

# Development of a Digital Flipbook based on the Teachings of *Ki Hajar Dewantara Tri N* in Thematic Learning in Elementary School

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## ABSTRACT

This study aims to develop and determine the feasibility of a digital flipbook based on the teachings of *Ki Hajar Dewantara Tri N* in thematic learning theme 6 sub-theme 1 in grade V Elementary School. This study was conducted at *SDN Krebbe* Kulonprogo Regency, Yogyakarta Special Region. The type of study is Research and Development (R&D) with the ADDIE model. This study was conducted using analysis, design, development, implementation, and evaluation. The data collection technique uses questionnaires, interviews, observation, and documentation. The data analysis technique is qualitative descriptive. The result showed that the digital flipbook based on the teachings of *Ki Hajar Dewantara Tri N* in thematic learning of science and Indonesian content in grade V Elementary School was appropriate to be used to support the learning process theme 6 sub-theme 1 in grade V Elementary School. The feasibility of learning media was obtained from the result of expert validation, user trial, and students' response. The result of material expert validation obtained an average score of 4 which was included in the "good" criteria. The results of media validation obtained an average score of 4.52 which was included in the "very good" criteria. The product user trial (class V teacher) obtained an average score of 4.13 which was included in the "good" criteria. Meanwhile, based on the students' response questionnaire, an average score of 4.46 was obtained which included the "very good" criteria.

**Keywords:** *flipbook, Ki Hadjar Dewantara Tri N, elementary school*

## 1. INTRODUCTION

During the Covid-19 pandemic, learning in most elementary schools in Indonesia was carried out online (in a network) following government policies (Pratama, 2021: 89). Online learning causes the students to have to study independently at home and the teachers must also use appropriate learning media so that learning objectives are achieved. Sutarna (2022: 289) states that online learning causes students to have the flexibility of learning time because they can study anywhere and anytime. Many applications can be used as learning media such as *video conferences, Google classroom, WhatsApp groups*, and so on.

Learning media has many kinds, for example, print media, audio, video, multimedia, and others. In printed form, one of the learning media that is often used is a book. Printed books become a basic need as the learning media, teaching materials, and learning resources. The more use of printed books, the more trees are cut in the forest. If this continues, it will have an impact on the world's environmental conditions that are increasingly unfriendly for life, considering the forests as the lungs of the world. From this condition, it is necessary to have an alternative and an effort to save the environment as education continues to develop. An environmentally friendly education concept is needed. Environmentally friendly education can take advantage of technological aspects to reduce paper use (Danuri, 2016:2). By utilizing technology, digital books are a very good alternative to learning. One form of digital book that can be applied to elementary school children is a digital *flipbook*.

*Digital Flipbooks* have an appeal because they have a *flip effect* (back and forth) and contain text, images, sound, animation, and video. This is a solution when distance learning takes place so that students can continue to learn using books that are designed to be attractive. In addition, digital *flipbooks* can be developed according to the wisdom possessed by Indonesia, namely the teachings of the Father of National Education *Ki Hajar Dewantara "Tri N"*. In the book *Ketamansiswaan* (2014: 39), *Tri N* consists of *niteni* (noticing), *niroke*

(repeating), and *nambahi* (adding). With this teaching, students who use *digital flipbooks* are expected to be able to think creatively based on the material presented.

Online learning at SD Negeri Kreet Kulon Progo is carried out by assisting students to study through WhatsApp groups. The media that have been used are voice messages and learning videos, but the *digital flipbook*-based learning media has not been implemented. The majority of books used in learning are still in print. So that the development of a *Tri N*-based *digital flipbook* in learning is very important as a support for learning and makes it easier for teachers to convey material and students can easily learn it both at home and school. Empirically and theoretically, flipbook development is considered feasible, valid, and practical in its use. The results of Nirmala & Istianah's (2020) research show that *Flipbook* is feasible and very valid to be used as a learning media for Metamorphosis material for fourth-grade elementary school students. The results of this study are evidence that flipbooks can be applied in learning in elementary schools.

Based on the description above, a problem can be formulated, namely, how is the development and feasibility of a *digital flipbook* based on the teachings of Ki Hadjar Dewantara (*Tri N*) in thematic learning theme 6 sub-theme 1 in grade V Elementary School? The purpose of this study was to develop and determine the feasibility of a *digital flipbook* based on the teachings of Ki Hadjar Dewantara (*Tri N*) in thematic learning theme 6 sub-theme 1 in grade V Elementary School. In this study, the development of *flipbooks* was used to facilitate the thematic learning process for science and Indonesian language materials and to increase students' enthusiasm for learning based on Ki Hadjar's teachings- *Tri N*.

