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PAPER

Effectiveness of Team-Based Project Integrated E-books in Improving Student Self-Directed Learning and Creativity

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ABSTRACT

Student self-directed learning and creativity are needed to support the hybrid learning currently being implemented in higher education. This research aims to develop an integrated team-based project e-book to increase students' self-directed learning and creativity. Products are designed according to the stages of the ADDIE model. The product is then tested for feasibility by material experts and evaluated by users. The results of the feasibility test conducted by experts show that the e-book is highly feasible for use. Meanwhile, user testing is conducted through pre- and post-tests. Furthermore, in-depth interviews were conducted with several students to enhance the depth of the obtained data. The results of user trials were analyzed using inferential statistical data analysis methods, specifically the paired sample t-test. The results of the analysis show that e-books can improve learning outcomes, students' self-directed learning abilities, and student creativity in cultural anthropology courses. Therefore, the results of this research can be used with students to improve learning outcomes, creativity, and students' self-directed learning abilities among students with similar characteristics.

KEYWORDS

e-book, team-based project, self-direct learning, creativity

1 INTRODUCTION

In the current post-pandemic hybrid learning era, students must have self-directed learning skills and creativity in learning [1]. However, in reality, there are still problems with learning, such as in the Cultural Anthropology course. Preliminary studies have found that the problems include self-directed learning and underdeveloped student creativity. These issues can be observed through the frequent occurrences in the classroom. Students must be instructed to complete the activity. It is not uncommon for students to copy and paste or plagiarize their friends' work [2] [3].

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Students may succeed in solving specific problems but fail if the context of the problem is slightly changed [4]. Students lack confidence in their abilities, leading them to frequently seek guidance from the lecturer when faced with learning problems. If there are no assignments, they will not study.

This problem must be solved immediately. From the perspective of adult learning, self-directed learning, learning independence, and learning creativity are fundamental values of empowerment [5]. Therefore, students must be empowered, have learning independence, and possess high creativity, as these are the essential foundations for solving various real-world problems.

The use of an integrated team-based project e-book can be considered as an alternative solution to address the aforementioned issues. Several research studies have stated that team-based projects are the best model for improving the quality of learning [6] [7]. They have a positive influence on student achievement [8] and are effective for preparing students to enter the world of work [9]. Team-based projects are an excellent approach to education compared to traditional, more content-oriented approaches [10]. Project-based learning increases student involvement in constructing knowledge and information, making it highly recommended for implementation in tertiary institutions [11].

One of the interesting aspects is the importance of implementing integrated team-based project e-books in higher education. This model has the potential to enhance critical thinking skills, problem-solving abilities, communication, independence, cooperation, leadership, teamwork, innovation, and creativity [12] [13] [14]. Team-based projects refer to students' collaborative involvement in designing, creating, and completing projects in real-world contexts. The results of these projects are then published or presented [15] [16]. Therefore, students involved in the investigation process must actively participate and take the initiative to find effective ways to complete projects. Instead, the lecturer facilitates the creation of the necessary conditions for students to collaborate with each other [17] [18]. Even though the project is done collaboratively, self-directed learning readiness, including high self-management skills, is important as the primary factor in achieving learning outcomes from team-based projects [15].

Team-based projects can be implemented with the assistance of learning media. Moreover, in the current era of learning, there is a tendency for learning to be done anywhere, anytime, with anyone, and through any learning source. And as we all know, the success of the learning process cannot be separated from the role of learning media. Learning media is an integral part of the learning process [19]. The selected media should provide a renewed enthusiasm for learning and enable students to actively participate in the learning process [17]. The Flipbook application is a suitable media to be integrated with the team-based project model.

The Flipbook application is a tool that allows users to combine various educational resources, such as material components, assignments, worksheets, and learning videos, into a single application. It is suitable because flipbooks are designed to promote learning independence and enhance student creativity. Learners can freely determine when and where to start learning, for they are not bound by space or time. If students do not understand the material, then the material can be repeated. An activity sheet has been included to make it easier for students to understand the material.

Several previous studies have also discussed the use of flipbooks as a medium for learning. Flipbooks have been proven to be suitable for use as learning media and can enhance the critical thinking skills of both teachers and students [20] [21] [22]. Even so, no research has yet integrated team-based projects using flipbooks. Therefore,

this research focuses on developing an integrated e-book with a team-based project model. The combination of team-based projects and flipbook applications is expected to improve the quality of the learning process and enhance self-directed learning and student creativity. The construction and development of e-books are integrated with a team-based project model, which can enhance student learning independence and creativity.

