The effect of digital books based on kvisoft flipbook maker on student learning outcomes

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Abstract. This study aimed at determining the learning outcomes of students who use digital books based on the kvisoft flipbook maker compared to the students without using digital books based on kvisoft flipbooks. It is because students learning outcomes were low so we use digital books based on kvisoft flipbook maker. This type of research was a quasi-experimental design with Post-test-Only Control Group Design. The data collection method used was the description test method to measure student learning outcomes. The learning outcome data were then analyzed using one-way ANOVA with prerequisite tests, namely the normality test and the homogeneity test. The results showed that there were several differences in the learning outcomes of students who used kvisoft flipbook-based digital books and students without using kvisoft flipbook-based digital books. The results of the analysis showed with a significance of 0.000. If the significance level is set = 0.05, and the significance value is smaller than α so that F is significant. This means that H0 was rejected and H1 was accepted, which states that there are differences in learning outcomes between students who took lessons using Kvisoft Flipbook Maker based digital books compared to the students who took lessons without using Kvisoft Flipbook Maker based digital books. The mean of experiment group was 84.56 and mean of control group was 70.32.

1. Introduction
Along with the development of information technology, the use of printed books in the learning process in higher education has gradually shifted to the use of digital books. Digital books allow students to be able to obtain sources of information/knowledge/course material in a form/way that is more interesting and more fun, because in these digital books, teaching materials can be packaged properly so that they can contain text, images, audio, video, which can be accessed via the internet whenever and wherever the student is, and can be read through a personal computer, laptop, tablet, or smartphone. Therefore, the digital book based on the previously developed Kvisoft flipbook maker which has been made by the researchers themselves is very suitable to be tested experimentally to determine the reliability and validity of this digital book to be used in learning.

The importance of digital books in supporting the learning process does not tend to make them as an obligation to require each course to be made in the form of digital books. Whether or not a digital book is needed for a particular subject is seen / viewed from several important aspects.
Judging from the review of the important aspects of the usefulness and complexity of the material content in a course taught to students according to the scientific field / department taken by the students, it does not mean that all courses must be made in the form of a digital book.

In higher education institutions, especially Ganesha University of Education, there are several general courses in the field of education that are important to be known and must be taken by all students majoring in education, one of which is Assessment and Evaluation. The Assessment and Evaluation course is an educational subject with complex material content, but it must be completed in 1 semester with a weight of 2 credits. Due to the limited time and complexity of the content of the Assessment and Evaluation course that must be taught to students, it is very appropriate and suitable if teaching materials are made in digital form, so that the teaching materials created become simpler, interactive, interesting, and easy for students to understand. It can also expedite the learning process. Besides, the presence of digital books is significant because it can also be used as blended learning material content in helping the learning process. This is consistent with several opinions of previous studies, such as Tsai, Lin and Lin [1]; Divayana, et al [2-4]; Dewi, et al [5]; and Sugiharni, et al [6]; who in principle also explained that a blended learning can run well if digital material content and adequate facilities supported it.

Based on the problems found, it is necessary to find the right solution / breakthrough to overcome them. The breakthrough used is by trying to conduct digital book experimental research for the Assessment and Evaluation subject using the Kvisoft Flipbook Maker application.

Research that has similarities and differences as a comparison with this research is the research that was conducted by Sari in 2016 regarding the development of digital books through the sigil application in the cookies and candys course [7]. Another study is research from [8] Suyasa in 2018 on “Empowering the CSE-UCLA Model in the Implementation of Evaluation of the Blended Learning Program at SMA Negeri 1 Ubud. [9] Suyasa (2018) in the international journal "Empowerment of CSE-UCLA Model Based on Glickman Quadrant Aided by Visual Application to Evaluate the Blended Learning Program on SMA Negeri 1 Ubud", [10] Suyasa (2018) in the senapati proceeding entitled "The Use of the Glickman Quadrant-Based CSE-UCLA Evaluation Model in Determining the Effectiveness of the Implementation of the Blended Learning Program at SMA Negeri 1 Ubud. [11] Suyasa (2018) Development of a digital book for assessment and evaluation subjects based on the kvisoft flipbook maker.

Based on the background, problems, related research, and other studies that have similarities and differences as a comparison with this study, the researchers are interested in taking a research topic entitled "The Effect of Digital Books Based on Kvisoft Flipbook Maker on Student Learning Outcomes". The formulation of the research problem is whether there is an influence of Digital Book Based on Kvisoft Flipbook Maker on Student Learning Outcomes.

2. Method

This study aims to determine the effect of digital books based on Kvisoft Flipbook Maker on learning outcomes. The type of research used to achieve this goal was a quasi-experiment. The experimental design used was Post-test-Only Control Group Design. The treated group is called the experimental group and the untreated group is called the control group. The design of this study is shown in Figure 1 [12].

![Figure 1. Non-Equivalent Post-test Only Control Group Design.](image-url)
Based on Figure 1, O1 is the post-test in the experimental group, O2 is the post-test in the control group, X is the Kvisoft Flipbook Maker-based Digital Book treatment.