## 2. METHODS

This research is a Research and Development (R&D) with the ADDIE model developed by Dick and Carey (1996) but only carried out in three stages. This is due to time constraints during the Covid-19 pandemic. The stages of the ADDIE model are: *Analyze* (Analysis), *Design* (Design), and *Development* (Development) (Tegeh, 2010).

The analysis phase was carried out by collecting data and analyzing problems at SDN Kreet grade V. The data was obtained by observing and analyzing needs. At this stage, identification of basic competency standards is carried out on the material for class V semester II Theme 6: Heat and its Transfer, Sub-theme 1: Temperature and Heat.

The *design stage* begins with making a design for the media display that will be developed. At this stage, the design of the cover display, book content, and cover are designed. In addition, a validation questionnaire was also prepared that will be used to assess the *digital flipbook learning media* developed.

At the *development stage*, media validation is carried out to obtain notes on improvements to the developed media. Media validation was carried out by media experts and material experts using a questionnaire that had been prepared. After revising the product, the media created is assessed. This is done to determine the level of media feasibility.

The subjects of this study were the V grade students of SD N Kreet, totaling 17 students and 1 teacher of grade V. The object of this study was the development of *digital flipbook learning media* for thematic learning of science and Indonesian content, theme 6 heat and its transfer, sub-theme 1 temperature and heat, learning 1. This research took place at SD Negeri Kreet, Kulon Progo Regency. The research was carried out in class V even semester 2022. The study lasted for approximately five months from November 2021 to March 2022. The data collection techniques used were questionnaires, observations, and documentation.

The data analysis used is qualitative and quantitative. Qualitative data analysis was used to describe suggestions from expert lecturers. These suggestions are contained in the media expert and material expert validation questionnaire. The suggestions given by expert lecturers are used as guidelines for improving the products developed. Quantitative data analysis was used to describe the feasibility of *digital flipbooks* based on the assessment of media expert lecturers, material experts, student assessment questionnaires, and fifth-grade teachers. Then the data was analyzed quantitatively by calculating the average to determine the feasibility of the *digital flipbook media* developed.

### 3. RESULTS AND DISCUSSION

The analysis phase is carried out by observing learning and analyzing needs using a needs analysis questionnaire filled out by the teacher. Phase I observation was carried out on January 17, 2022, when the learning took place through *google meet*. Online learning is carried out in class V with *google meet* for 30 minutes then continued using *WA Groups* and assignments. Through *google meet* the teacher greets students and prepares students' conditions to be ready to take part in learning. Furthermore, using the *WA Group*, the teacher conveys the subject matter by sending text messages, voice messages, and videos. Then students listen to the material and do the assignments given by the teacher. Students collect assignments by being photographed or collected when a limited face-to-face learning schedule takes place. Phase II observation took place on January 25, 2022, when face-to-face learning was limited in class. When learning takes place face-to-face, the teacher only uses media in the form of student books. However, in the classroom, there are several learning media such as props, maps, building spaces, and pictures. Whether online or face-to-face learning is limited, generally it is fun. Students' reading ability is fluent, but reading interest is not too high. To attract interest in reading, the teacher tries to present an interesting new story equipped with pictures. The teacher also does *ice breaking* so that students can focus again and not be sleepy.

In addition to observations, a needs analysis was also carried out by giving a questionnaire to class V teachers containing questions about aspects of learning, learning media, and opinions about digital books. The results of the questionnaire revealed that the learning methods used at SD Negeri Krebet during the pandemic were online and offline. During online learning, parents support student learning by providing facilities in the form of cellphones and *mobile phones*' internet quota. Teachers use media in the form of Youtube, voice messages, and videos to be applied when learning online. When explaining science and Indonesian materials, the teacher usually uses videos and pictures. Digital books have never been applied in learning. Based on the needs analysis questionnaire, teachers also support the use of digital books in learning. Digital books that are attractively packaged and equipped with pictures will become learning media that motivate students to learn and increase student interest in reading.

