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DEVELOPMENT OF INTERACTIVE DIGITAL MODULES ON FLAT BUILDING SPACE MATERIALS FOR CLASS IV STUDENTS

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Abstract

Interactive digital modules for broad flat wake materials for grade IV students are motivated by, the variety of use of teaching materials, especially in mathematics learning in Kepuh Kiriman Elementary School 1. Interactive digital modules can be used to learn independently because students get feedback (scores) directly. The purpose of this research is to describe the process of developing interactive digital modules on broad flat wake materials for grade IV students and know their feasibility. This research uses a type of development research or commonly known as Research and Development (R&D). Using the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). However, it is limited to the Analysis, Design and Development stage. Data collection methods use questionnaires and documentation. Development research instruments used to assess the feasibility of interaktif digital modules are in the form of product feasibility questionnaires. Data analysis techniques use descriptive data analysis techniques for product processing and quantitative analysis to determine product feasibility. The results of this research are products of development results through three stages, namely Analysis (needs analysis, student analysis, content analysis / material), Design (the stage used to create an interactive digital module content framework) and Development (in the form of product development results.

Key woards: Digital module, interactive, spacious flat wake

INTRODUCTION

Information and communication technology (ICT) exists very commonly in various aspects of life. According to Hidayat (2019), Rachmadtullah, dkk (2020), and Saputra, dkk (2021) technology and information have fundamentally changed procedures and practices in all forms of business in government and business. The use of technology and information in the field of education is suitable for use, so that learning is student-centered. The role of technology and information in education is an important role, because technology will continue to grow and develop rapidly. The rapid development of technology has a great influence on the world of education. The encouragement that teachers demand to do learning is like digital literacy. The use of digital technology in learning is defined as a system that encourages learning that is active, innovative, and creative, and allows for long-distance communication between teachers and students or vice versa.

In Nana's opinion, (2019) digital learning or what is usually referred to as E-Learning is defined as a learning system that uses electronic devices as a learning medium. E-learning is expected to be able to change new strategies in the current learning process. E-learning has many benefits, such as being able to cope with students who are passive in learning and the availability of unlimited learning resources.

Munir (2017) and Yustitia, dkk (2021) said that digital learning is not limited to time, distance, and place, but

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digital learning can be done synchronously or synchronously. The use of learning variations in digital learning is very important, such as the use of interactive digital modules so that students do not get bored in carrying out learning activities at home (Kusmaharti, 2020; Atmojo, S. E. 2022).

However, based on the results of observations made by researchers, there is still a lack of use of module variations in learning. The learning carried out only uses makeshift learning module materials. Virtual face-to-face learning activities are carried out once a week, then students are given assignments to complete one module and given time to complete the assigned tasks, then collected in the space provided. If learning is carried out like this, learning is less effective for students, then a digital module is needed to support learning activities. According to Alperi (2019) and Kusmaharti (2022) the reason for the need for a digital module is that with the module students are able to learn independently with the ability of students to observe and solve the problems packaged in the module with their abilities.

This is reinforced by the following expert opinion, research conducted by Kana Puspita (2021) with the title Development of Basic Chemistry Praticum E-Module Using Canva Design Application. This study stated that based on the test results, the use of Canva as an e-module received a positive response. With the e-module, it can increase knowledge at the time of learning even in pandemic conditions. Researchers hope that the use of the canva design e-module can help other educators prepare teaching materials in facing the pandemic crisis in the future.

Research conducted by Admelia, (2022) with the title Effectiveness of using the Canva application in making Hypercontent Interactive Learning Modules in Al Ikhwan Elementary School. This study states that based on the results of trials the use of digital modules using canva is very effectively used by elementary school teachers. Because Canva has many advantages and is easy to use. Hence making the learning atmosphere interactive and fun. Research conducted by Wilujeng, Aji, & Yasa, (2021) with the title Development of E Digital Canva-Based Modules on the Benefits of Animals for Humans Grade 3 Elementary School Students researchers stated that the digital modules developed using are very effective and practical to use in learning so as to be able to increase students' interest in the learning activities carried out.

