

Effectiveness of digital module development in Pancasila education learning using the Flip PDF Professional application

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ABSTRACT

This research was motivated by the fact that the use of printed textbooks in elementary schools was not able to increase student activity, motivation, and participation. The teacher's teaching materials do not yet use Flip PDF Professional. This research aims to produce a computerized module using Flip PDF Professional as a Pancasila Education teaching application. The research method used is research and development. The type of research is research and development using 4D. This 4D model, namely: defining, designing, developing, and disseminating. The research subjects were 22 fourth-grade students at Bukit Cangang Elementary School 12, 24 students at ATTS Elementary School 14 at meeting 1 and 25 students at meeting 2, as well as 18 students at Benteng Elementary School 01 at meeting 1 and 21 students at meeting 2. The digital module was declared effective after an effectiveness test was carried out. At meeting 1 on the topic of rules at home and rules at school, students obtained a completion result with a percentage of 86% and for meeting 2, on the topic of rules in the surrounding environment, students obtained a completion result with a percentage of 88%. These results provide digital module development with effective results for use. Thus, it can also be said that the digital module that supports the Flip PDF Professional application in elementary class IV schools is very significant, very easy to use, and very useful for teaching.



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INTRODUCTION

Based on the results of observations and interviews conducted by researchers three state elementary schools cluster 1, Guguk Panjang District, starting from July 18, 2023, to July 22, 2023, at ATTS Elementary School 14, Bukit Cangang Elementary School 12 and Benteng Elementary School 01, through the process of interviewing grade IV teachers and filling out observation questionnaires on student interests. Based on the results of the observations that have been carried out, there are problems regarding learning resources, namely that learning resources using printed textbooks have not been able to increase student participation and activeness in the learning process in the classroom. The impact that occurs is that it can cause students to feel bored, less active, and have poor learning motivation. This research is important to be conducted so that the problems found in grade IV of elementary school can be resolved properly. One solution to overcome these problems

is to utilize advances in science and technology in the educational aspect, namely by developing digital modules in Pancasila Education learning in grade IV of elementary school. According to [Nurhasnah et al., \(2020\)](#) digital modules that can be developed using software such as computers, cell phones, and others are known as E-Modules. [Sintawati & Margunayasa \(2021\)](#) Asserted that the e-module is a learning innovation that can improve the completeness of learning outcomes and boost student participation in the classroom.

Computer-based learning materials can be accessed with computers, laptops, and mobile devices and can help students learn learning materials easily. According to [Wilujeng & Putri \(2020\)](#) A flipbook is a type of software that can create digital modules and improve the quality of learning in the classroom. According to [Sari & Siregar \(2022\)](#) digital modules consist of materials provided to instructors and students to be used objectively with careful consideration when using Flipbook software. One example of such a module is the Flip PDF Professional application which serves as a guide on what students can do using computers, laptops, cellphones, and other devices for digital teaching. According to [Aftiani et al., \(2020\)](#) Flip PDF Professional is an application that can import various animated media into Flipbook. According to [Belia et al., \(2022\)](#) “one of the software used is the Flip PDF Professional application. Educators can add videos, images, audio, and hyperlinks with this app. The result of the media is flipbook-shaped teaching materials. According to [Erniwati et al., \(2022\)](#) Flip PDF Corporate Edition Software is a flipbook-shaped application that can be used to create a digital module that also looks like a flipbook. According to [Nugroho et al., \(2023\)](#) PDF files can be converted into digital books using a program called Flip PDF Professional, which can be opened and closed like regular books.

Most of the previous studies that have conducted research using the Flip PDF Professional application in elementary schools in Science and Mathematics subjects as subjects that will be made in the form of digital modules ([Ibrohim, 2019](#); [Ramadhina & Pranata, 2022](#); [Yunianto, 2019](#)), this study creates a digital module using the Flip PDF Professional application in the Pancasila Education subject in the Independent Curriculum for grade IV elementary schools. The novelty of this study is a digital module of the independent curriculum in Pancasila Education learning in grade IV elementary schools. The purpose of this study is to create an innovative and creative learning environment that is pedagogical and didactic, so educators and students themselves must use imaginative and intuitive learning resources to produce a creative, innovative, and interesting learning environment, suitable for increasing motivation, participation, and activeness of students. The contribution of the research that has been done has obtained the results of the effectiveness test of the digital module in Pancasila Education learning with the material "Rules at Home, Rules at School and Rules in the Surrounding Environment" in Grade IV of Elementary School resulting in an effective digital module. This can be seen from the results of the test sheet work which shows the average percentage of student completion after using the digital module with a percentage of 87%. These results indicate that the digital module developed is effective for use in the learning process in grade IV of elementary school.