At the design stage, it is carried out by taking into account the KD and indicators to be achieved. After determining the learning developed, then collecting material on temperature and heat sourced from journals and books. After the material has been collected, the next step is to design the book page and arrange the layout of the material so that it is presented in an attractive and easy-to-understand way by students. The following is a preview of the initial design that was created:

At the development stage, validation was carried out by a media expert lecturer Ardian Arief, M.Pd., and material expert Shanta Rezkita, M.Si., M.Pd. to get criticism and suggestions from the validator. The goal is to produce digital *flipbook media* that is feasible to use. Based on the results of the media expert's assessment of three aspects of the assessment, namely the display aspect which obtained an average score of 4.3, programming obtained an average score of 5, and learning obtained a score of 4.8. The results of the overall media validation obtained a total score of 14.1 and an average score of 4.7. Based on the guidelines for converting quantitative to qualitative data, the development of a digital *flipbook is* included in the "very good" criteria. However, media experts gave some suggestions to improve the product.

Based on the results of material expert validation, the material aspect obtained an average score of 4.1, the learning aspect obtained an average score of 4.8 and the *Tri N aspect* obtained a score of 3.8. The results of the overall media validation obtained an average score of 4.17. Based on the guidelines for converting quantitative to qualitative data, the development of a *flipbook digital book is* included in the "good" criteria. Material experts also provide some input to improve the product.

The assessment carried out by the fifth-grade teacher obtained a score of 17.9 with an average score of 4.47. Then converted from quantitative data to qualitative data with the category "very good". This is based on the reference listed in the score criteria table in chapter III. The assessment of digital *flipbook learning media* by fifth-grade students obtained a score of 13.37 with an average score of 4.45. Then converted from quantitative data to qualitative data with the category "very good".

Products developed through quantitative analysis show good scores and grades so that the media can be used. Qualitative analysis was obtained through expert advice and input during validation to become material

for product revision. After the product is revised according to suggestions and input, the product is final. The following is the final product view.

### 1. Display cover / front page



Figure 1. Cover/ front page

### 2. Preface Display



Figure 2. Preface

### 3. Display of Instructions for Use of Books and Table of Contents



Figure 3. Instructions for using the book and table of contents

### 4. Image List Display and Core Competencies



Figure 4. List of drawings and core competencies

5. Display of Basic Competencies and Indicators



Figure 5. Basic competencies and indicators

6. Display of Learning Objectives and Introduction to Digital Books



Figure 6. Learning objectives and book introduction

7. Material Display



Figure 7. Material

8. Display of Evaluation Questions



Figure 8. Evaluation questions

## 9. Bibliography View



Figure 9. Bibliography

## 10. Display of Compiler Profiles and Advisors and Experts



Figure 10. Profile of authors and lecturers

## 11. Back cover



Figure 11. Back cover

**Discussion**

Research on the development of digital *flipbooks* based on the teachings of Ki Hadjar Dewantara (Tri N) is an alternative solution to assist teachers in fulfilling learning media that can attract students' attention during online learning during the Covid-19 pandemic. In addition, the use of technology in the field of learning media such as digital *flipbook* plays a role in efforts to reduce paper use and is environmentally friendly.

In its implementation, this research uses the ADDIE development model which is carried out through three stages, namely analysis, design, and development. The implementation of these stages through several processes such as media validation, media validation, teacher assessment, and teacher assessment. Due to time constraints during the Covid-19 pandemic, implementation and evaluation were not carried out. So that the data used to determine eligibility are the results of questionnaires given to experts, teachers, and students.

This stage of the analysis is done by observing and analyzing needs. Based on the results of observations, it is known that learning is carried out online and offline. The media used by teachers during online learning are *google meet*, *wa groups*, voice messages, and videos. Meanwhile, when offline learning is carried out on a scheduled and limited basis, it is known that the media used are in the form of printed books, maps, pictures,

props, building spaces, and also pictures. Based on needs analysis, it is known that during online learning students learn to use gadgets and take advantage of the internet quota. When explaining science and Indonesian materials, the teacher uses videos and pictures to convey the material. It is also known that teachers need media to convey material that is packaged attractively and equipped with pictures, especially when learning online. *Flipbook* digital book that developed in this study to assist teachers in delivering science and Indonesian material in theme 6 sub-theme 1, learning 1.

