techniques. There are several techniques in analyzing the data, namely descriptive statistical analysis, normality test, homogeneity test, and comparison test of two averages. Descriptive statistics are used to describe the sample data. In addition to using descriptive statistics, normality and homogeneity tests are also required. The normality test determines whether the data obtained from each sample is normally distributed or not. The statistic used in this research is the Lilliefors test. The homogeneity test aims to determine whether the two models have a homogeneous variance or not. The statistic used in the homogeneity test is the F test.

Hypothesis testing was carried out after normality and homogeneity tests. Hypothesis testing can be done using a comparison test of two averages. Data normally distributed and have a homogeneous variance can use the t-test to prove whether the hypothesis is rejected or accepted. The formula for the t-test is:

$$t = \frac{\overline{X_1} - \overline{X_2}}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \quad (1)$$

Where:

$$s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \quad (2)$$

Description:

$\overline{X_1}$ = Average of experiment group
$\overline{X_2}$ = Average of control group
$\overline{s_1^2}$ = Varians of expriment group
$\overline{s_2^2}$ = Varians of control group
S^2 = Varians of the both of group
n_1 = Number of students in experiment group
n_2 = Number of students in control group

Futhermore, the determination of hypothesis in the study, as follows:

a. Ho is rejected if $t_h > t_1 - \frac{\alpha}{2}$ or $t_h < -t_1 - \frac{\alpha}{2}$

b. Ho is accepted if $-t_1-\frac{\alpha}{2} < t_h < t_1-\frac{\alpha}{2}$

Result and Discussion

Result

The research results can be seen in three aspects. The first research results are the results of research on knowledge. The results of data analysis will be described as follows.

a. The Effect of Electronic Learning Material on Knowledge Aspects

Students' knowledge was assessed from essays with 20 multiple-choice questions. This posttest was given to the two sample groups at the end of the research activity. The description of the data can be seen in Table 2.

Table 2. Results of Knowledge Aspect Data Analysis in the Sample-Group

Statistical Parametrics	Experimen Group	Control Group
Number of Student	36.00	35.00
Average	76.80	63.28
Modus	85.00	65.00
Standard Deviation	13.58	14.08
Varian	184.50	198.44
L_o value of normality test	0.11	0.09
L_t value of normality test	0.14	0.14
F_h value of homogeneity test	1.07	
F_t value of homogeneity test	1.77	
The value of t_h comparison test of two averages	4.25	

From the data analysis in Table 2, it can be described that there are differences in student learning outcomes in terms of knowledge in the experimental group and the control group. The average value of knowledge of the experimental group is higher than the average value of knowledge of the control group. The difference in the average value between the experimental group and the control group is 13.52. This shows a significant difference between the two sample groups in the aspect of knowledge.

From the normality test results that have been carried out, it is found that the L_o and L_t value are at a significant level of 0.05 for n_1 = 36 and n_2 = 35, as shown in Table 2. From Table 2, the results of the normality test calculation can be explained on the knowledge aspect of the sample group. The experimental group has a L_o of 0.11, and the control group has a L_o of 0.09. The sample will be normally distributed if the value $L_o < L_t$. The L_t value at n = 35 and n = 36 was obtained at 0.14, so it can be concluded that the two sample groups were normally distributed.

From Table 2, the results of the homogeneity test analysis can be described for the knowledge aspect. The F_h result is 1.07. The two sample groups can be homogeneous if the value of $F_h < F_t$. These results indicate that 1.07 < 1.77 means that the two sample groups have homogeneous variants.

From Table 2, it can be stated that the results of the calculation of the hypothesis test for the knowledge aspect. The results of the previous data analysis showed that the sample was normally distributed and homogeneous. The test used next is the t-test. The value obtained after statistical analysis is t_h = 4.25 and the value of tt for dk = n_1+ n_{2-2} is t_t = 1.99. The value of t_h is greater than tt and is in the rejection area of H_o. From the statistical analysis of the data, it can be stated that there are significant differences in student learning outcomes in the aspect of knowledge between students who use Newton's law electronic learning material with Kvisoft Flipbook Maker and students who do not use them in group X SMA.