METHOD

The type of research conducted by researchers is known as Research and Development (R & D). The development model used in this study is the 4-D model. According to Thiagarajan the flow of the 4D model is to define, design, develop, and disseminate ([Lestari, 2018](#)). The first stage is to analyze basic problem determination, student analysis, concept analysis, task analysis, and learning objective analysis. The second stage is the product design and design process. The third stage is development through validity, practicality, and effectiveness tests. Validity tests by experts and product revisions are carried out based on assessments, input, and suggestions from experts. Practicality tests are by providing assessment instruments to teachers and students. Effectiveness tests are to see the effectiveness of the products that have been developed by providing pre-test and post-test questions to students at trial schools and research schools. The fourth stage is the dissemination process carried out at distribution schools so that the effectiveness of products produced are effective for use in the learning process.

Effectiveness in developing digital modules is intended to determine the level of effectiveness of the products that have been developed. The effectiveness instrument is used to collect data through pre-test and post-test questions given to students, with the aim of seeing the effectiveness of using digital modules before and after being used in the learning process.

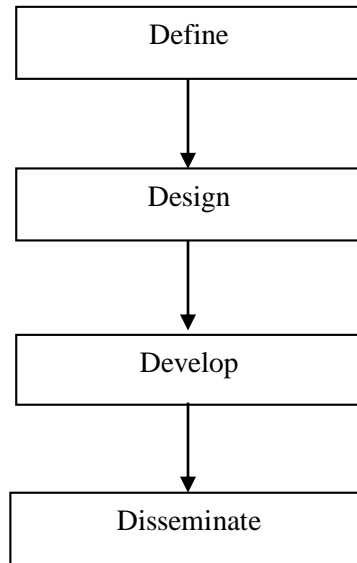


Figure 1. 4-D Model

The research Subjects were fourth-grade students at Bukit Cangang Elementary School 12, students at ATTS Elementary School 14, and students at Benteng Elementary School 01. Starting on July 18, 2023 to July 22, 2023. A detailed explanation of the research subjects can be seen in the following [Table 1](#).

Table 1. Research Subjects

No.	School Name	Information	Number of Students 1st Meeting	Number of Students Meeting 2
1	Bukit Cangang Elementary School 12	Trial School	22 Students	22 Students
2	ATTS Elementary School 14	Research School	24 Students	25 Students
3	Benteng Elementary School 01	School of Dissemination	18 Students	21 Students

This research is conducted through analysis with two types of data sources, namely Quantitative is data obtained to produce numbers. Quantitative data is obtained from student favorite questionnaire scores. Qualitative data is structured data that cannot be verified through numbers. This information is presented as a summary and analysis that is expected to be carried out by students and teachers using the prepared topic discussion framework.

The digital module that has been tested then enters the effectiveness stage. The effectiveness test is carried out to determine whether the digital module used achieves effective goals in improving the equality of the digital module. The effectiveness test instruments are described in [Table 2](#) dan [Formula 1](#).

Table 2. Interval and Frequency of Completion

No.	Interval	Frequency
1.	≥ 80	Number of Students Completed
2.	≤ 80	Number of Students Not Completed

$$\text{Percentage Completed} = \frac{\text{Number of Students who Completed}}{\text{Number of Students Present}} \times 100\% \quad (1)$$

Create a percentage of student learning outcomes completed into qualitative criteria in [Table 3](#) below.

Table 3. Percentage of Completion

No.	Interval	Criteria
1	0-39%	Very Low
2	40-59%	Low
3	60-74%	Currently
4	75-84%	Tall
5	85-100%	Very High

RESULTS AND DISCUSSION

Results

The digital module was developed based on problems found during observations in elementary schools. The problem is that the use of printed textbooks has not been fully able to increase student participation and activeness in the learning process in the classroom. The digital module that has been developed contains learning materials on the Pancasila Education subject of the independent curriculum, images, videos, and quiz links to be worked on by students, and animation designs on each page of the digital module. The first stage, namely the basic problem definition stage, is carried out through interviews with teachers and observations of students to find out and determine the problems that occur in teachers and students and determine what products are suitable to be developed in overcoming the problems faced by teachers and students, and the product developed is a digital module using the Flip PDF Professional application. In the second stage of product design, the design process is carried out by collecting teaching materials, images, videos related to the subject matter, quiz links, and animation designs on each page of the digital module that has been developed using the Flip PDF Professional application. The digital module is designed using language that is easy for students to understand and can increase student participation, motivation, and activeness.