A digital *flipbook* designed using the *Canva app*. After the media is designed, the product is produced using the *online flipping book application*. Nahar (2021: 63) states that an *online flipping book* is a website-based editing application for *online publication*. By using the *flipping book online* digital book development becomes easier and more interesting because it can be integrated with images and videos. Yudianto (2017: 235) states that with videos students can witness an event that cannot be witnessed directly, is dangerous, or past events that cannot be brought directly into the classroom. Students can also play back the video according to their needs and needs. Learning with video media fosters interest and motivates the students to always pay attention to lessons. The digital book developed in this study is based on the teachings of Ki Hadjar Dewantara, namely *Tri N. Niteni's* teachings are found in the reading and watching video sections. The teachings of *nirrokke* are found in the section on making mind maps and finding keywords. As well as the teaching of *adding is* found in the section on conducting experiments, rewriting information, and evaluating questions. Schools that carry out learning outside the network and within the network can use this media. This media has drawbacks because it requires an internet connection and media use is still limited for two weeks because it uses a paid application. Students and teachers can access this digital *flipbook* by clicking the link <https://online.flippingbook.com/view/214110020>

At the development stage, media validation is carried out by media experts and material experts to know the feasibility of the developed media so that it can be used in the learning process. First, validation is done by media expert validation. Then proceed with validation by material experts. Media and materials experts provide an assessment and some input so that the media is suitable for use. After analyzing the validation data from media experts, an average of 4.7 was obtained in the Very Good (SB) category. Learning media will be very good and useful when the media has good technical quality, can be used in all conditions, and has some material in it (Wahyuni, 2018:9). This learning media is interactive, so students can operate the media according to their needs. In addition, the media is developed based on the *Tri N teaching* which can be used during face-to-face learning and distance learning and makes students more active. Siregar (2018: 716) states that image media is a medium that has a good influence because its use in learning can attract attention so that students pay more attention. Furthermore, Hadi (2017: 99) states that video is an effective medium to improve the ability of elementary school students to understand concepts. This learning media, in addition to containing science and Indonesian language material for class V, theme 6, sub-theme 1, learning 1, is also combined with pictures and videos so that it is interesting and effective when used in the learning process.

Furthermore, the validation carried out by material experts also provided suggestions and inputs such as: adjusting KI and KD, adjusting indicators with objectives, making *Tri N teachings* more varied, making book introductions for students, adding questions that can measure learning objectives, adjusting colors to the *background*, and includes live videos. Material expert validation includes aspects of concept truth, material aspects, learning aspects, and aspects of *Tri N's teachings*. The average obtained from media experts is 4.17 with good criteria (B). After being validated and corrected then the media is ready to be implemented. Yuangga (2020: 55), states that good learning media must contain material so that it supports a learning atmosphere that leads to the achievement of goals. Through materials that are relevant to the learning objectives, it is hoped that the learning media for digital *flipbooks* based on the *Tri N teachings* can help teachers deliver material to students. Sujarwo (2017: 36) states that color has a stronger effect than shape and can create a higher level of attention. The developed media contains elements of color that are attractive to students so that it is expected to motivate students to learn. Furthermore, Magdalena (2020: 88) states that the evaluation aims to determine the effectiveness and efficiency of learning activities with the main indicators of learning success that has been determined. Based on this, the developed media also contains evaluation questions to determine students' abilities in achieving learning objectives.

The media assessment was carried out to obtain grades from the teacher and fifth-grade students using a questionnaire. After the students filled out the assessment questionnaire, the data obtained were analyzed, and then the average result was 4.45 in the Very Good (SB) category. The teacher's questionnaire obtained the average score of the teacher's response was 4.47 in the Very Good (SB) category. Mahnun (2012: 31) mentions that one of the criteria in choosing media is to consider the cost. The use of media that can be done *online* allows students to save on internet quota costs. In addition, using learning videos can be done without having to download them. Based on the results of the data and explanations that have been presented from various aspects, it shows that the digital *flipbook media* based on the *Tri N teachings* is feasible to use.

