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Development of an E-Module for Art Performance Based on Integrated Learning at SMAN 1 Jatibarang

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Abstract

The research aims to develop a Project-Based Learning (PjBL)-based art performance learning module integrated with History, Language, Economics, Informatics, as well as Craft and Entrepreneurship subjects. The method employed is Research and Development (R&D) using the ADDIE development model, which consists of the analysis, design, development, implementation, and evaluation stages. The development subjects are Grade XII students at SMA Negeri 1 Jatibarang. Data collection instruments include interview sheets, observation sheets, questionnaires, student worksheets, expert validation sheets, and documentation. Data analysis is conducted using descriptive statistical analysis techniques. The module development is designed to enhance students' collaborative skills, creativity, and interdisciplinary understanding. The module validation is carried out by subject matter experts, media experts, and peers, with limited trials conducted on students. The findings indicate that the developed module meets validity and effectiveness criteria based on expert assessments and positive student responses. The development of the art performance module is expected to serve as an innovative learning alternative that supports the Merdeka Curriculum.

Keywords: Module Development, Integrated Learning, Art Performance.

Introduction

One form of learning activity in Cultural Arts is art performance. Art performances have great potential to support the integration and strengthening of character. These activities train students in cognitive, affective, and psychomotor aspects, as well as provide ample space for students to express themselves, collaborate, and create meaningful works.

The selection of teaching methods and learning resources is a crucial aspect that educators must consider. The learning resources currently used in schools consist of textbooks and student worksheets (LKS). However, their content is incomplete in covering all the processes required in art performance activities. The presentation of the material is less engaging and not relevant to the students' conditions, resulting in inefficient and ineffective learning processes. Therefore, appropriate steps are needed to make learning efficient and effective by encouraging educators' creativity in planning and implementing instruction. One of the learning resources that can support this process is a module.

In order for a learning process to improve learning outcomes, it needs to be supported by an appropriate learning guide. A learning guide is necessary because the face-to-face duration in the classroom is very limited compared to the volume of material that must be covered. A learning guide that enables increased student learning outcomes and prioritizes active student independence is

an e-module (N. S. Herawati & Muhtadi, 2018, p. 182).

The integrated learning approach implemented through the Project Based Learning (PjBL) model offers an innovative solution for arts education. Students do not merely study art as a separate subject but also connect it with other subjects, such as incorporating local cultural history themes as the background story for performances, utilizing digital devices for art production, and managing budgets and promotional strategies from the perspectives of economics and entrepreneurship subjects. The project-based learning model holds great potential to create a more engaging and meaningful learning experience for students (Rati et al., 2017, p. 62).

In the context of art performances, the project-based approach enables students to develop essential managerial and organizational skills. Collaboration between educators and students is also a vital element in this approach. Educators act as facilitators who provide guidance and support, while students are given opportunities to take initiative and responsibility. This collaboration fosters a dynamic and participatory learning environment that can enhance student motivation and performance.

Based on the explanation above, the researcher developed an electronic-based learning module (e-module) for art performances by integrating subjects such as History, Language, Entrepreneurship (PKWU), Economics, and Informatics. It is expected that this integrated approach will enable art performance activities to be conducted optimally and provide meaningful learning experiences tailored to students' needs, talents, and interests.

Method

Research Design

The research method employed in this study is Research and Development (R&D) using the ADDIE design model. ADDIE is a model developed from instructional design frameworks to help establish a theoretical foundation for learning design. The ADDIE development model consists of five stages: analysis, design, development, implementation, and evaluation (Krisna et al., 2024, p. 6). The ADDIE model is well-suited for module development, and previous studies have shown that development using the ADDIE approach can produce high-quality learning products (Dynasty, 2024, p. 31).

The researcher chose the ADDIE model because it is considered easy to implement, with clear and structured stages throughout its execution. ADDIE was developed as an innovative learning model because it provides a systematic, effective, and efficient learning process packaged within step-by-step instructional procedures. It is one of the learning models that can be used as a guideline to deliver systematic, effective, and efficient learning processes (Arief & Sofrayani, 2022, pp. 75–76). The product resulting from this research is an e-module for art performance learning.

Research Procedure

1. Analysis
- Performance Analysis

The researcher conducted a preliminary study or observation at several senior high schools in Brebes Regency, which only use limited learning resources and media in delivering Cultural Arts lessons in the classroom. The analysis of potentials and learning problems was carried out based on interviews with primary sources, namely Cultural Arts educators at SMAN 1 Jatibarang, regarding the use of learning resources, particularly modules, and examining learning outcomes, learning objectives, the scope of materials related to art performance management, and the production process of art performances.