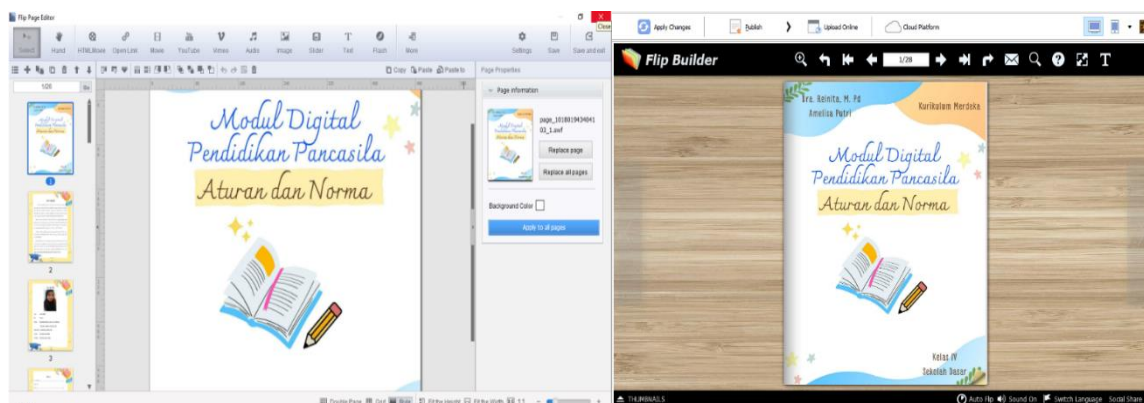


Figure 1. Page Editor Menu Display and Final Result of the Digital Module

The third stage is the digital module development stage to produce a valid, practical, and effective digital module for students to use in the learning process. The digital module development stage goes through a validity test process by experts which includes aspects of material validation, language validation, and media validation. The practicality test is carried out after the developed digital module has been validated based on the assessment of experts, by providing a practicality questionnaire to teachers and students after using the digital module and an effectiveness test by providing pre-test and post-test questions to students at trial and research schools to determine the effectiveness of the digital module. The fourth stage is the distribution of the digital module to determine the effectiveness test at the distribution school.

Analysis of Digital Module Effectiveness Test Results

The development stage includes testing the effectiveness of the product created which is carried out in trial schools and research schools.

Results of Effectiveness Tests at Trial Schools

The results of the effectiveness test on the digital module were used to determine the level of effectiveness of the digital module in class IV of Bukit Cangang Elementary School 12 which was attended by 22 students with the effectiveness of the test presented in [Table 4](#).

[Table 4](#). Effectiveness Tests at Trial Schools

No.	Meet	Before Using the Digital Module	After Using the Digital Module
1	First Meeting	41%	82%
2	Second Meeting	41%	86%

The percentage of fourth-grade students can be seen from the percentage calculation above. After using the digital module, the first meeting using the Flip PDF Professional application was 82%, with effective criteria. In the second meeting, the percentage of fourth-grade students can be seen from the percentage calculation above. After using the digital module the Flip PDF Professional application is 86%, with very effective criteria.

Results of Effectiveness Tests at Research Schools

The results of the effectiveness test of the development of digital modules were carried out to determine the level of effectiveness of the digital module in class IV of ATTS Elementary School 14 which was attended by 24 students, the results obtained are presented in [Table 5](#).

[Table 5](#). Effectiveness Tests at Research Schools

No.	Meet	Before Using the Digital Module	After Using the Digital Module
1	First Meeting	42%	88%
2	Second Meeting	44%	88%

The percentage of fourth-grade students can be seen from the percentage calculation above. After using the digital module's first meeting using the Flip PDF Professional application, the result was 88%, with very effective criteria. The percentage of fourth-grade students can be seen from the percentage calculation above. At the second meeting after using the digital module using the Flip PDF Professional application was 88%, with very effective criteria.

