

Development E- module Based on Flipbook for Increase Ability Students in Learning Layout Cikatri Makeup

Anik Maghfiroh¹, Ade Novi Nurul Ihsani¹, Okta Purnawirawan², Godham Eko Saputro¹,
Mia Hafizah Tumangger¹, Indah Indi Afifah¹

¹Universitas Negeri Semarang, Indonesia

²Universitas Brawijaya, Indonesia

*Corresponding Author: anikmaghfiroh@mail.unnes.ac.id

Abstract

Education in the digital era demands increased digital integration in the world of education. This requires innovative learning media that can increase student engagement and achievement. However, this condition also presents challenges and demands for educators to have the ability to integrate information technology interactively during the learning process, so that learning objectives can be achieved optimally. Therefore, learning media are needed that support the learning process both classically and independently. This study aims to develop a flipbook-based e-module as an interactive learning tool for the Makeup course in the Beauty Education Study Program, Semarang State University. This study uses the Research and Development R&D (Research and Development) approach with the ADDIE model, which consists of five stages: analyze, design, development, implementation, and evaluation. Data collection was carried out through interviews, observation sheets, and tests. The validation results using the observation sheet showed an average score of 87.33%, while validation by material experts obtained an average score of 90.66%. Both results indicate that the developed e-module is valid and very feasible to use. The trial using the one group pretest-posttest model resulted in an average pretest score of 58.4% and an average posttest score of 86%. Meanwhile, the results of the student questionnaire showed that the use of the flipbook-based e-module obtained an average score of 77%, which is included in the very feasible category. Based on the results of the validation, trial, and student responses, it can be concluded that the developed flipbook-based e-module meets the criteria of being very valid and feasible to use as a supporting medium in a directed and effective learning process.

Keywords: E-module, Flipbook, Make-up

INTRODUCTION

Education is a very important thing For done, matter This because of education No only practice attitude And skills but Also practice student For think critical and creative with push individual For always develop potential within himself, so that participant educate capable face change knowledge existing education and technology. Teachers, curriculum, facilities and infrastructure, evaluation, and utilization technology is components important that interact during the learning process (Ramadhani, 2023). Learning Alone is a process for help participant educate in get knowledge with well, therefore That needed capable educator determine the right learning strategy in accordance with interest participant educate so that can the occurrence of a conducive learning process (Yasyfi et al., 2024).

Development technology in the digital era has bring change significant in various aspect life, including in the world of education. Digital transformation drives institution education For utilise technology information optimally in the learning process (Sari, 2019). One of the demands in the world of education moment This is existence integration digital technology that is not only support smooth learning process teach, but also be able to increase engagement and results Study participant educate. In the context of learning vocational, such as in the Beauty Education Study Program, the use of appropriate learning media is very important. For support skills practice student.

One of problems faced by the institution education that is selection of learning media that has not been in accordance And often time cause atmosphere Study Which nature monoton so that make it difficult participant educate in accept information provided (Zainuddin, 2019). The impact from progress means technology, information and communication that makes generation young own habit tend more often

interact with world virtual or Internet, Of course just matter This give influence to existence book text from schools and modules that start abandoned. According to Randa (2023) the factors that make participant educate No fond of read book text and modules print is form physique visible book boring, with existence use media electronic can give benefit for student For make process learning more interesting, interactive as well as can done Where only and when just so that can increase quality learning. Responding matter said, teachers need to do innovation through technology with prepare appropriate teaching materials and learning media For studied by participants educate in a way active and efficient (Widiana, 2020).

Instructional Media become one of component important in system education, things This because of learning media functioning as something that is attempted For understood by participants educate (Rohmaniah, 2023). With Thus, it can understood that the role of teachers in Arranging learning media is very crucial success of learning process participant educate. Educator can strive for matter the with looking for learning media that can help creativity in teach through development education with utilise technology information and communication, one of them that is do development of learning media from module print become module based on electronic or E-Module (Rani, 2023). E- module is form development from module print presented in digital format and can accessed through device electronic like computer, tablet, or smartphone. E- module designed For support learning independent with serve material in a way systematic, interactive, and interesting. Different from module conventional, e- module often equipped with multimedia features such as images, videos, animations and links interactive that allows user interact direct with content learning (Rahmadani, 2021). E- module flipbook based is one of the e- module form interactive presenting appearance resemble book print However in a digital format that allows reader turn over page virtually. View This give a nuance that is both familiar and modern, as well as increase Power pull user to material learning. Flipbooks can also be integrated with learning multimedia such as audio, video, and animation, so that capable increase motivation Study as well as effectiveness delivery material (Sungkono, 2019). E- module flipbook based becomes one of the solution innovative in development of learning media. Flipbook has visual excellence that resembles book print, but served in an interactive and easy digital format accessed When only. This media rated capable increase motivation Study student as well as give experience learn more fun and effective (Awwaliyah, 2021).