2 METHOD

Research on e-book development is integrated with the team-based project model using the ADDIE model [20] [23]. The basis for choosing this model is the systematic steps it offers and its theoretical foundation in learning design [24]. This model consists of five steps: analyze, design, develop, implement, and evaluate. These stages can be seen in Figure 1.

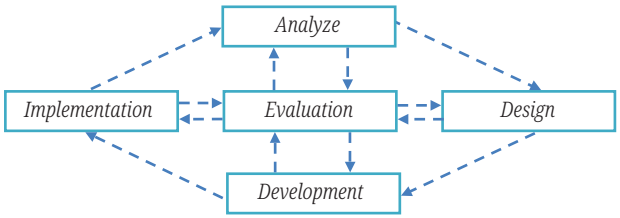

Fig. 1. Stages of ADDIE model

The development procedure is described in the following steps: first, analysis. The analysis phase includes analyzing the competencies outlined in the SCPL, examining the characteristics of students in relation to self-directed learning and creativity, and analyzing the material in accordance with the SCPL. Second, it involves planning (design). The design is carried out with a frame of reference: a) for whom the lesson is designed, namely for students taking the Cultural Anthropology course; b) what abilities students want to learn, namely the achievement of competencies contained in the SCPL, self-directed learning, and creativity; c) how these skills can be effectively learned, namely through the application of a team-based project learning model assisted by the Flipbook application; and d) how to determine the level of mastery and skills, namely through evaluation. The third development activity includes drafting an integrated e-book with a team-based project model by designing learning syntax and learning tools. Then conduct the initial prototype validation test (draft) with experts. Then, evaluate and revise the initial design of the integrated e-book development team-based project, taking into account recommendations and input from experts. At this stage, a product is created through a collaborative team-based project using a reliable Flipbook application. In 2020, a valid e-book product was produced. In 2022, the project will be enhanced by incorporating a team-based learning model and conducting field trials to assess its effectiveness at two tertiary institutions. Following this, the project will be disseminated on a large scale. The fourth phase will involve applying the findings from the development phase through experimental implementation in the field. Experiments were conducted to determine the quality of a product in the form of an integrated team-based project e-book that effectively enhances student self-directed learning and creativity. Product trials are conducted by carrying out experiments. The fifth evaluation is the stage in which the researcher makes

enhancements, refinements, and overall improvements before disseminating or reaching out to stakeholders broadly.

2.1 Product trials

Product trials in this study included test locations and subjects, data collection instruments, and data analysis.

1. **Location and research subjects**

The research was conducted to test the effectiveness of the developed products at the Social Studies Program of Universitas Negeri Malang (UM) and the Social Studies Program of Universitas Negeri Surabaya (UNESA). The study included 40 students enrolled in the Cultural Anthropology course during the third semester of the Social Studies Program at UM, as well as 38 students taking the same course during the third semester of the Social Studies Program at Universitas Negeri Surabaya.

2. **Data collection instruments**

The instruments used to collect data in this study included questionnaires, tests, field notes, and documentation. The questionnaire used in this study consisted of a media and material validation questionnaire, as well as a self-directed learning and student creativity questionnaire. This questionnaire assesses the validity and effectiveness of the integrated team-based project e-book. Tests are used to measure understanding of the material during field experiments. Field notes are used when observing the implementation of learning in the classroom.

3. **Data analysis**

In this study, the t-test was used for inferential statistical analysis. The t-test is used to analyze the test result data. The t-test used is the paired-sample t-test. Paired samples are samples taken from the same subject but subjected to different treatments. The same class was used in the research, but it received different treatment before and after using the integrated team-based project e-book. Table 1 presents a product trial design.

Table 1. Product trial design

Group	Pre-Test	Treatment	Post-Test
Control	O1	–	O2
Experiment	O3	X	O4

Notes: X: Learning using an integrated team-based project e-book; O1, O3: The initial test before being given treatment using an integrated team-based project e-book; O2, O4: The final test after students are given treatment using an integrated team-based project e-book.