The population of this study were all third semester students of PTI Study Program who took the Education Assessment and Evaluation courses. The research sample was taken by using random sampling technique. The determination of the experimental group and the control group was done randomly with a lottery system. The random technique with a lottery system was carried out because all classes were considered to have the same ability and opportunity to become the experimental group and the control group. Determination of 2 (two) classes as the sample in this study were randomly selected equivalent class pairs. There were 24 students in control group and 24 students in the experimental group. The instrument used in this study was a test. The test is used to obtain data on learning outcomes. Learning outcomes are the scores obtained by students in completing the post-test on the cognitive (knowledge) aspect after participating in the learning process. The aspect that is measured in the learning outcome test is the cognitive aspect.

There are assumptions that must be fulfilled in ANOVA, namely the normality test and the homogeneity test [13].

The data distribution normality test was performed using the Kolmogorov-Smirnov statistic. Testing is done by testing the statistical hypothesis as follows.

H0: the sample data comes from a normal distribution
H1: the sample data did not come from a normal distribution

The Kolmogorov-Smirnov test is carried out by calculating the absolute difference between the cumulative frequency distribution of the sample and the theoretical cumulative frequency distribution. The test criteria for data have a normal distribution if the Kolmogorov-Smirnov significance value is greater than 0.05 and if the significance value is below 0.05 the data is not normal.

To test the homogeneity of the variance between the two groups the Fisher test (F test) was used. Testing is done by testing the statistical hypothesis as follows.

H0: the variance in each group is the same (homogeneous)
H1: the variance in each group is not the same (not homogeneous)

Homogeneity test used Fisher's test (F test). The test criterion is to accept H0 at the 5% significance level (α = 0.05) if the test results indicate that Fcount <Ftable, then all variance is homogeneous.

3. Results and Discussion

The data in the experimental research carried out were the learning outcomes score of the Assessment and Learning Evaluation. The experimental research was conducted in four meetings, consisting of three times for the learning process and one meeting for the posttest conducted in the experimental and control classes. The analysis of the results showed that both groups were normal and homogeneous.

The hypothesis stated that there was a significant difference in learning outcomes between students who take lessons using Kvisoft Flipbook Maker-based digital books and students who take lessons without using Kvisoft Flipbook Maker-based digital books. Statistically, it could be formulated as follows:

a. H0: \( \mu A1Y1 = \mu A2Y1 \)
b. H1: \( \mu A1Y1 \neq \mu A2Y1 \)

Information:

\( \mu A1Y1 \) = score of students learning outcomes who take part in the lesson using Kvisoft Flipbook Maker based digital books.

\( \mu A2Y1 \) = score of students learning outcomes who take part in learning without using Kvisoft Flipbook Maker based digital books.

Hypothesis testing using ANOVA through the variance F statistic. The test criterion is if the F value is less than 0.05, the null hypothesis (H0) is rejected and accepts the alternative hypothesis (H1).
The results of the analysis with a significance of 0.000, if the level of significance was set = 0.05, the significance value was smaller than α so that F was significant. This means that Ho was rejected and failed be rejected H1 which stated that there was a difference in learning outcomes between students who took lessons using Kvisoft Flipboook Maker based digital books and students who took lessons without using Kvisoft Flipboook Maker based digital books. So, based on the results of this hypothesis test, it can be concluded that there was a significant difference in learning outcomes between students who take lessons using Kvisoft Flipboook Maker-based digital books and students who take lessons without using Kvisoft Flipboook Maker-based digital books.

The discussion of this research, namely the results of hypothesis testing, showed that the learning outcomes of students who used the Kvisoft Flipboook Maker-based Digital Book were higher than those who did not use the Kvisoft Flipboook Maker-based Digital Book. In other words, there will be a better effect if learning uses Kvisoft Flipboook Maker based digital books. Related to the score of students learning outcomes, it was known that the average students learning outcomes in the experimental group were higher than the control group. Thus, with the Kvisoft Flipboook Maker based digital book, it is able to make discussions in learning more efficient and save time. Because it is not only face-to-face but learning to use Kvisoft Flipboook Maker based digital books can be anywhere and anytime. This makes the Learning Assessment and Evaluation learning even better. This is consistent with the results of Aqidatul Izza’s [14] research which states that there is an effect of using the flipbook maker media on student learning outcomes.

4. Conclusions
Based on the results of the research and discussion previously presented, the following conclusions can be proposed, namely that there were differences in learning outcomes between students who used Kvisoft Flipboook Maker based digital books and students who did not use Kvisoft Flipboook Maker based digital books.

Based on the research results, several suggestions can be made to improve the quality of learning. The suggestions that can be presented based on the results of the research that have been carried out are as follows: (1) it is expected to implement learning using the Kvisoft Flipboook Maker-based Digital Book as an alternative to learning in the teaching and learning process in the classroom considering the Kvisoft Flipboook Maker-based Digital Book has a positive effect on students learning outcomes, (2) it is hoped that it can help socialize other lecturers to apply and try to use the Kvisoft Flipboook Maker-based Digital Book as an alternative to learning in the teaching and learning process.

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