Up course is one of the eye college that requires understanding theoretical at a time ability good practice. In addition according to (Setyowati, 2024) Make- up is one of eye studying practice in the Beauty Education Study Program which provides student with knowledge and skills in do technique make up face in a way professional. Courses This covers material about analysis form face, selection product cosmetics, techniques basic makeup application to corrective makeup, as well as understanding about aesthetics and ethics in make up face. Therefore That requires interactive and interesting learning media. For facilitate the learning process in a way comprehensive, good in activity classical and also independent. One of the learning media used For learning namely E- module flipbook -based (Julian, 2024).

Through study this, developed an e- module flipbook based designed special For support learning in the eyes Makeup Course. Research This aiming For know feasibility and effectiveness of e- modules the in increase ability students, good from aspect knowledge and also skills. It is expected that the results from development This can become contribution real in enrich source relevant digital learning with need learning in the modern era.

METHOD

Types of Research

This research is a *Research and Development (R&D) development study aimed at producing flipbook-based E-module learning media products and testing their validity, feasibility, and effectiveness in learning on Cikatri's make-up material*. The development model used is the ADDIE model, which is a framework for designing, developing, and evaluating the development of flipbook-based e-module learning media. This approach was chosen because ADDIE provides a structured and flexible flow, making it suitable for the development of technology-based learning media that requires continuous evaluation and improvement.

Development Model Used

Models used in research and development is ADDIE through 5 stages that is *Analysis, design, development, implementation, and evaluation*. This model general used in development of learning media and has proven support achievement objective learning in a way effective and efficient (Kazanidis, 2022). The flow of stages in the DDIE model seen in Figure 1 below :



Figure 1. Stages of the ADDIE development model

Steps Development

a. Analysis

At the stage This conducted to identify learning needs and student characteristics. Activities at the *analysis stage* in the form of analysis location research, analysis performance, analysis participants, analysis facts, concepts, principles and procedures material learning as well as analysis objective learning. Based on the results of observations, learning the material of cikatri facial makeup still uses lecture methods and media such as powerpoint slides. The results of the interview showed that students had difficulty understanding the steps of cikatri facial makeup in an applied manner due to limited visualization in the learning media used. This information is a basic needs analysis in the development of flipbook -based e-module learning media.

b. Design

At the *design stage*, the aim is to design the content and structure of learning media. The activity begins with mapping of Basic Competencies (KD) and Learning Objectives (TP), followed by the stages making *flow chart*, compile component content, And development product beginning with help application *canva* in order to compile material which is then exported to in *Hyzine Flipbooks* for display E- module can seen like book original However shaped electronics.

c. Development

At the stage *development* module Which Already made Then can rated by validator through instrument Which has prepared and ready approved by the instrument validator. E- module validation carried out by 3 media experts and experts 3 person material. E- module based on *flipbook* Which has in revision in accordance with criticism And suggestion Which given by validator, furthermore packed in form link.

d. Implementation

Stage *implementation*, involving the trial of e- module learning media flipbook based to student For know convenience use and its impact to results Study. Kazanidis (2022) in his research emphasize the importance of testing learning media For to obtain bait come back from user (response test) user) before done evaluation and revision. Stage This done with testing learning media to 75 students use *pre-experimental designs (nondesigns)* with experimental models *one group pretest-posttest design* through giving question test in the form of *pretest* and *posttest*. The questionnaire was filled out to determine the understanding of the material, ease of use and its impact on the learning outcomes of student participants.

e. Evaluation

The last stage, namely *evaluation*, aims to evaluate the quality and effectiveness of the *flipbook -based e-module learning media* as a whole. Evaluation is carried out in two forms, namely formative evaluation (during the design and development process) and summative evaluation (after implementation). The data analyzed covers results validation expert, response students, as well as improvement score *pretest* and *posttest*. Based on the evaluation results, a final revision was made to perfect the *flipbook -based e-model media*.

Subjects and Location of Research

Activity process development of e- module learning media based on *flipbook* This carried out at the level college high in students Beauty education study program that takes eye makeup course. Subject study in accordance with context material namely facial make-up cicatri as many as 75 students. The research location is in the Beauty Education Study Program Faculty of Engineering, Semarang State University.