3 RESULT AND DISCUSSION

3.1 Result

1. **Analysis stage**

Analysis is carried out on student characteristics, learning, and curriculum. The analysis of student characteristics is focused on promoting student learning

independence and creativity. Data collection was carried out through a questionnaire administered to 24 students who were enrolled in cultural anthropology courses. The results reveal the difficulties experienced by students in self-directed learning. 58% of respondents are still unable to solve their learning problems independently. Meanwhile, regarding student creativity, several issues were identified: 1) difficulty in quickly generating possible assignments; 2) inability to articulate what the lecturer had communicated; and 3) lack of alternative perspectives on the problems presented.

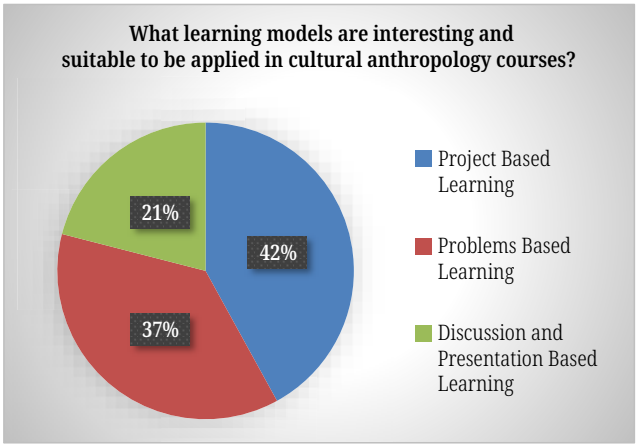

Fig. 2. Survey results on learning models

Analysis in this case is also conducted during learning activities. Still using the survey method, 42% of respondents chose a project-based learning model compared to problem-based learning or learning through discussions and presentations. Therefore, in creating this e-book, the aim it is to provide projects that students can undertake. This also facilitates the results of curriculum analysis, which promotes self-directed learning by students through problem-based learning and project-based learning (see Figure 2).

2. Design stage

Product specifications are developed as an integrated team-based project, assisted by the Flipbook application. This e-book is used for Cultural Anthropology courses during odd semesters. The design has several steps, including 1) compiling the RPS with a team-based project model; 2) arranging MFIs; 3) compiling an integrated e-book with a team-based project model; and 4) developing pre-test and post-test assessment instruments.

In general, the syntax for implementing a team-based project is as follows:

3. Development stage

The development stage involves writing a team-based project integrated e-book draft, validating it with experts, and revising it based on their suggestions and input until the book is deemed ready for trial. Validation is conducted to obtain academic recognition. Validation was carried out through material validity testing involving material experts, namely Deny Wahyu Apriyadi, S.Ant., M.A. (anthropologist) and Ali Imron S.Sos., M.A. The instrument used to collect material validation data is a questionnaire. The questionnaire contains an assessment sheet and a comment sheet. The following data results from a critical assessment by material and media experts (see Table 2).

Table 2. Assessments by material and media experts

Validator	Percentage	Category
Material expert validator 1	85%	Feasible
Material expert validator 2	84%	Feasible
Average	84.5%	Feasible

Based on the results of the validation test analysis, it can be concluded that the integrated team-based project e-book is feasible to use. The average rating of the two validators is 84.5%. The category is very manageable, even with revisions. Revisions are made based on the validator's criticisms and suggestions in order to improve them and make them truly feasible for use. The following is the detailed revision result based on the validator's input (see Tables 3 and 4).

Table 3. 1st Material expert revision

No.	Before Revision	After Revision
1.	Suppose you want to add statistical data as reinforcement, in my opinion. In that case, it should be presented in the introductory section for all tribes in this book to ensure data uniformity.	In the introduction or general description of each ethnic chapter, a table of population numbers and a location map have been added.
2.	In this part of the religious system, at least one has to discuss rituals in a belief system in that tribe. The religious system can also correlate with the sacred and profane concepts in the tribe because the religious system cannot be separated from these two big concepts.	The concept of religion in each ethnic chapter has explained the concept of rites, so the ceremonial stages in belief are associated with things considered holy (sacred) and what is not holy (profane) according to their respective beliefs.
3.	In the art section, in my opinion, it is necessary to explain holistically the variety of art that this tribe has, what meaning it contains, and what kind of cultural products it is.	All kinds of arts belonging to ethnic groups have been explained, along with their meanings and cultural products.