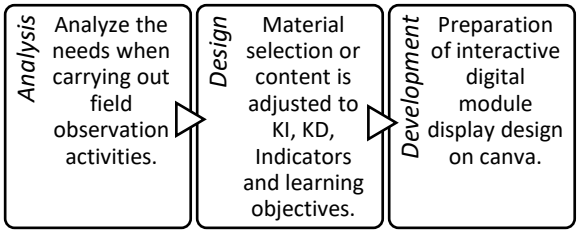
Therefore, researchers offers the canva solution is one of the web sites that is appropriate to use in developing inetarktive digital modules. Because Canva according to Enterprise, (2021) is a website, a very popular application that is used for the field of brand building and graphic design and is offered for free. Canva can be used anytime and anywhere. We can get the Canva application through google play, web site, and app store. Various features have been provided by Canva that we can take advantage of for the attractive and inetarktive appearance design that we will use. Many advantages can be utilized. Such as creating designs using various templates, hyperlinks, animations, gifts, fonts and can upload audio, photos, videos, links, and so on. .

According to Putri Diana, (2021) said that using Canva, it can make it easier for us to save time, and for educators it can make it easier to design learning components such as media and even e-modules. With Canva, it can make it easier for students to master the teaching material because canva can display presentations with text, video, audio, animation, images, graphics according to the desired appearance and can make students more focused on understanding the lesson with a more attractive appearance.

METHOD

Research and development (R&D) using the ADDIE development model. In Setyosari, (2020) the ADDIE model consists of several stages of learning design, namely Analysis (analysis), Design (design), Development (development), Implementation (implementation) and Evaluation (evaluation), but in this research the development stage is limited to the development stage due to limited research time.

The research procedure for the development of the interactive digital module only comes to three stagesn more details can be seen in the following figure:



RESULTS AND DISCUSSION

The results of this study are to describe the stages of development of the ADDIE model, but are limited to the *Analysis*, *Design and Development stages,* as follows:

1. Analisis

At the stage of needs analysis Lack of variation in the use of teaching materials used in learning. At SDN Kepuh Kiriman 1, they conduct virtual face-to-face learning once a week because they get complaints from parents. Student was given the task of completing a learning module consisting of several materials and collected representatives of parents in the space provided. So that makes learning seem less meaningful.

At the stage of the analysis students according to Evi Sandri, (2021) there is a lack of interest of students in mathematics learning, because mathematics is one of the subjects that students consider difficult. Because students complete tasks in one lesson, it makes it difficult for students to understand concepts, formulas and solve problems in mathematics learning.

At the content / material analysis stage , namely using mathematics subjects, the material is broadly built flat square and rectangular class IV / semester2. Researchers refocused indicktors and learning objectives in accordance with core competencies and basic competencies in the annual mathematics program of SDN Kepuh Kiriman 1. Below are the indicators and learning objectives that have been developed:

Table 1. Basic Competencies and Indicators

Basic Competencies	
3.2	Describes and determines the circumference and area of the square area, the prersegi of length, and the triangle and the relationship of the power of two to the root.
	3.2.1 Formulate the area of square and rectangular areas. (P4)
4.2	Solving problems relating to the circumference and area of square, square, and triangle areas includes involving the rank of two with the root of the rank of two.
	4.2.1 Solves problems related to square and rectangular area. (C4)

Table 2. Learning objectives

Learning Objectives
After observing the interactive digital module of the material area of the square flat build and perrectangle : 1. Students can correctly formulate the area of squares and rectangles. 2. Students are able to correctly solve problems related to the area of squares and rectangles.

2. Desain

At the product design stage the researcher determines the contents and

materials to be used in the interactive digital module. The interactive digital module design is equipped with *a cover*, how to use the module, foreword, *Home* (table of contents), materials, quizzes, and glossary. Here is the appearance of the interactive digital module *cover* :

Figure 1. Module cover display

The *cover display of* the interactive digital module includes, the author's name, title, and user goals. While below is continued with the menu or table of contents contained in the interactive digital module.

Figure 2. Module table of contents view

On the table of contents display the interactive digital module includes, foreword; book identity (core competencies, basic competencies, learning indicators and objectives); the material consists of apperceptions, learning videos, rectangular and square flat building area materials, as well as question exercises; quizzes, and glossaries.

