

## Development of Based Learning Multimedia *Flipbook* on the Subject of Life Organization at SMPIT Al Multazam Kuningan

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**Abstract:** Learning patterns that only use blackboards, books, worksheets, and PowerPoint slides generally only focus on the teacher while students listen, take notes, and memorize more. This learning pattern can cause boredom and monotonous learning so students are not interested in the learning process. One effort to overcome this problem is to develop appropriate learning media such as flipbook-based learning multimedia. This research was conducted in class VII SMPIT Al Multazam Kuningan to develop flipbook-based learning multimedia. This research was conducted using the R&D (Research and Development) method which refers to the ADDIE model. The percentage of media validation scores by experts is 87% from linguists, 90% from content/material experts, and 89% from media experts. Furthermore, at the trial stage, flipbook-based learning multimedia received an assessment percentage of 89.8% for the material aspect, 87.55% for the language aspect, 88.9% for the media aspect, and 88.75% for the average percentage. These results indicate that flipbook-based learning multimedia is very feasible to be applied in the learning process.

**Keyword:** Media development, Multimedia learning, flipbook

### 1. INTRODUCTION

The 21st century is marked by the presence of the media era (*digital age*) which is very influential on the management of learning and changes in student characteristics. 21st-century learning is imperative for teachers to integrate information and communication technology, as well as the management of student-centered learning (Wijaya *et al.*, 2016). In developing 21st-century learning, teachers are required to change conventional teacher-centered learning patterns (*teacher-centered*) into student-centered learning (*student-centered*) because learning resources are abundant not only from teachers. By integrating information and communication technology into learning, teachers can create learning patterns that are varied and not monotonous (Fahyuni, 2017).

According to Faturrohman *et al.* (2011), the existence of learning media as a means of conveying messages in the learning process is a very important thing to pay attention to. Learning media has a role in explaining abstract things and showing hidden things. The ambiguity and complexity of teaching materials can be helped by presenting learning media as intermediaries for conveying information in the learning process.

Selection and use of appropriate learning media following competency objectives are very necessary. Learning media that is dominated by writing and lacks a variety of content only puts pressure on students on the rote aspect (Sabri, 2020). Multimedia-based learning *flipbook* is one of the learning media that can combine several contents such as text, animation, audio, images, and videos and is equipped with video/audio

navigation facilities, menu/link controls, and responses feedback provides opportunities for students to be able to understand concepts even deeper ([Amanullah, 2020](#)).

*Flipbook* is a learning technology that utilizes computers to display multimedia information in a concise and dynamic form ([Mulyadi & Wahyuni, 2016](#)). *Flipbook* can integrate sound (audio), graphics, images, animation, and video so that the information presented is more varied compared to conventional books or PowerPoint slides. In addition, *flipbooks* are also interactive because there are facilities such as video/audio navigation, page navigation, menu/link controls, and *respond-feedback*. These facilities can provide feedback to user so that users as communicating with *Flipbook*. With the characteristics of *flipbook* interactive and the ability to integrate various forms of content *flipbooks* can be developed into learning media to create effective learning ([Sugianto et al., 2013](#)).

According to [Sriyanti et al. \(2020\)](#) learning based on multimedia *flipbooks* can be used as an alternative for teachers in schools to improve student learning outcomes. This is in line with the opinion of [Amanullah \(2020\)](#) who states that innovation in learning is necessary to meet students' needs to make it easier to understand the material through creative, innovative, and informative learning media such as flipbooks and other multimedia.

The results of research conducted by [Safitri et al. \(2021\)](#) show that *mode* the application-based *flipbook* is effective in improving student's writing skills and students' learning independence. Whereas in research conducted by [Roemintoyo & Budiarto \(2021\)](#) stated that the use of flipbooks in the learning process had a positive impact on increasing student achievement in both terms of academic and practical. The development and use of flipbooks for science learning also have an impact on literacy students' critical thinking skills. This is shown through the results of [Susanto & Lestari \(2020\)](#) research which states that learning media-anchored-based *flipbooks* can empower critical thinking skills.