Table 4. 2nd Material expert revision

No.	Before Revision	After Revision
1	Typos in the text need to be checked as a whole.	The typos in the text have been fixed.
2.	Several references have not been written in the bibliography.	Have written down all the libraries used in the bibliography.
3.	It would be nice to use the most recent references of the last five years except for the main book.	The book already uses the latest references.
4.	For the content of the general description section, you can add a map location where the ethnicity is located.	Location maps have been added for each ethnic group.
5.	The chapter on implementing the team-based project model needs to be arranged coherently, starting from the planning, implementing, and evaluating what it looks like.	It has been arranged coherently, starting from the planning, implementation, and results of the effectiveness of the integrated team-based project e-book.

The two expert validators of the material generally agreed that it was good and could be used after revisions based on their suggestions and input. In particular, the validator emphasizes that each ethnic chapter includes statistical data on population numbers, maps, and various forms of art associated with ethnic

groups. All suggestions have been used as references to improve the integrated team-based project e-book. Therefore, the e-book can be considered feasible and suitable for trials. Figure 3 illustrates the results of the integrated team-based project e-book.

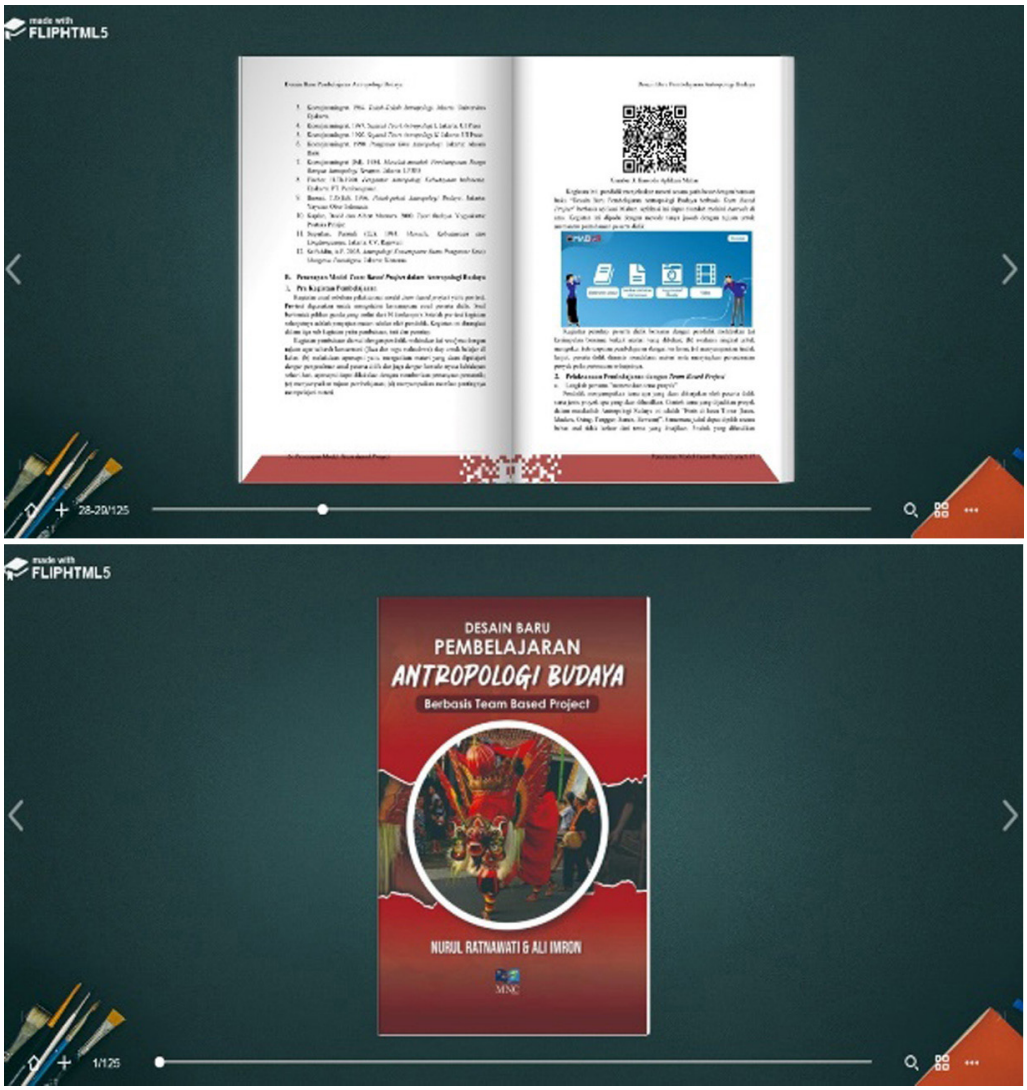

Fig. 3. Team-based project integrated e-book results

4. Implementation and evaluation stage

A trial was conducted by administering a pre-test and post-test to assess the effectiveness of the integrated team-based project e-book. The research was conducted using a group pre- and post-tests design in two comparison classes: UNESA and UM. It needs to be done twice, both before and after the experiment. The results of the pre- and post-test values will be tested for normality as a prerequisite for the paired sample T-test. The Kolmogorov-Smirnov normality test showed that the pre- and post-tests values were normally distributed, and each p-value was greater than 0.05. The results of the effectiveness test for the integrated team-based learning e-book presented in Table 5.

Table 5. Normality test results

Normality Test			
Kolmogorov-Smirnov			
Class	Statistic	N	Sig.
Pre-test UM	.025	41	.109
Post-test UM	.115	41	.195
Pre-test UNESA	.120	38	.183
Post-test UNESA	.117	38	.200*