Students' competence in the two sample groups had the same initial conditions. After applying electronic learning material with Kvisoft Flipbook Maker, there are differences in student learning outcomes in terms of knowledge in the experimental and control groups. These differences indicate the effect of Newton's law electronic learning material with Kvisoft Flipbook Maker on student learning outcomes in the knowledge aspect. It can be concluded that Newton's law electronic learning material with Kvisoft Flipbook Maker can improve student learning outcomes in the knowledge aspect of class X SMA.

b. The Effect of Electronic Learning Material on Attitude Aspects

Assessment of student attitudes is carried out during the learning process. The research for the attitude aspect in the sample group was carried out for five weeks. Data was obtained from observations using observation sheets. The difference in student learning outcomes in the attitude aspect between the experimental and control group can be seen in Table 3.

Table 3. Results of Attitude Aspect Data Analysis in the Sample-Group

Statistical Parametrics	Experiment group	Control group
Number of Student	36.00	35.00
Average	78.14	70.76
Modus	76.67	61.67
Standard Deviation	7.57	7.69
Varian	57.34	59.24
L_o value of normality test	0.07	0.09
L_t value of normality test	0.14	0.14
F_h value of homogeneity test		1.03
F_t value of homogeneity test		1.79
The value of t_h comparison test of two averages		4.12

The data analysis of students' attitude aspects is divided into six indicators that are assessed during the learning process. The indicators evaluated are discipline (DC), self-confidence (SC), hard work (HW), cooperation (CP), responsibility (RP), and tolerance (TL). The results of the data analysis on the aspects of student attitudes per indicator are presented in graphical form, which can be seen in Figure 2.

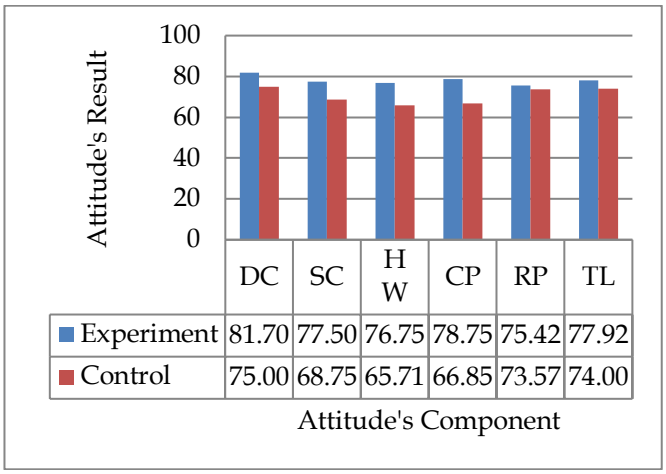

Figure 2. The Result of Student's Attitudes

From the data analysis in Table 3 and Figure 2, it can be described that there are differences in student learning outcomes in the attitude aspect in the experimental group and the control group. The difference between the experimental and control groups' average value is 7.35. This indicates that the attitude value in the experimental group is superior to the control group. This shows that the treatment given to the experimental group is the use of Newton's law electronic learning material with Kvisoft Flipbook Maker compared to the control group that was not given any treatment.

The normality test was conducted to determine whether the sample was normally distributed or not. The results of the normality test in Table 3 are explained that the experimental group and control group have L_o values of 0.07 and 0.09, respectively. At the 0.05 level of significance, the two-sample groups will be normally distributed if the price is $L_o<L_t$. The data obtained is the value of $L_o<L_t$, so it can be concluded that the experimental group and the control group were normally distributed.

A homogeneity test was conducted to test whether the sample group had homogeneous variance. The two sample groups can be said to be homogeneous if the value of Fh Ft. From TABLE 3, it can be stated that the Fh results for the attitude aspect have a value of 1.03. These results indicate that the two sample groups have homogeneous variance.

The data is normally distributed and has a homogeneous variance followed by the t-test. After performing statistical analysis, the t_h value was 4.12 and the t_t value at a significance level of 0.05 obtained dk = n_1+ n_{2-2} of t_t = 1.99. This shows that the value of t_h is greater than tt and is in the rejection region of H_o. Based on this, it can be stated that there are significant differences in student learning outcomes in the attitude aspect between students who use Newton's law electronic learning material with Kvisoft Flipbook Maker and those who do not use them in class X high school students.

