

Development of an Interactive Digital Book Based on Problem Based Learning to Improve Students' Performing Arts Management Skills in Pg Paud Edutainment Courses

Elya Siska Anggraini¹, Aman Simaremare², D. Simatupang³, Dwi Septi Anjas Wulan⁴

{elyasiskaanggraini@unimed.ac.id¹, tuansimare@unimed.ac.id²,
dorlincsimatupang@unimed.ac.id³, dwiseptianjaswulan@unimed.ac.id⁴ }

Teaching at Early Childhood Education Department, Faculty of Education, Medan State University, Medan–North Sumatra, Indonesia 20221¹, Teaching at Early Childhood Education Department, Faculty of Education, Medan State University, Medan–North Sumatra, Indonesia 20221², Teaching at Early Childhood Education Department, Faculty of Education, Medan State University, Medan–North Sumatra, Indonesia 20221³, Teaching at Early Childhood Education Department, Faculty of Education, Medan State University, Medan–North Sumatra, Indonesia 20221⁴

Abstract. This research began with the absence of digital interactive books that facilitate students in improving students' learning skills and independence. Thus, this research aims to (1) develop digital interactive books for Edutainment courses; (2) Testing the suitability level of digital interactive books as edutainment learning media; and (3) The validation or assessment process from media experts, material experts is a critical step in evaluating the quality and effectiveness of educational tools like digital learning materials, language experts on problem based learning media to improve the performing arts management skills of PG PAUD students. The method employed in this research is Research and Development (R&D), utilizing the ADDIE development model, which comprises five stages: Analysis, Design, Development, Implementation, and Evaluation. However, this research was conducted only up to the fourth stage, which is Implementation. Validation was conducted by the KDBK Lecture Team, the Media Expert Lecturer Team, and the Edutainment Language Expert Lecturer Team. Additionally, the developed materials were tested by students from the Early Childhood Education Teacher Education Study Program at Medan State University. Validation data for interactive digital book products was collected using a validation sheet instrument, while data on entertainment arts management skills was collected using an instrument in the form of a multiple choice test via Google form which was inserted into the interactive digital book product. Overall, The results of the validation test for the material aspect indicated a "Good" category, with a total score of 88 and an average value of 4.4. In contrast, the validation for the media aspect was categorized as "Very Good," with a score of 94 and an average value of 4.7. Therefore, the development of this Problem-Based Learning (PBL) Interactive Digital Book is deemed feasible for use as a learning medium and an independent learning resource, particularly in enhancing students' performing arts management skills in the Edutainment course at the Early Childhood Education Teacher Education Program (PG PAUD).

Keywords: Edutainment, Interactive Digital Books, PBL, Skills.

1 Introduction

The rapid advancement of science and technology in the 21st century is closely linked to the sophistication of electronic components, which play a crucial role in the progress of information technology. Therefore, educators need to have an obligation to equip students with attitudes, knowledge, skills, and learning independence so that in the future students can solve and answer every problem that arises due to the challenges of the times. The skill of searching and finding problem information is an important factor to support effective and efficient learning (Sinurat et al., 2017). Thus, one of the digital learning resources that can be used to train this skill is an electronic book or known as a digital book. In addition, digital books can be a source of learning (Raihan & Ahmadi, 2018).

Interactive Digital Books, also referred to as Interactive Digital Modules, are educational tools that include materials, methods, limitations of learning content, instructions for learning activities, exercises, and evaluation methods. These elements are systematically and attractively designed to achieve the desired competencies and promote independent learning (Hamdani, 2011). Digital books that incorporate problem-based learning in edutainment courses positively influence the resolution of edutainment challenges. They enable educators to design learning experiences that seamlessly blend educational and entertaining content, ensuring that learning activities are enjoyable and engaging. In edutainment learning, effective learning can be carried out if the mood of students is in a pleasant, happy condition, then the students will automatically play an active role in the learning process. Therefore, educators need to have an obligation to equip students with attitudes, knowledge, skills, and learning independence so that in the future students can solve and answer every problem that arises due to the challenges of the times. Therefore, increasing the use of learning media needs to be done so that the quality of graduates with the established competency standards is in accordance with expectations, namely designing edutainment activities in learning and performance activities as a forum for students to train their skills in managing a performance event for teachers, students, and pre-school students.