Results of Effectiveness Tests at Distribution Schools

The distribution stage at Benteng Elementary School 01 is a distribution school. The results of the digital module effectiveness test were carried out to determine the level of effectiveness of the digital module in class IV of Benteng Elementary School 01 which was attended by 18 students at the first meeting and 21 students at the second meeting, the results obtained are presented in [Table 6](#).

[Table 6](#). Effectiveness Tests at Distribution Schools

No.	Meet	Before Using the Digital Module	After Using the Digital Module
1	First Meeting	50%	89%
2	Second Meeting	48%	90%

The percentage of fourth-grade students who graduated from Benteng Elementary School 01 can be seen from the percentage calculation above. After using the digital module, and first meeting using the Flip PDF Professional application, the results were 89%, with very effective criteria. The percentage of fourth-grade students who graduated from Benteng Elementary School 01 can be seen from the percentage calculation above. After using the digital module second meeting using the Flip PDF Professional application, the result was 90%, with very effective criteria.

Discussion

Based on the results of the practicality test, the digital module was declared very effective for use in the learning process. Furthermore, the digital module can be used by teachers to help students understand the subject matter and can help students increase their participation, motivation, and activeness. Researchers developed digital learning media that adapt to the demands of 21st-century learning, by utilizing technological developments and developing digital modules using the Flip PDF Professional application. This digital module is packaged in the form of a PDF file, and then copied into a Word file so that when the link is pressed, it can be opened immediately and used digitally. This digital module contains material that is equipped with images, learning videos, and quiz links that can be accessed by students and displays attractive colored animation designs on each page. This digital module also uses language that is easy for students to understand.

This finding strengthens the research that has been conducted (Sahamudin et al., 2022), stating that digital modules are materials to help students in the learning process. There are several weaknesses in printed modules. In particular, it is less interesting for students to learn in the classroom, and also cannot display learning videos. The use of digital module materials is one way to overcome the shortcomings of printed modules. At the elementary school level, good learning can use text or module teaching materials. Modules are a type of material used to help students learn subjects in more depth. According to Wahyuni & Puspari (2017), modules are made in sentences that are easy for students to understand based on their knowledge and maturity so that they can progress freely based on the educator's journey.

One form of effort in making innovations to improve the learning process in the classroom is by using digital modules using the Flip PDF Professional application. According to Parapat & Sagala (2022), one benefit of using Flip PDF Professional is that it's quite accessible and allows you to include images, audio, and video in the module that needs to be created. According to Putri & Wijayati (2022) HTML5, EXE, Zip, Mac application, FBR, mobile type, mobile, tablet, and CD are the outputs. Meanwhile, according to Yudianto (2019) There are advantages to Flip PDF Professional, including: (1) Creating a flipbook that can be flipped like a book will produce interesting interactions. (2) In the flipbook section, interactive learning materials such as flash animations or videos are available. (3) Digital modules are a set of materials used to create materials that describe media visually. According to Rahmawati, et al., (2012) it is envisaged that students would find it simple to comprehend the information in order to successfully meet the learning objectives thanks to the benefits offered by the Flip PDF Professional program.

CONCLUSION

The results of the effectiveness test of digital modules in Pancasila Education learning produced a very effective digital module. This can be seen from the results of the test sheet which showed an average of 88% of the percentage of student completion after using the digital module. Furthermore, with the digital module using the Flip PDF Professional application, it is hoped that it can become a useful digital module for students in the learning process as well as for other researchers so that the digital module using the Flip PDF Professional application that has been developed can be a reference for other researchers to develop other digital modules.

REFERENCES

- Aftiani, R. Y., Khairinal, & Suratno. (2020). Pengembangan media pembelajaran e-book berbasis Flip PDF Professional untuk meningkatkan kemandirian belajar dan minat belajar siswa pada mata pelajaran ekonomi siswa kelas X IIS 1 SMA Negeri 2 Kota Sungai Penuh. *Jurnal Manajemen Pendidikan dan Ilmu Sosial*, 2(1), 458–470. <https://doi.org/10.38035/jmpis.v2i1.583>
- Belia, G., Murtono, Utaminingsih, S., & Pratama, H. (2022). Analysis of e-module needs with the Flip PDF Professional application for Integers. *ICCCM Journal of Social Sciences and Humanities*, 1(1), 8–15. <https://doi.org/10.53797/icccmjssh.v1i1.2.2022>