Another research was conducted by [R. Adawiyah et al. \(2019\)](#) entitled *Interactive e-book of physics to increase students' creative thinking*

*skills on rotational dynamics concept*. In this research, the interactive e-book developed has gone through a series of validations and trials and has been shaped *flipbook*. The resulting interactive e-book integrates several contents such as images, audio, video, and animation. The results of the study show that interactive e-books can improve students' creative thinking skills on the concept of dynamics of rotation in all aspects, namely fluency, originality, flexibility, and elaboration. Furthermore, [Santoso et al. \(2018\)](#) in his research "*The Effectiveness of eBook versus Printed Books in the Rural Schools in Indonesia at the Modern Learning Era*" explained that the use of e-books in learning can not only be done in urban schools but also rural schools can be applied. In this study, there was an effect of differences in teaching materials on student learning outcomes in rural schools. Students use *e-books* in learning, obtaining higher learning outcomes of 5.573 points compared to students who use printed books.

This research was conducted to develop a multimedia-based learning *flipbook* in science learning the subject matter of life organization. Organization of life is an example of science subject matter which contains abstract concepts and complex scientific terms. To teach it, appropriate and effective learning media are needed so that students can achieve their learning goals. *Flipbook* is one of the media that can be developed for use in learning. In this study, there are innovative learning features that are added in the form of flash content created using an application *adobe captivate*. This flash content is in the form of animated images and competency tests that can provide response *feedback*. This innovation is expected to make flipbook-based learning multimedia more interactive

## 2. RESEARCH METHOD

This research was conducted in class VII SMPIT Al Multazam Kuningan and refers to the ADDIE development research model. According to [Sukmadinata \(2012\)](#), The series of steps in the ADDIE model research is systematically arranged to consist of five stages, namely *analysis, Design, Development, Implementation, and evaluation*.

The sampling technique is done in a way *probability sampling*. *Probability sampling* or

probability sampling is a sampling method, in which each member of the population has the same opportunity to be selected as a member of the sample. The data collection techniques were obtained through questionnaires, media validation sheets, and observation sheets for the process of observing and recording systematically, logically, objectively, and rationally regarding various phenomena both in real situations and in artificial situations to achieve certain goals.

### 3. RESULTS AND DISCUSSION

Learning media is one of the tools for an educator to facilitate students to achieve learning goals. With the advancement and development of technology, learning media that can be applied to the learning process are more numerous and varied. [Arsyad \(2014\)](#) suggests that the use of learning media in the teaching and learning process can generate new desires and interests, generate motivation and stimulate learning activities, and even bring psychological influences on students.

Multimedia-based learning *flipbook* developed with the KVIsoft application. This application can convert pdf textbooks or doc files into an application in the form of a digital book or other terms *flipbook*. By using KVIsoft we can add and integrate other items such as pictures, music, videos, and animations in digital books that are being developed so that e-books can become

interactive learning media ([Sugianto et al., 2013](#)).

Figure 1 is an image of the initial view (front cover) *flipbook* that has been developed. cover *flipbook* designed with shades of images that symbolize the learning material that is about the organization of life. On *Flipbook* You can see the navigation buttons to move to the next page or return to the previous page. At the bottom of *flipbook*, There is also a control menu that the user can use when accessing *Flipbook*. Some of the sections contained in the control menu are as follows:

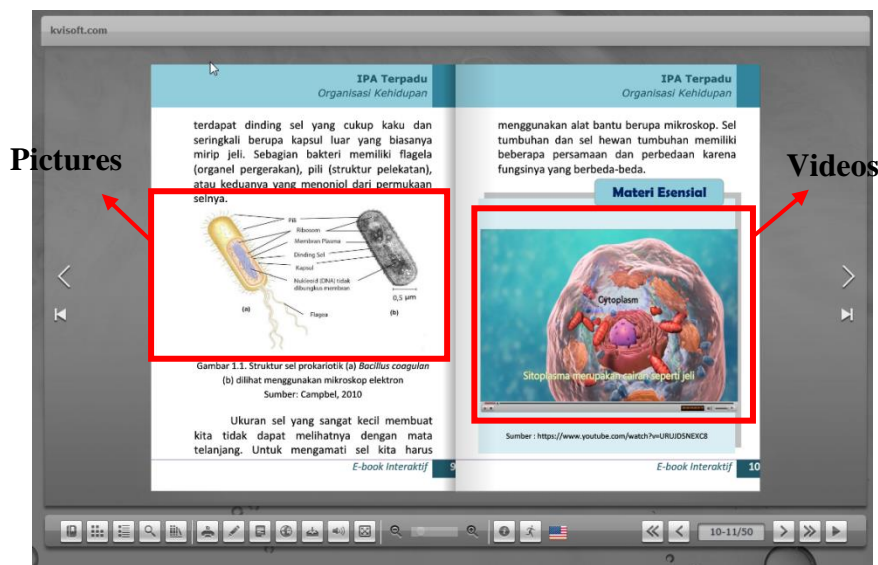
1. *Front cover and back cover*, serves to help the user move to the front page or move to the last page.
2. *Previous and next*, helps the user to open the next page or open the previous page.
3. *Full screen*, to maximize the display of the e-book into full-screen mode
4. *Son in, zoom out* function to enlarge or reduce the screen display *flipbook*
5. *Bookmarks* serve to mark a page that is considered important or interesting by *users*
6. *Text select*, functions to select the text contained in the e-book and is then able to give a color effect to the selected text
7. *Go to page*, serves to help the user to go directly to the page number you want to read
8. *Draw*, this menu has a function like a pen that can make small scribbles on *the flipbook*.



Figure 1. Flipbooks cover

The buttons on the control menu above are the facilities found in *the flipbook* which can be used by users. With these menus *flipbooks*, it can respond to the needs of users and include in the interactive learning media. This is based on the opinion of Warsita (2008) which states that interactive media is one the computer-based learning media that synergizes all media consisting of text, graphics, photos, videos,

animations, music, and narration. The most important characteristic of interactive learning media is that students do not only pay attention to presentations or objects but are able and encouraged to interact with the media while attending lessons. In addition, according to Sutopo (2012) in interactive learning media, there are 5 objects, namely text, images, animation, audio, video, and interactive links.



**Figure 2.** Flipbook pages with pictures and learning videos

Integrating learning images and videos on *the flipbook* can be seen in the picture above. Pictures and learning videos have the function to clarify learning material. On *flipbook* developed there are videos taken from other learning sources and there are also learning videos made by researchers. In

the learning video section, there is a video navigation button menu. Video navigation buttons are a set of buttons that function to control the course of the video. Through the navigation buttons, students can control the video or audio contained in *the flipbook*



**Figure 3.** Competency test contained in the flipbook

On the other page, there is a competency test regarding the learning material that has been carried out. This competency test was made by researchers by utilizing the application *adobe captivate* and then integrated into *Flipbook*. This competency test can respond in the form of a true or false statement to the answers given by students. In addition, the final part of the competency test also provides a summary of the scores and answers obtained by students.

Multimedia-based learning *flipbook* which has been developed further through the media validation stage. According to [Surjono \(2017\)](#), the

criteria used to measure the feasibility of learning media include 3 aspects, namely content, instructional, and appearance. The content aspect includes learning materials related to science material and the subject matter of life organizations. While the instructional aspects and related view *tools* and the facilities are contained in *the flipbook*. These three aspects will then be measured through media validation sheets by experts, namely by language expert validators, content/material experts, and media experts. The following is a table of media validation results.