- Needs Analysis

The subsequent analysis involved identifying students' needs regarding learning resources during the learning process, as well as the availability of supporting tools used to facilitate learning. Based on initial observations and interviews

with several twelfth-grade students, it was found that students showed less interest in learning due to limited learning resources. Available learning resources in the school consist of Cultural Arts textbooks and student worksheets containing concise material and practice questions. Educators tend to focus primarily on developing students' skills.

2. Design

At this stage, the researcher designed the development of the module based on the results of the previous analysis. The art performance learning module is designed attractively and contains conceptual material about the process of creating artworks and managing art performance production. The learning design employs an Integrated Learning approach with a Project Based Learning model.

3. Development

The development stage is the realization phase of the product based on the design made. The developed learning module was validated by media experts, material experts, and peers. The validation process used instruments prepared during the design phase. Validation aims to assess the e-module, provide suggestions and feedback to improve the e-module's feasibility for implementation. The development stage produced an analysis of the evaluation results of the e-module obtained from the validators.

4. Implementation

The purpose of the implementation stage is to obtain a valid design of the learning e-module. Revisions are made if the module design still has weaknesses and has not reached a valid level. Media experts and material experts play a critical role at this stage in determining whether revisions to the learning module are necessary. The revised and improved e-module is then subjected to trials. The trial of the e-module usage is conducted in two phases: a limited-scale trial (10 students) and a large-scale trial (1 class consisting of 36 students).

5. Evaluation

The evaluation stage is the final step of the ADDIE model, which aims to assess the developed e-module in learning, carried out by the expert team and students (Saputra, 2023, p. 40). The evaluation conducted includes tests of effectiveness and efficiency. The effectiveness test uses a questionnaire instrument directed at experts and students regarding the effectiveness of using the art performance learning e-module. The efficiency test is conducted through a test instrument consisting of multiple-choice questions to measure students' level of understanding.

Result

Analysis

The analysis stage was conducted by thoroughly examining the research focus, including an analysis of the subject matter, learning outcomes along with the learning objective flow, and student characteristics. This analysis process serves as an initial consideration before proceeding to the next stage and aims to clearly define the research object. The result of this stage is a draft containing all the conducted analysis findings.

The first step in the analysis stage was to review the subject selected as the research object, which is Cultural Arts. The second step involved analyzing the Learning Outcomes (CP) and Learning Objective Flow (ATP), resulting in the CP and ATP documents for Grade XII. Furthermore, the analysis of student learning characteristics was conducted through interviews with Mr. Andi Pratomo, S.Pd., and the distribution of questionnaires to students. The findings from the analysis stage included problems, needs, and proposed solutions that serve as the basis for consideration in developing the e-module.

Design

The design stage is conducted after the analysis stage, where all findings from the analysis significantly influence the planning in the design phase. The design takes the form of a draft encompassing two main activities: gathering materials based on the analysis results and structuring the systematic use of the e-module. During the material collection process, the selection of tools to develop the e-module is also carried out. The choice of tools considers their suitability with the analysis results and development needs. Based on these considerations, the chosen tool is Canva, selected for its easy accessibility and appealing design features.

The developed e-module contains several main menus, namely the Material menu, Exercise menu, and Practicum menu. The Material menu includes texts and videos arranged according to the predetermined Learning Outcomes, aimed at broadening students' understanding of the studied topics. The Exercise menu consists of formative questions serving as evaluations after students study the material. According to educators' guidance and needs, exercises are created using the interactive platform Quizizz. The Practicum menu contains tutorial videos that students must follow and practice directly.

Development

In the development stage, the e-module was created using Canva based on the results of the previous analysis and design phases. The development process was conducted after consulting with Mr. Andi Pratomo, S.Pd., the Cultural Arts teacher at SMAN 1 Jatibarang, whose input served as the basis for further development considerations.

1. E-Module Development

The media was developed using Canva, taking into account the results of the previous stages, including content preparation, user interface design, and menu structure determination within the e-module.

Figure 1. Initial page of the e-module

The home menu contains an explanation of the e-module, learning outcomes, and the flow of learning objectives corresponding to the subject matter. It also presents the sequence of menus that students will study, starting from reading the material, completing exercises, to performing practical activities.