RESULTS AND DISCUSSION

Module results based on *flipbook* on material makeup. E-module developed designed with use application with add video tutorial and quiz as evaluation learning. E-module based on flipbook Which has arranged by researcher, Then done test validity by validator expert media and experts material. As for the results validation aiming For improve media based on input from experts so that the product worthy For used. Analysis results validation by media experts on E- module development based on *flipbook* is presented in Table 1 below.

Table 1. Results Validation Media			
	Validator 1	Validator 2	Validator 3
Validation Value	89%	92%	81%
Average	87.33%		
category	Very Worth to use		

Source : Researchers, 2025

The data above show that average percentage score E- module media eligibility based on *flipbook* from three indicator among them aspect appearance, aspect programming, And aspect utility get mark presentation by 87.33%, can concluded E- module based on *flipbook* own category very worthy For used as a learning medium.

Validation Results by 3 experts material to E- module development based on *flipbook* is presented in Table 2. as following.

Table 2. Results Validation Material			
	Validator 1	Validator 2	Validator 3
Validation Value	92%	90%	90%
Average	90.66%		
category	Very Worth to use		

Source : Researchers, 2025

The data above show that average percentage score from third validator as big as 90.66% with thus material on E- module based on *flipbook* presented through a number of aspect among them aspect contextual, content and presentation in accordance with input and suggestions from expert material own very worthy category used. Result data validation user through trial questions on make- up material For see results understanding students, The results of the *pretest* and *posttest* data obtained from student with using the *One group pretest-posttest design* model as described in table 3 below.

Table 3. Results <i>Pretest</i> And <i>Posttest</i>					
Class	<i>Pre-test</i>			<i>Post test</i>	
	Mark Lowest	Mark Highest	Mean	Mark Lowest	Mark Highest
Experiment	25	81	58.4	73	84

Source : Researchers, 2025

The data above show that the *pre-test* data to obtain mark lowest 25, value highest 81 with an average of 58.4. While For *post test* data acquisition mark lowest 73 and value highest 84 with an average score of 86. With using the questionnaire instrument provided to student aiming For to obtain evaluation to E- module usage based on *flipbook* on makeup material.

Response data student obtained with give questionnaire response student after finish all over activity learning. As for the response data student can seen in Table 4 below.

Table 4. Results Questionnaire Response Student			
Indicator	Average indicator	Total	Category
Material	73%	77%	Worthy of used
Visual	78%		
Language	80%		

Source : Researchers, 2025

The data above show results calculation from third indicators used in questionnaire. Based on percentage questionnaire obtained an average of 77% with category worthy For used as media learning in the form of E- modules *flipbook* based.

Discussion

Development technology in the digital era has bring change significant in various aspect life, including in the world of education. Digital transformation drives institution education For utilise technology information optimally in the learning process. One of demands in the world of education moment This is existence integration digital technology that is not only support smooth learning process teach, but also be able to increase engagement and results Study participant educate. In the context of learning vocational, such as in the Beauty Education Study Program, the use of appropriate learning media is very important. For

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Learning media is very important success of learning process participant educate. Educator can strive for matter the with looking for learning media that can help creativity in teach through development education with utilise technology information and communication, one of them that is do development of learning media from module print become module based on electronic or E-Module. E- module that is made in study This namely the e- module presented in digital form can accessed through device like computers, smartphones and tablets. E- modules This No only can used at the time learning on campus but also can accessed For Study in a way independent when outside campus. In line with matter the, so study This Revelation with study previously Which carried out by Anzil et al., (2021) with develop E- module interactive use Canva app. In addition to being able to create fun learning, E - modules can also help student through activity Study in a way independent with utilise technology.

Study by Hikmah (2021) explains that media learning based on E- module can increase motivation Study during the learning process in progress in a way independent. And e- modules be one of material teach Which arranged with effective and systematic Good from aspect content, language and benefits. This study contributes to filling the gap by providing empirical evidence on how interactive electronic learning media can be used effectively to improve theoretical knowledge and practical competence of students in the beauty education study program. From a broader perspective, the successful implementation of *flipbook- based electronic media* shows the importance of implementing a systematic instructional design model such as ADDIE in developing educational technology products. Careful analysis, iterative design, and validation processes are key to ensuring that the final product of the flipbook-based e-module is feasible to use to meet the needs and objectives to achieve maximum learning outcomes and is able to give support in increase results Study student.