#### 4. CONCLUSION

The development of digital *flipbook learning media* based on the teachings of Ki Hadjar Dewantara (*Tri N*) is carried out in stages. The first stage is analysis. The analysis is done by observation and needs analysis. The second stage is a design made using the *Canva application* and assisted by the *flipping book application to produce flipbook* digital books. Then the third stage is media development, carried out by providing validation questionnaires to expert lecturers and assessment questionnaires for teachers and students. Input from experts is used for product revision, while questionnaire scores from experts, teachers, and students are used to determine the feasibility of the media that has been developed. Based on the results of research on the development of digital *flipbooks* based on the teachings of Ki Hadjar Dewantara (*Tri N*) shows that the score obtained from media experts is an average of 4.7 which is included in the Very Good (SB) criteria. Then the results of material validation get an average of 4.17 which is included in the good criteria (B). In addition, the assessment of the fifth-grade teacher obtained an average of 4.47 which is included in the Very Good (SB) criteria. The feasibility of learning media is supported by the score of the student assessment questionnaire conducted at the product assessment stage. Based on the results of student assessments obtained a value of 4.45 which includes the criteria of Very Good (SB). The score indicates that the digital *flipbook learning media* based on Ki Hadjar Dewantara's teachings is appropriate to be used to support the learning process of the 6th sub-theme 1 theme of the fifth-grade students of SD Negeri Kreet.

#### Suggestion

Research on the development of a *Tri N*-based digital *flipbook* is only limited to product validation and assessment, so for further research to carry out research according to the ADDIE model stage. In addition, it is necessary to pay attention to several things, including 1) improving the design and components of teaching materials so that they are more complete; 2) the presentation component is made better and more attractive; 3) designing teaching materials with the latest technological updates so that they are increasingly developing according to the times; 4) developing digital *flipbook media* based on *Tri N* on other materials. 5) improve sentence writing and word usage to make it easier to understand and 6) use unlimited free applications so that they can be accessed anytime with unlimited time.

#### REFERENCES

- Danuri, M. (2016). Green Campus Berbasis Teknologi Informasi. *Jurnal Ilmiah Infokam*, 12(1).
- Hadi, S. (2017). Efektivitas Penggunaan Video sebagai Media Pembelajaran untuk Siswa Sekolah Dasar. In *Seminar Nasional Teknologi Pembelajaran dan Pendidikan Dasar 2017* (96-102).
- Ketamansiswaan, T. D. (2016). *Materi Kuliah Ketamansiswaan*. Yogyakarta: Universitas Sarjanawiyata Tamansiswa.
- Magdalena, I., Fauzi, H. N., & Putri, R. (2020). Pentingnya Evaluasi dalam Pembelajaran dan Akibat Memanipulasinya. *Bintang*, 2(2), 244-257.
- Mahnun, N. (2012). Media pembelajaran (kajian terhadap langkah-langkah pemilihan media dan implementasinya dalam pembelajaran). *An-Nida'*, 37(1), 27-34.
- Nahar, H. N., Ampera Dina., & Fariyah. (2021). *Development of E-module Learning Basic Sewing Technology Based on Discovery Learning for Tenth Grade Fashion Student of Vocational High School*.
- Nirmala, N. S., & Istianah, F. (2020). Pengembangan Media Pembelajaran Flipbook Sebagai Media Belajar Pada Pembelajaran Ipa Materi Metamorfosis Kelas Iv Di Sekolah Dasar. *Jurnal Penelitian Pendidikan Guru Sekolah Dasar*, 8(1).



- Pratama, A. P. (2021). Pengaruh pembelajaran daring terhadap motivasi belajar siswa SD. *Mahaguru: jurnal pendidikan guru sekolah dasar*, 2(1), 88-95.
- Sutarna, N., Acesta, A., Cahyati, N., Giwangsa, S. F., Iskandar, D., & Harmawati, H. (2021). Dampak Pembelajaran Daring terhadap Siswa usia 5-8 tahun. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 6(1), 288-297.
- Siregar, R. (2018). Penggunaan Media Gambar Untuk Meningkatkan Hasil Belajar IPA pada Siswa Sekolah Dasar. *Suara Guru*, 3(4), 715-722.
- Sujarwo, S., & Oktaviana, R. (2017). Pengaruh Warna Terhadap Short Term Memory pada Siswa Kelas VIII SMP N 37 Palembang. *Psikis: Jurnal Psikologi Islami*, 3(1), 33-42.
- Wahyuni, I. (2018). Pemilihan Media Pembelajaran. *Artikel*, 1(1), 1-14.
- Yuangga, K. D. & Sunarsi, D. (2020). Pengembangan media dan srategi pembelajaran untuk mengatasi permasalahan pembelajaran jarak jauh di pandemi covid-19. *JGK (Jurnal Guru Kita)*, 4(3), 51-58.
- Yudianto, A. (2017). Penerapan video sebagai media pembelajaran. In: Seminar Nasional Pendidikan 2017, 09 Agustus 2017, Sukabumi.