- Erniwati, Hunaidah, Nurhidayat, R., & Fayanto, S. (2022). The testing of e-module Flip-PDF corporate to support learning: Study of interests and learning outcomes. *JET: Journal of Education Technology*, 6(4), 586–597. <https://doi.org/10.23887/jet.v6i4.43857>
- Ibrohim, S. (2019). *Pengembangan elekonik modul menggunakan aplikasi 3D page Flip Profesional pada tema ekisistem untuk kelas V SD/MI*. UIN Raden Intan Lampung. <http://repository.radenintan.ac.id/5550/>
- Lestari, N. (2018). Prosedural mengadopsi model 4D dari Thiagarajan suatu studi pengembangan LKM bioteknologi menggunakan model PBL bagi mahasiswa. *Jurnal Teknologi*, 1(1), 56–65. https://ejurnal.undana.ac.id/index.php/jurnal_teknologi/article/view/1170
- Nugroho, M. R., Sumardjoko, B., & Fathoni, A. (2023). Development of science learning e-modules using the Flip PDF application. *Jurnal Paedagogy*, 10(2), 525–535. <https://doi.org/10.33394/jp.v10i2.7130>
- Nurhasnah, Kasmita, W., Aswirna, P., & Abshary, F. I. (2020). Developing physics e-module using “Construct 2” to support students’ independent learning skills. *THABIEA: Journal of Natural Science Teaching*, 3(2), 79–94. <https://doi.org/10.21043/thabiea.v3i2.8048>
- Parapat, W. S., & Sagala, P. N. (2022). Development of interactive e-modules using Flip PDF Professional based on a contextual approach to building flat side space materials. *Indonesian Journal of Multidisciplinary Science*, 1(8), 849–872. <https://doi.org/10.55324/ijoms.v1i8.151>
- Putri, D. D., & Wijayati, P. H. (2022). Digitizing lehrwerkanalyse materials with the Flip PDF Professional application. *Randwick International of Education and Linguistics Science Journal*, 3(3), 504–513. <https://doi.org/10.47175/rielsj.v3i3.538>
- Rahmawati, F., Indrawati, I., & Handayani, R. D. (2012). Penerapan model teaching with analogies (TWA) dalam pembelajaran fisika di MA. *Jurnal Pembelajaran Fisika*, 1(2), 192–199. <https://doi.org/10.19184/jpf.v1i2.23158>
- Ramadhina, S. R., & Pranata, K. (2022). Pengembangan e-modul berbasis aplikasi Flipbook di sekolah dasar. *Jurnal Basicedu*, 6(4), 7265–7274. <https://doi.org/10.31004/basicedu.v6i4.3470>
- Sahamudin, Bachri, B. S., & Arianto, F. (2022). Pengembangan modul pembelajaran konsep kewargaan digital untuk meningkatkan kemandirian belajar dan hasil belajar siswa kelas x di SMK Pembangunan Surabaya. *Jurnal Ilmiah Mandala Education*, 8(2), 1553–1565. <https://doi.org/10.58258/jime.v8i2.3254>
- Sari, D. M., & Siregar, N. (2022). Pengembangan modul digital menggunakan desain pembelajaran ELPSA untuk meningkatkan pemahaman konsep siswa. *JKPM: Jurnal Kajian Pendidikan Matematika*, 7(2), 321–336. <https://doi.org/10.30998/jkpm.v7i2.13606>
- Sintawati, N. P., & Margunayasa, I. G. (2021). Interactive e-module for science learning content: Validity and feasibility. *International Journal of Elementary Education*, 5(1), 19–29. <https://doi.org/10.23887/ijee.v5i1.34281>
- Wahyuni, H. I., & Puspari, D. (2017). Pengembangan modul pembelajaran berbasis kurikulum 2013 kompetensi dasar mengemukakan daftar urutan kepangkatan dan mengemukakan peraturan cuti. *JPEKA: Jurnal Pendidikan Ekonomi, Manajemen dan Keuangan*, 1(1), 54–68. <https://doi.org/10.26740/jpeka.v1n1.p54-68>
- Wilujeng, I., & Putri, T. S. Y. (2020). Development of SETS e-module integrated with POE model for science learning. *EST: Journal of Educational Science and Technology*, 6(3), 252–264. <https://doi.org/10.26858/est.v1i1.14735>
- Yunianto, T. (2019). *Pengembangan media pembelajaran berbasis Flip Builder pada meteri bangun datar kelas IV SD/MI*. UIN Raden Intan Lampung. <http://repository.radenintan.ac.id/6784/>