Student learning outcomes in the two sample groups had the same initial conditions. After applying electronic learning material with Kvisoft Flipbook Maker, there were differences in student learning outcomes in the experimental and control groups' attitude aspects. These differences indicate the influence of electronic learning material with Kvisoft Flipbook Maker on student learning outcomes in the attitude aspect. It can be concluded that electronic learning material with Kvisoft Flipbook Maker Newton's law material can improve student learning outcomes in the attitude aspect of class X SMA.

c. The Influence of Electronic Learning Material on Skill Aspects

Assessment of the skills aspect is carried out during practical activities. Five skill indicators are assessed during the practicum. The indicators evaluated were reading data (RD), collecting data (CD), analyzing data (AD), communicating the results of data analysis (CM), and making conclusions (MC). Aspects of student skills are obtained through the scoring rubric. The results of data analysis on the skills aspect for the two sample groups can be seen in Table 4.

Table 4. Results of Data Analysis of Skill Aspects in the Sample-Group

Statistical Parametric	Experiment group	Control Group
Number of Student	36.00	35.00
Averagesa	79.25	67.47
Modus	78.33	66.67
Standard Deviation	8.22	9.09
Varian	67.69	82.74
L_o value of normality test	0.04	0.05
L_t value of normality test	0.14	0.14
F_h value of homogeneity test		1.22
F_t value of homogeneity test		1.77
The value of t_h comparison test of two averages		5.80

Descriptive statistical analysis is not only presented in the form of tables but can also be presented in the form of graphs. The results of the data analysis of aspects of student skills per-indicator assessed during the practicum are presented in graphical form, which can be seen in Figure 3.

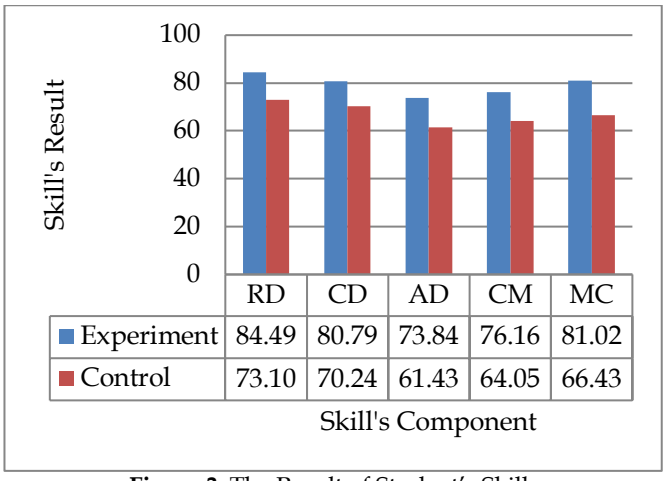

Figure 3. The Result of Student's Skills

From the data analysis in Table 4 and Figure 3, it can be described that there are differences in student learning outcomes in terms of skills in the experimental group and the control group. The average value of skills in the experimental group is higher than the average of skills in the control group. The difference in the average value of the skill aspect in the experimental and control groups is 12.24. This indicates a significant difference in learning outcomes between the two sample groups in the aspect of skills.

The normality test results that have been carried out have obtained the L_o and L_t Values at a significant level of 0.05 for $n_1 = 36$ and $n_2 = 35$, as written in Table 4. From Table 4, it can be explained that the L_o value in the experimental group is 0.04 while the L_o value in the control group of 0.05. The two sample groups will be normally distributed if the value of $L_o<L_t$ is obtained at the 0.05 level. The data obtained is the $L_o \leq L_t$ value, so it can be told that the two sample groups are equally distributed normally.

A homogeneity test was conducted to test whether the sample group had homogeneous variance. From Table 4, it can be stated that the F_h results for the attitude aspect have a value of 1.22. The two samples will have a homogeneous variance if the value of $F_h<F_t$. These results indicate that the two sample groups have homogeneous variance.

From Table 4 it can be explained the results of the t-test calculations for the skill aspect. The value obtained after statistical analysis is $t_h = 4.12$ and the value of tt for $dk = n_1 + n_{2-2}$ is $t_t = 1.99$. The value of t_h is in the rejection region of H_o so that the hypothesis is accepted. From the statistical analysis of the data, it can be interpreted that there are significant differences in student learning outcomes in the aspect of skills between students who use Newton's law electronic learning material with Kvisoft Flipbook Maker and students who do not use them in class X SMA.

Student learning outcomes in the two sample groups had the same initial conditions. After applying electronic learning material with Kvisoft Flipbook Maker, there were differences in student learning outcomes in the experimental and control groups' skill aspects. These differences indicate the influence of electronic learning material with Kvisoft Flipbook Maker on student learning outcomes in the skills aspect. It can be concluded that electronic learning material with Kvisoft Flipbook Maker Newton's law material can improve student learning outcomes in the skill aspect of class X SMA.