3. *Development*

Researchers developed an interactive digital module using *canva*. Here are the stages of its development:

The first step, open *google* to enter the *canva web site.*

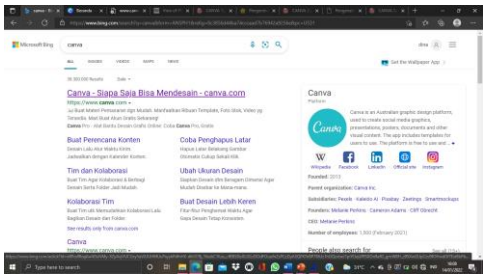


Figure 3. Screenshoot website link *canva*

The second step, *log in* or *sig up* using *email* or *facebook.* Then you will enter the *canva* homepage and be treated to various editing services. Then click the "presentation for mobile" menu on the Canva menu. for the design of a digital module with a size of 1080 x 1920 piks.

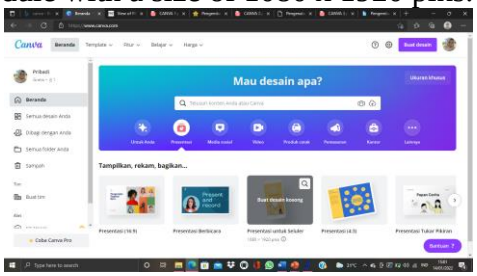


Figure 4. Screenshoot canva homepage

The third step, select the display design of the "Template" menu module.

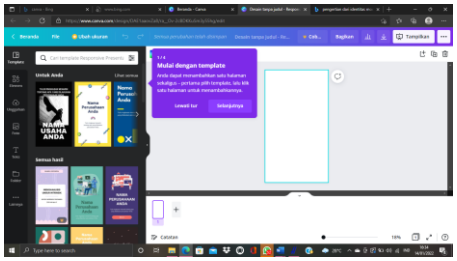


Figure 5. Screenshoot display module template

The fourth step, design the module according to the needs (content / material) needed. On the *Canva* menu, there are various features that can be used for free. Such as elements, uploads (images, videos, audio), text, styles (logo-making features), audio, video, backgrounds, embeds (adding links to modules), and more.

The fifth step is to design an interactive digital module by utilizing the features contained in *Canva* according to the material and needs. To add a new page click "+" add the page located in the next design corner.

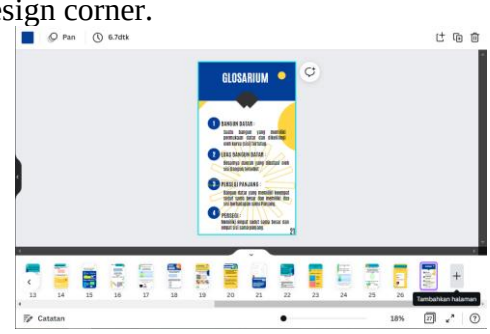


Figure 6. Screenshoot how to add a new page

The sixth step, to create an interactive quiz. By clicking the "pin" feature on *the Canva menu*, then paste the quiz link that has been created on "paste web link", then click "add to *design"*

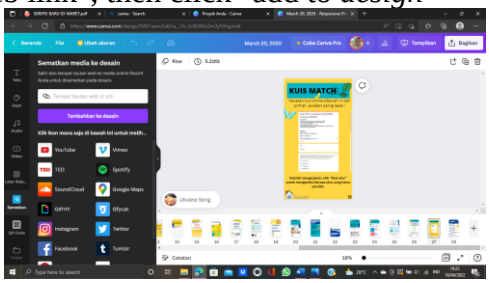


Figure 7. Screenshoot how to create an interactive quiz

The last step, after the digital module design is complete, here's how to share the link so that students can use the interactive digital module by clicking "copy link". After that the link can be shared via *whatapps* or others.

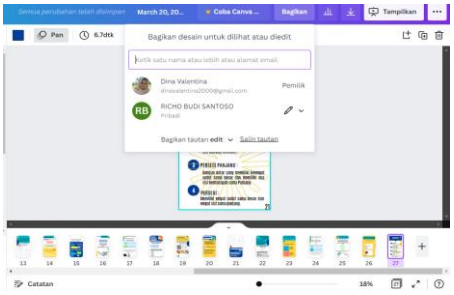


Figure 8. Screenshoot how to share a link

The development of interactive digital modules on flat building broad materials for grade IV students has benefits that can support distance learning activities so that it can make students not easily bored when participating in learning activities, because digital modules have an attractive appearance. This is reinforced by the results of research conducted by Kana Puspita,(2021) with the title Development of Basic Chemistry Praticum E-Modules Using the Canva Design Application. Proven to get a positive response. With the existence of e-modules that utilize *Canva*, it can support learning activities even in the Covid-19 pandemic.