Problems can arise in edutainment if the performance activity is carried out without proper preparation, without an appropriate concept, unstructured, and not considering several things that can happen outside the plan that should be, so that efficient communication is needed between the event organizer and the artists or participants who will take part in the performance or performing arts competition held. According to Scott M. Cutlip, Allen H. Center & Glen M. Broom (in Kusuma, 2016) that management functions to create and maintain good and useful bonds between the organization and the community that will affect the success or failure of the organization.

2 Method

The type of research utilized is Research and Development (R&D). R&D is a method of study aimed at producing specific products and testing the effectiveness of those products. The model used for developing the learning media is the ADDIE model. The ADDIE development model consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. (Sugiyono, 2014).

3 Result

Products developed is interactive digital book based on problem based learning through applications using the Kvisoft Flipbook Maker application which can be accessed via Android devices or laptops/computers . Display material in the application Kvisoft Flipbook Maker includes : (1) Installation Loading Screen Application, (2) Front Page Display, (3) Display of Application Menu Materials and Features, (4) Display of Design Link Materials Activities and Practice Questions, (5) Practice Question Display , and (6) Practice Question Value Display. Digital books have been designed with a more complete system in the form of implemented applications using programming languages. The next stage involves applying the media products to users (students). The first step is to install the products, enabling students to use and operate them independently in their learning process.