Figure 2. Material page of the e-module

The material menu of the e-module includes a list of topics aligned with the learning outcomes of the Computer Network Engineering and Informatics major. Each topic is accompanied by explanations in the form of text and videos, as well as reference sources. Additionally, trivia or interesting information is inserted as general knowledge to encourage students to keep up with the latest technological developments. This menu also includes a button that directs students to the exercise menu after they finish reading the material.

Figure 3. Exercise page of the e-module

The exercise menu contains a list of questions aligned with the learning outcomes of Cultural Arts. Each exercise includes a link to the Quizizz platform. Additionally, there are buttons to return to the material menu and to proceed to the practicum menu if the material includes a practicum session.

The practicum menu contains a list of practical activities corresponding to the learning outcomes of the Computer Network Engineering and Informatics major, with only two topics including practicum sessions. Each practicum is presented in the form of tutorial videos. Furthermore, buttons are available to return to the material and exercise menus.

2. Media Validation

The validation of the e-module design was conducted by material experts and media experts. The results of the data analysis were used to improve the e-module design. Validation from the user perspective was carried out by students and educators through questionnaires. The calculation of validation and practicality scores was performed using the following formula:

$$P = \frac{f}{N}\ x\ 100\%$$

Explanation:

P = Final Score

f = Obtained Score

N = Maximum Score

(Sa'adah & Wahyu, 2022, p. 97)

The obtained data were then interpreted based on the Feasibility Interpretation Criteria table. There are five feasibility interpretation criteria, namely: very feasible, feasible, less feasible, not feasible, and very not feasible:

Table 1. Feasibility Interpretation Criteria

No	Score Range	Criteria
1	81% - 100%	Very Feasible (can be used)
2	61% - 80%	Feasible (can be used with revisions)
3	41% - 60%	Less Feasible (recommended not to use)
4	21% - 40%	Not Feasible (must not be used)
5	0% - 20%	Very Not Feasible (must not be used)

(Arista et al., 2022, p. 18)

3. Effectiveness of the Learning E-Module

The data analysis technique to determine the effectiveness of using the e-module is by examining the gain score (N. S. Herawati & Muhtadi, 2018). According to Hake, the N-Gain Score test formula is:

$$< g > = \frac{\bar{X}\ posttest\ score - \bar{X}\ pretest\ score}{\bar{X}\ maximum\ score - \bar{X}\ pretest\ score}$$

Explanation:

g: gain score

$\bar{X}\ posttest\ score$: average posttest score

$\bar{X}\ pretest\ score$: average pretest score

$\bar{X}\ maximum\ score$: maximum possible score

(Hake, 2014, p. 14).

Interpretation of N-Gain criteria is shown in Table 2:

Table 2. N-gain Level Category

Range	Category
g > 0,70	High

$0{,}30 \leq g \leq 0{,}70$	Moderate
$g < 0{,}30$	Low

(N. S. Herawati & Muhtadi, 2018, p. 185)

The data were obtained from formative evaluations consisting of three stages: expert tests by media and material experts, limited-scale trials, and large-scale trials. Below is the table of validation and trial subjects:

Table 3. Validation and Trial Subjects

No	Stage	Respondents	Number	Instrument Type
1	Validation Test	Material Expert	1	Questionnaire
		Media Expert	1	Questionnaire
		Peers	5	Questionnaire
2	Limited-Scale Trial	Grade XII Students	36	Questionnaire
3	Large-Scale Trial	Students	108	Questionnaire

(Indra Maghfiroh, 2025)

4. Implementation

Based on the results of the development stage, the implementation was carried out by directly testing the e-module with educators and students. The trial with educators involved presenting the developed e-module, discussing feedback from the media and material validation stages, and explaining its usage flow. The trial with students was conducted in a twelfth-grade class consisting of 36 students with diverse characteristics, employing a qualitative method.

The activity began with a pre-test to measure the students' prior knowledge of the Cultural Arts subject. The pre-test results were discussed intensively by calling on students alternately to read their answers aloud, correct mistakes, and deepen understanding. All material within the e-module was delivered through class discussions. The final stage involved a post-test to assess the increase in students' knowledge and to evaluate the effectiveness of the e-module used.

5. Evaluation

The evaluation stage was conducted by analyzing students' learning outcomes through the comparison of pre-test and post-test scores obtained during the e-module trial. This analysis employed a paired k-sample comparative test using the Friedman Two-Way ANOVA method to determine whether there was a significant difference between the scores before and after the use of the e-module.