CONCLUSION

Based on the product development process of interactive digital modules on broad material flat builds for grade IV students. The interactive digital module is developed using the ADDIE model development stage which is limited to three stages, namely *Analysis, Design, Development.*

1. *Analysis,* at this stage uses three stages, namely, needs analysis, student analysis, and content / material analysis.
2. *Design*, at this stage the researcher determines the design of the contents on the digital module. Includes cover, instructions for use, foreword, home

(table of contents), materials, quizzes, and glossary.

3. *Development*, at this stage researchers developed a module design on *canva.*

REFERENCES

Admelia, M., Farhana, N., Agustiana, S. S., Fitri, A. I., & Nurmalia, L. (2022). Efektifitas penggunaan aplikasi Canva dalam pembuatan modul pembelajaran interaktif Hypercontent di Sekolah DasarAl Ikhwa. *Kacanegara Jurnal Pengabdian Pada Masyarakat*, 186.

Alperi, M. (2019). Peran Bahan Ajar Digital Sigil dalam Mempersiapakan Kemandirian Belajar Peserta Didik. *Jurnal TEKNODIK*, 101.

Atmojo, S. E. (2022). The Effectiveness Of Virtual Laboratory Assisted Online Science Learning On The Scientific Character Of Elementary School Teachers Candidate. *Edukatif: Jurnal Ilmu Pendidikan*, *4*(3), 4948-4955.

Enterprise, J. (2021). *Desain Grafis dengan Canva.* Jakarta: PT. Gramedia .

Kana Puspita, M. N. (2021). Pengembangan E-modul Praktikum Kimia Dasar Menggunakan Aplikasi Canva Design. *Jurnal IPA dan Pembelajaran IPA*, 158.

Kusmaharti, D. (2020). Efektivitas online learning terhadap kemampuan pemecahan masalah matematika mahasiswa. *Journal of Medives: Journal of Mathematics Education IKIP Veteran Semarang*, *4*(2), 311-318.

Kusmaharti, D. (2022). Problem-Based Learning Digital Module Assistance Of Numeration of Prospective Elementary School Teachers. *Elementary School: Jurnal Pendidikan dan Pembelajaran ke-SD-an*, *9*(1), 24-27.

Munir. (2017). *Pembelajaran Digital.* Bandung: Alfabeta.

Nana, E. S. (2019). Pengembangan Inovasi Pembelajaran Digital Menggunakan Model Blended POE2WE di Era Revolusi Industri 4.0. *Prosiding SNFA (Seminar Nasional Fisika dan Aplikasinya)*, 83.

Hidayat, Nandang. (2019). Pemanfaatan Teknologi Digital Dalam Kegiatan Pembelajaran. *Jurnal Pendidikan & Pengajaran Guru Sekolah Dasar*, 10.

Putri Diana, P. J. (2021). Pengembangan Materi Ajar Dasar Listrik dan Elektronika Berbasis Canva di SMK Negeri 5 Padang. *Jurnal Vocational Teknik Elektronika dan Informatika*, 33.

Rachmadtullah, R., Yustitia, V., Setiawan, B., Fanny, A. M., Pramulia, P., Susiloningsih, W., ... & Ardhian, T. (2020). The challenge of elementary school teachers to encounter superior generation in the 4.0 industrial revolution: Study literature. *International Journal of Scientific & Technology Research*, *9*(4), 1879-1882.

Saputra, N., Tobing, M. T., & Ili, L. (2021). Strategi Pembelajaran Daring Sebagai Alternatif Proses Aktivitas Belajar Siswa SD Di Masa Covid-19. *NATURALISTIC: Jurnal Kajian Penelitian Pendidikan dan Pembelajaran*, *5*(2b), 911-920.

Wilujeng, I. W., Aji, S. D., & Yasa, A. D. (2021). Pengembangan E Modul Berbasis Canva Digital Tentang Manfaat Hewan Bagi Manusia Siswa Kelas 3 Sekolah Dasar. *Seminar Nasioanal PGSD UNIKAMA*, 261-270.

Yustitia, V., Fanny, A. M., Kusmaharti, D., & Setiawan, B. (2021). Aplikasi Pembelajaran Tematik Berbasis TIK: PPM Bagi Guru SD Hang Tuah X Sedati. Manggali; Vol 1 No 2 (2021): ManggaliDO-10.31331/Manggali. V1i2. 1692.