Discussion

The first research is that applying Newton's law electronic learning material with Kvisoft Flipbook Maker can improve student learning outcomes in the knowledge aspect. This is in line with research (Suyasa & Divayana, 2020) which states that using the Kvisoft flipbook maker can improve student learning outcomes. Electronic learning material with Kvisoft Flipbook Maker is designed with an attractive appearance starting from the cover to the content of the learning material. The appearance of attractive learning material can increase students' interest in understanding the material in electronic learning material (Serevina & Sari, 2018). Electronic learning material in learning makes learning practical, effective, and easy for students to understand (Onyia, 2013). In addition, the material on electronic learning material is also equipped with supporting media such as animation, music, and videos that are relevant to the material presented. Learning material is provided with animations can improve learning and benefit students (I. C. Chou, 2016). In addition to animation, videos in learning material can also make it easier for students to understand the material being studied because it involves more students' senses in learning. Electronic learning material can also help students understand abstract material (Sawitri, Y., Asrizal, A., and Mufit, 2020). The videos in the learning material are also very helpful for students to understand abstract material, such as the movement of planets in the solar system. Electronic learning material with Kvisoft Flipbook Maker is also equipped with evaluations. The evaluation presented in learning material is an evaluation that can be done directly by students on electronic learning material. Students can answer evaluation questions and see the results of scoring directly on electronic learning material.

The second result achieved is that using electronic learning material with Kvisoft Flipbook Maker can improve student learning outcomes in the attitude aspect. The presence of electronic learning material with Kvisoft Flipbook Maker can make students more active, initiative, responsible and confident in asking and answering questions and being motivated to learned (Linda & Nufus, 2020). The high motivation of

students is one of the success factors of students in learning (Gbollie & Keamu, 2017). Students' scientific attitudes, namely discipline, confidence, hard work, cooperation, responsibility and tolerance, can be observed in the learning process (Lee et al., 2019). Students' scientific attitudes can be stimulated through experimental activities, adaptability, appreciation and values that are expected to be possessed by scientists in doing their work (Suryawati & Osman, 2018). In line with the theory, implementing experiments in the learning process helps students train students' scientific attitudes. The component of scientific attitude must be developed in the process of learning at school so that there is a change in the student's personality (Juhji & Nuangchalerm, 2020).

The final result achieved is the application of electronic learning material with Kvisoft Flipbook Maker to improve student learning outcomes in the skills aspect. The learning material applied is electronic to be directly accessed on students' cellphones (Pebriantika & Wibawa, 2021). Electronic learning material is equipped with work instructions to guide students in conducting experiments. The experiment carried out was a virtual experiment using Phet Simulation, which was opened via a link. The ability of students becomes applicable by utilizing technology in learning because teachers can vary the context of learning by utilizing various technologies (Kessler, 2017), and the role of the internet make it the right tool to potentiate various implementations in learning context (Hanif, 2020). In line with the theory that there is an increase in students' critical thinking skills by applying the Kvsoft flipbook maker in learning process (Safitri et al., 2021). Experimental activities make students investigate systematically, proceed, are trained to conclude, and communicate correctly the results of the investigations carried out.

The research that has been done has some limitations in its implementation. This limitation can occur because of the shortcomings possessed by the researcher. It is hoped that the limitations that occur during the research will make the experience and can be improved in the future.

The first limitation is that the researcher only has one observer. Observer aims to help researchers to make observations in research. In assessing attitudes and skills, more than one observer is needed. The solution to this limitation for future researchers is to have more than one observer evaluate students' attitudes and abilities.

The second limitation is that links to electronic learning material distributed to students during learning can only be accessed for a certain period, so they must be updated regularly. This happens because the researcher uses Kvisoft Flipbook Maker, which is not premium tool. The solution to this limitation for future researchers is to use the premium Kvisoft Flipbook Maker. This is done so that electronic learning material that is made can be accessed online via a link for a long time.

Conclusion

Based on the data that has been analyzed, conclusions can be drawn. This research concludes that using Newton's law electronic learning material with Kvisoft Flipbook Maker can improve student learning outcomes in aspects of attitudes, knowledge and skills with a 95% confidence level. These results indicate that using electronic learning material with Kvisoft Flipbook Maker Newton's law material is effectively applied in physics learning activities to improve learning outcomes of students.

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