Discussion

Media Validation Results

The e-module was validated by experts to assess its feasibility, both in terms of interface design and user flow, prior to implementation or trials with educators and students. The media validation form included several aspects and indicators that media experts needed to evaluate. The results, presented in Table 4, indicate that based on the media validation score criteria according to Widiana & Rosy (2021), the e-module falls into the "Highly Feasible" category for trial with students.

Table 4. Media Validation Results

Aspect and Indicator	Score
Display Quality	24
E-module Content	10
Feasibility of Implementation	5
Interface or Appearance	13
Compatibility	5
Total	57
Percentage (%)	$\frac{57}{60} x100 = 95$

Material Validation Results

The material validation, conducted by a lecturer assigned as the subject matter expert, yielded a percentage score of 90.7%. Based on the media validation score criteria by Widiana & Rosy (2021), the e-module is classified as Highly Feasible for trial implementation with students.

Table 5. Material Validation Results

Aspect and Indicator	Score
Material	22
Evaluation	14
Language	23
Total	59
Percentage (%)	$\frac{59}{65} x100 = 90{,}7$

Student Learning Outcome Evaluation

The entire validation process indicated feasible results, confirming that the e-module was ready for trial implementation with students. A pre-test was conducted to measure students' understanding of the subject matter in the Computer and Basic Networking course. The test items were discussed after the pre-test to deepen students' comprehension. Students were then provided with a link to the e-module, allowing them to access and interact with the content directly. The material in the e-module was delivered over approximately 120 minutes. In the final stage, a post-test was administered to evaluate the students' learning outcomes.

Table 6. Pre-test and Post-test Scores

Name	Pre-test Scores	Post-test Scores	Criteria
Student 1	75	80	Strong
Student 2	80	95	Very Strong
Student 3	60	80	Strong
Student 4	85	100	Very Strong
Student 5	85	95	Very Strong
Student 6	90	95	Very Strong
Student 7	80	85	Strong
Student 8	90	100	Very Strong
Student 9	80	100	Very Strong
Student 10	85	100	Very Strong

Based on the evaluation results, it can be concluded that students' learning achievements showed an improvement, with the average interpretation criteria falling under the very strong category. The next stage is to carry out a follow-up evaluation by presenting the testing results to the instructor, providing an overview of students' learning progress and discussing the interaction and utilization of the e-module in supporting the learning process.

Data Analysis Results

The data analysis technique used to determine the effectiveness of the e-module was based on the gain score value, as referenced in (N. S. Herawati & Muhtadi, 2018). According to Hake, the N-Gain Score formula is as follows:

$$< g > = \frac{93 - 81}{95 - 81} = 0{,}85$$

The pre-test scores ranged from a minimum of 60 to a maximum of 90, while the post-test scores ranged from a minimum of 80 to a maximum of 100. The average pre-test score of 10 students was 81, while the average post-test score was 93. This indicates a difference between the students' average post-test and pre-test scores. Based on these data, it can be concluded that the students' learning outcomes achieved a gain score of 0.85, which falls into the High category.

Conclusion

Based on the results of the research, the following conclusions were drawn:

a. Through the application of the ADDIE development model, the e-module was successfully designed with a structured workflow, starting from the analysis, design, development, implementation, and evaluation stages. The e-module was developed using the Canva platform, enabling easy access for students via computers, laptops, or mobile phones. The e-module features include materials, exercises, and practicum activities. In the Materials section, students can study lesson content according to the selected topics, supplemented with short videos and

reference links. The Exercises menu provides buttons linking to specific practice questions and directs students to the Quizizz platform for interactive exercises. The Practicum menu contains tutorial videos outlining the steps for carrying out practical activities.

b. The media feasibility validation results showed a percentage of 95%, with an interpretation of "highly feasible." The material feasibility validation obtained a percentage of 90.7%, also categorized as "highly feasible."

c. In the testing phase, the average pre-test and post-test scores of 10 twelfth-grade students in the Seni Budaya (Cultural Arts) subject showed an improvement, with an average pre-test score of 80 and an average post-test score of 93. Based on the gain score test, a value of 0.85 was obtained, which falls into the High category.

Based on the research conducted, several recommendations are proposed for future studies. The number and scope of samples should be expanded to obtain more comprehensive data. The development of e-modules can be extended to cover a broader range of subjects and materials, enabling their use by all students in the Seni Budaya subject at SMAN 1 Jatibarang.

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