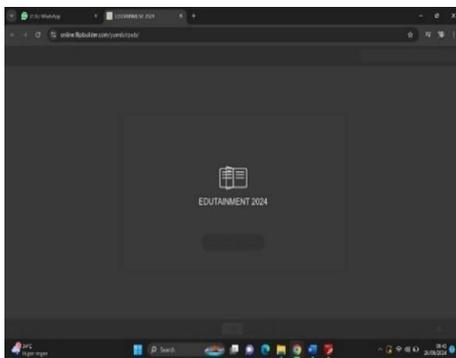


Fig. 1. Installation Loading View Image Application

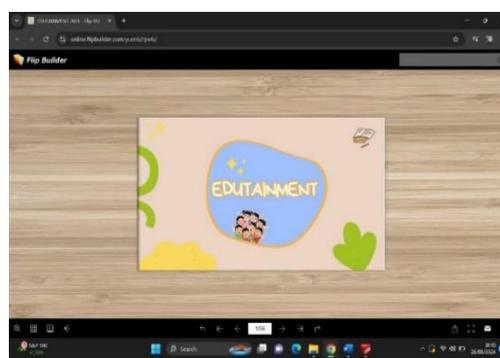


Fig. 2. Front Page View

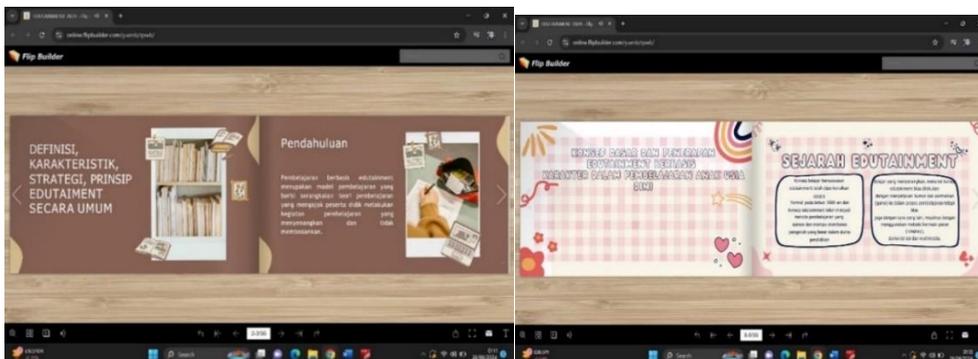


Fig. 3. Display of Application Menu Materials and Features

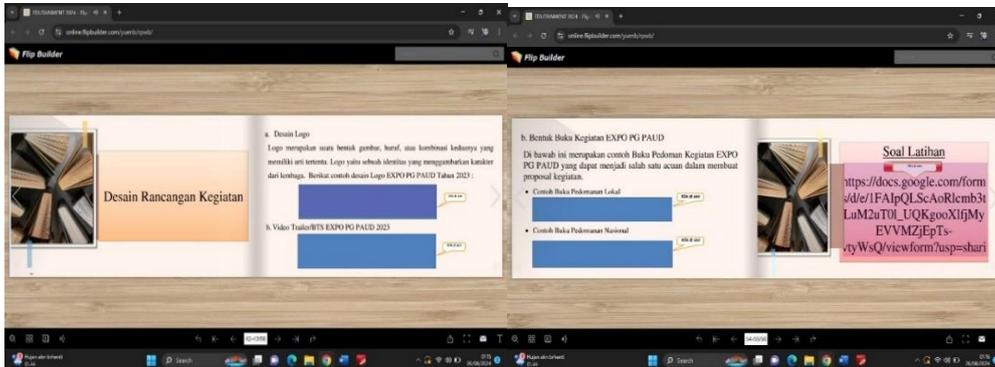


Fig. 4. Design Link Material View Activities and Practice Questions

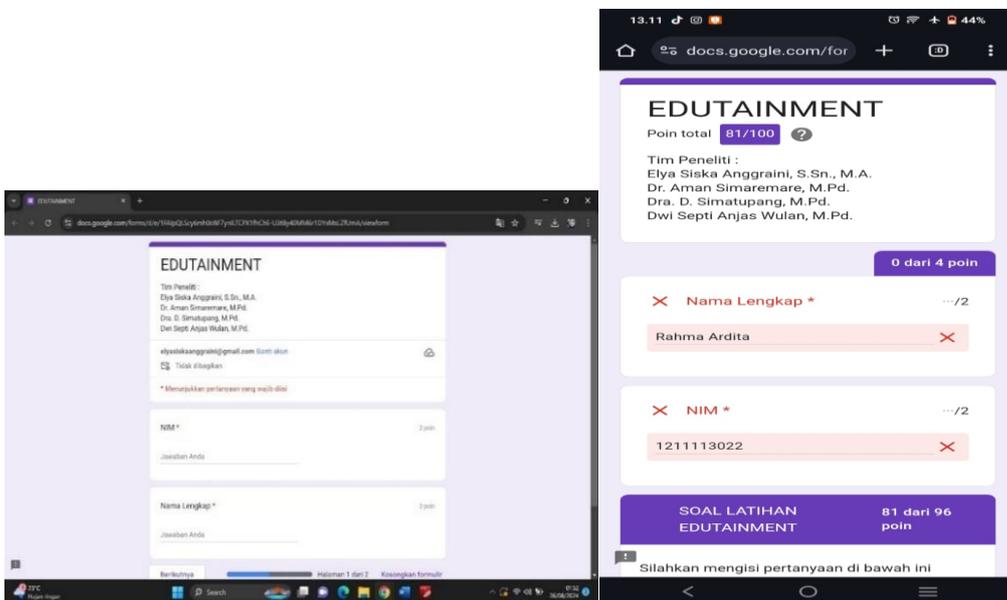


Fig. 5. Practice Questions

Fig. 6. Display mark exercise question

The next stage involves applying the media products to users (students). First, the products need to be installed so that they can be used and operated independently in their learning process. Additionally, Material Experts and Media Experts will conduct testing and validation of the learning media application, focusing on problem-based learning within the Edutainment lecture subject. Input from media expert, expert materials, and users will be revised in accordance with the advice given in the media application.

The figure displays two Microsoft Excel spreadsheets side-by-side, both titled 'Daftar Hasil Ujian Akhir Mata Kuliah Pendidikan...'. The left spreadsheet shows a list of trial sessions with columns for 'Transkripsi', 'Nama Lengkap', 'NIM', 'Kelas', 'Poin', and 'Tempat'. The right spreadsheet shows a similar list with columns for 'Nama Lengkap', 'NIM', 'Kelas', 'Poin', and 'Tempat'.

Fig. 7. Trial Attendance List

The figure displays four screenshots of a Flip Builder online trial session. The top-left screenshot shows a slide titled "EDUTAINMENT" with a cartoon illustration of children. The top-right screenshot shows a slide titled "KONSEP MANAJEMEN PERTUNJUKAN" with a cartoon illustration of a chef. The bottom-left screenshot shows a slide titled "Desain Rancangan Kegiatan" with a cartoon illustration of a person. The bottom-right screenshot shows a registration form for the trial session, with fields for "Nama Lengkap" and "NIM".

Fig. 8. Implementation Online Trial



Fig. 9. Documentation Trials Application

Table 1. Outcomes of Material Expert Validation.