CONCLUSION

Based on results and Discussion about development of E- module learning media flipbook based on eyes make up lecture on make up material cikatri, data was obtained that response student towards learning media This reaching an average of over 70%. This is indicates that the e- module learning media developed based on flipbook in the learning process capable give support in increase results Study students. In addition, after the learning process done with using e- module learning media this, there is improvement mark student with an average value above 80%. This result show that the e- module learning media based on *flipbook* used contribute in a way positive to improvement understanding and achievement academic students. With Thus, it can concluded that use of e- module learning media based on *flipbook* play a role in increase effectiveness of the learning process, so that student more easy understand the material taught and obtained results learn more Good and the learning process walk in a way effective and efficient.

REFERENCES

- Anzil, Thohir, M. A. (2022). Pengembangan E-Modul Interaktif Heyzine Flipbook Berbasis Scientific Materi Siklus Air. Sekolah Dasar: Kajian Teori, 31(2), 112.
- Anwar, L. (2021). Implementation of an Interactive E-Module to Improve Concept Understanding of Students. 513, 78–84.
- Awwaliyah, H. S., Rahayu, R., & Muhlisin, A. (2021). Pengembangan e-modul berbasis flipbook untuk meningkatkan motivasi belajar siswa SMP tema cahaya. Indonesian Journal of Natural Science Education (IJNSE), 4(2), 516-523.
- Hikmah. (2021). Interactive E-Module Development in Multimedia Learning. ISHLAH: Jurnal Pendidikan, 13(3), 2293–2300.
- Julian, F., & Miaz, Y. (2024). Interactive Electronic Learning A Technology- Based Approach with Flip PDF Professional. Jurnal Pedagogi dan Pembelajaran, 7(3), 447-456.
- Kazanidis, I. (2022). A Comparative Study of the ADDIE Instructional Design Model in Distance Education.

1–20.

- Nana D. (2023). Pengembangan E-Modul Interaktif Berbasis Model Pembelajaran Menggunakan Flipbook Maker Pada Materi Gelombang. *Jurnal Kumparan Fisika*, 6(2), 107–118.
- Randa, G., & Mahartika, I. (2023). Prototype Produk Media Pembelajaran E-Modul Stoikiometri Berbasis Teknik Mnemonik Akrostik. *Journal Of Social Science Research*, 3(5), 3473–3485.
- Rahmadhani, S., & Efronia, Y. (2021). Penggunaan e-modul di sekolah menengah kejuruan pada mata pelajaran simulasi digital. *Jurnal Vokasi Informatika*, 6-11.
- Ramadhani, Y., Kharnolis, M., Kesejahteraan Keluarga, P., Teknik, F., Negeri, U., Ketintang, S. J., Gayungan, K., Surabaya, K., & Timur, J. (2023). Pengembangan Media E-Modul Pembuatan Busana Rumah Dengan Sistem Industri Di Kelas Xi Tata Busana Smk Dharma Wanita Gresik. *Ejournal.Unesa.Ac.Id*, 12, 26–37.
- Rani, A. E., Supiani, T., & Putra, Z. E. F. F. (2023). Articulate Storyline Based E-module on Facial Makeup Materials. 3, 98-105.
- Rohmaniah, S. V. (2023). Pengembangan E-Modul Berbasis Problem Based Learning Bermuatan Pendidikan Karakter Pada.
- Sari, I. (2019). Development of E-Module Based on Problem Based Learning on Heat to Improve Student's Science Process Skill. *The Turkish Online Journal of Educational Technology* –, 17(3), 26–36.
- Setyowati, E., & Afandi, B. A. T. (2024). Efektivitas Media Pembelajaran Berbasis Video Tutorial Mata Kuliah Rias Fantasi pada Mahasiswa Pendidikan Tata Kecantikan. *Beauty and Beauty Health Education*, 13(1), 1-10.
- Sugiyono. (2019). *Metode Penelitian dan Pengembangan (Research and Development)*. Bandung: Alfabeta.
- Sungkono. (2019). Pengembangan media flipbook sebagai alternatif pembelajaran interaktif di era digital. *Jurnal Teknologi Pendidikan*, 20(2), 115–124.
- Widiana, (2020). Pengembangan E-Modul Berbasis Flipbook Maker pada Mata Pelajaran Teknologi Perkantoran. *Edukatif : Jurnal Ilmu Pendidikan*, 3(6), 3728–3739.
- Yasifi, (2019). Efektivitas Media Pembelajaran Berbasis Video Tutorial Mata Kuliah Rias Fantasi Pada Mahasiswa Pendidikan Tata Kecantikan. 13(1), 1–10.
- Zainudin. (2018). Pengembangan modul elektronik (e-modul) interaktif pada mata pelajaran Kimia kelas XI SMA. *Jurnal Inovasi Teknologi Pendidikan*, 5(2), 180–191.