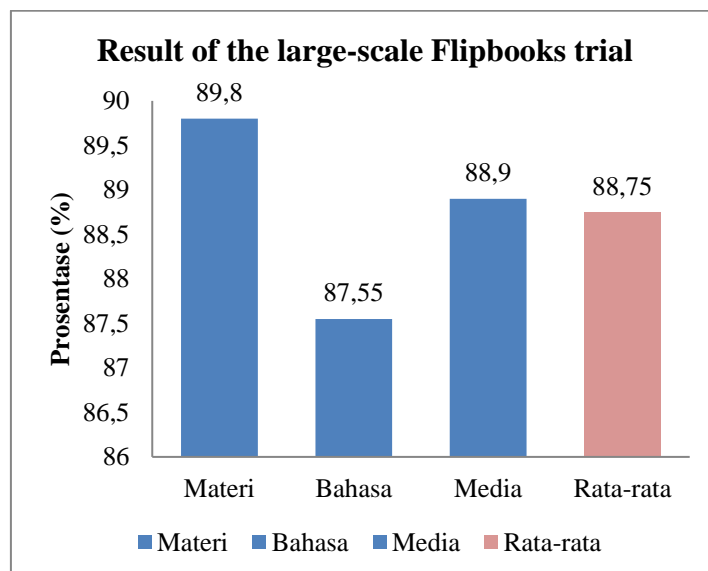
**Table 1.** Flipbook validation data

No	Validation	Percentage	Information
1	Linguist	87%	Very worth it
2	Content/material expert	90%	Very worth it
3	Members of the media	89%	Very worth it

The process of developing flipbook-based learning multimedia has gone through the stages of guidance and revision by experts. Overall the expert validator gives a very decent score for all aspects. Language expert validators give a percentage score of 87%, content/material experts 90%, and media experts 89%. The high score given by the validator shows that flipbook-based

learning multimedia can be continued at the media trial stage.

The next stage is media trials. This stage *flipbook* which has been developed and tested on 32 students aims to find out the implementation of integrating the contents in *the flipbook* and the functioning of the program in it. The following is data based on learning multimedia trials *flipbook*.



**Figure 4.** Result of the large-scale Flipbooks trial

Based on the data above, it is known that the percentage of material aspects is 89.8%, language aspects are 87.55%, and media aspects are 88.9%. The average percentage of the value given by the user is 88.75 which means the multimedia-based learning *flipbook* is very feasible to be implemented in Integrated Science learning. [Saraswati & Linda \(2019\)](#) revealed that the media can be associated as an attention grabber and keeps students engaged and focused on learning. The clarity and sequence of the material, the attractiveness of the changing appearance, and the integration of learning features such as audio, video, and animation show that *Flipbook* has the advantage as a learning medium. [Cheng et al. \(2012\)](#) in research “*The Effect of Multimedia Computer Assisted Instruction and Learning Style on Learning Achievement*”, revealed that learning that utilizes multimedia can motivate students to use a live approach and active learning. According to [Diani & Hartati \(2018\)](#) Some of the advantages of multimedia-based learning *flipbooks* among them

1. Learning attracts more students' attention so that it can foster learning motivation.
2. Learning will have a clearer meaning due to the integration of text, image, video, and animation learning facilities so that learning material can be better understood by students and allows students to master learning material better.
3. Learning methods will be more varied, not merely verbal communication through the teacher's words so that students are not bored and create interactive learning conditions.
4. Students do more activities because they not only listen to the teacher's description but also do other activities such as doing the tasks contained in the book's interactive

According to [Ramdania et al. \(2013\)](#) one of the learning media that is expected to create an interesting and conducive learning atmosphere *Flipbook*. The application of *flipbooks* in the learning process is expected to provide renewal in the learning process in class. Besides that, the use of a *flipbook* can increase student learning motivation and can also affect achievement or student learning outcomes. According to [Eka & Refirman \(2013\)](#), the

application of multimedia in the learning process has a significant impact on increasing learning outcomes and student motivation. This is in line with the opinion expressed by [Fransiska \(2020\)](#), according to students who learn to use *flipbooks* have achieved significantly better learning outcomes compared to students who study using teaching materials in the form of textbooks only. In addition, students who learn by using *flipbooks* are also motivated to review the learning that has been done to deepen their understanding of the material being taught.

#### 4. CONCLUSION

Based on the research results, a multimedia-based learning *flipbook* can be developed as a learning medium in science learning the subject matter of life organization. Data from large-scale trials show that the percentage of material aspects is 89.8%, language aspects are 87.55%, and media aspects are 88.9%. The average percentage of the value given by the user is 88.75%. These results indicate that multimedia-based learning *flipbooks* are very feasible implemented in the science learning process.

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