Aspects that were evaluated.	Score
Learning	
1. The alignment of the material with competency-based standards.	4
2. Clarity in formulating learning objectives.	4
3. Conformity between material and indicators achievement competence	4
4. The connection between KD (Competency Standards), indicators, the presented material, and evaluation.	4
5. Clarity of language used in the materials.	4
6. Presentation structured and systematic material	5
7. Interestingly the material presented	4
Complete material flow conformity	4
9. Conformity between the concept of practice questions and the material	5
10. Clarity in instruction workmanship question	4
Convenience understand understanding channel material with the language used	4
Media capabilities in increase Spirit study student	5
Media capabilities in increase knowledge student	5
Contents	

1. Compatibility between learning materials with competence base	5
2. Compliance material with Achievement Indicators	4
3. Suitability of the material to learning objectives	5
4. Clarity in delivering the material	5
5. Systematics in the presentation of the material	4
6. Compliance Question Variations with material	5
7. Compliance visual display with the material presented	4
Amount Score Max	100
Amount Score	88
Average evaluation = number of scores obtained / number of aspects	4.4

Based on Table 1, the results of the material validation of the interactive digital book in education by the validator indicate that the material developed for the learning media falls into the "Good" category, with a total score of 88 out of a possible 100. This average score was then converted into a 1-5 Likert scale, yielding a value of 4.4 out of 5. From these data, it can be concluded that the material from the developed learning media is classified as "Good," and therefore, this learning media is ready for testing.

Table 2. Results of Media Expert Validation.

Aspects that were evaluated.	Score
Quality Content/Material	
1. Veracity of information	5
2. Accuracy of material (Accuracy)	5
3. Balance in presentation ideas	4
4. Compliance with details levels	4
Learning	
1. Learning activities (Activities)	5
2. Clarity objective learning and alignment with goal achievement (Alignment among learning goals)	5
3. Characteristics participant educate	4

4. Evaluation (Assessment)	4
Bait come back And Adaptation	
The learning content model can receive feedback and be adapted to different types of students.	5
Motivation	
The capabilities of the media in encourage desire know student	5
Ability to improve student knowledge	5
Media capabilities in Motivate student in increase understanding student	5
Design Display/Presentation	
The images presented are attractive, and are equipped with visual and audio information to enhance learning.	5
Interaction Use	
1. Ease of interactive touch and drag functions	5
2. Maintainable media	5
3. convenience in operating learning media	5
Accessibility	
1. Easy-to-access interactive digital media applications	5
2. Design format and control presentation that accommodates student needs	4
Reusability	
The ability of interactive digital books to be used in various learning methods and to be accessed by students with different needs	5
Fulfil Standard	
Adherence to international standards and specifications	4
The Maximum Score	100
The Total Score	94
Average Evaluation = number of scores obtained / number of aspects	4, 7

In Table 2, the validation results for effective communication learning media created with Kvisoft Flipbook Maker are categorized as "Very Good," receiving a total score of 94 out of a maximum of 100 from the learning media validator. This score translates to an average of 4.7

on a Likert scale of 1 to 5. Based on these findings, it can be concluded that the interactive digital books developed are valid, making them suitable for testing with users, specifically students.

4 Conclusion

The study on the development of instructional media in edutainment within the Early Childhood Education Department, Faculty of Education, Medan State University, focused on creating interactive digital books based on problem-based learning. This initiative aims to enhance students' performing arts management skills in the Edutainment course of PG PAUD and was successfully implemented using the Kvisoft Flipbook Maker application. Evaluations from material expert validators yielded a total score of 88, which corresponds to an average rating of 4.4, categorized as "Good." Similarly, assessments by media experts resulted in a total score of 94, averaging 4.7, placing it in the "Very Good" category. Thus, the development of these interactive digital books is deemed suitable as a learning media and an independent study resource for students.

References

- [1] Hamdani. 2011. Teaching and Learning Strategies. Bandung: Pustaka Setia.
- [2] Kusumah, Rr. Chusnu Sharifah Diah. (2016). Module Management Events. Module. Yogyakarta: University Country Yogyakarta.
- [3] Raihan, S., & Ahmadi, F. (2018). Development of Scientific Learning E-Book Using 3D Pageflip Professional Program . 7 (1), 7–14.
- [4] Sinurat , YC, Zulharman & Amtarina, R. (2017). Skill Patterns Literacy Information in the Problem-Based Learning Process for Students at the Faculty of Medical Riau University. Student Online Journal (JOM) Field Medicine , 4 (2), 1-12.
- [5] Sugiyono. (2014). Open Library - Method Study Quantitative, Qualitative And R&D. Alfabet