Data on the pre- and post-test values show a normal distribution if the significance value is greater than 0.05. Based on the results of the normality test conducted using SPSS 25, the pre- and post-tests were conducted in two different locations with varying numbers of respondents. The significance value of the results was also obtained. The pre- and post-test UM, equal to 0.109 and 0.195 respectively, are both greater than 0.05, indicating that the distribution is normal. Meanwhile, the results of the pre- and post-tests conducted at UM were 0.183 and 0.200, respectively, indicating that they had a normal distribution with a p-value greater than 0.05.

Table 6. Paired samples statistic

Paired Sample Statistic				
	Mean	N	Standard Deviation	Standard Error Mean
Pre-test UM	42.95	41	10.67	1.665
Post-test UM	84.85	41	3.167	.494
Pre-test UNESA	44.55	38	9.602	1.557
Post-test UNESA	84.94	38	3.312	.537

Table 7. Paired samples test

Paired Samples Test								
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pre-test – Post-test UM	41.902	11.187	1.747	–45.433	–38.37	–23.985	40	.000
Pre-test – Post-test UNESA	40.395	9.993	1.621	–43.679	–37.11	–24.918	37	.000

The Table 6 above shows that the average pre-test conducted at UM was 42.95 with a standard deviation of 10.67, and the average post-test was 84.85 with a standard deviation of 3.167. It can be concluded that the average post-test value is greater than the average pre-test value. Furthermore, in Table 7, the significance value is obtained. (2-tailed) p-value of 0.000 and less than 0.005. If signature (2-tailed) ≤ a, then Ho is rejected, and Ha is accepted. So, it can be concluded that there are differences in the effectiveness of team-based learning methods before and after the

treatment. In developing this e-book, it can be stated that it is effective because it has been proven to improve student learning outcomes. Additionally, the N-gain test was conducted to determine the increase in knowledge after receiving treatment (see Table 8). To calculate the N-gain test, use the following formula:

$$< g >= \frac{\text{post-test} - \text{pre-test}}{\text{Skor maksimum} - \text{pre-test}}$$

Table 8. N-gain classification

G-Value	Interpretation
$g > 0.7$	High
$0.3 < g \leq 0.7$	Medium
$g \leq 0.3$	Low

Table 9. N-gain test result by pre- and post-tests

Class	N	Post-Test Average	Pre-Test Average	N-gain	Classification
UM	42	82.8	42	0.81	High
UNESA	38	84.95	44.6	1.02	High

Based on the results of the N-gain analysis conducted, it is evident that the average post-test score at UM is 82.8, while the pre-test score is 42. The N-gain value of 0.81 falls within the high classification. The post-test and pre-test scores conducted at UNESA were 84.95 and 44.6, respectively, with an N-gain value of 1.02, indicating a high level of improvement (see Table 9). Additionally, to assess self-directedness and student creativity, a questionnaire will be administered using a creativity and self-directed attitudes scale after providing treatment to the two research participants. The following is a summary of the analysis of the results of the assessment questionnaire.

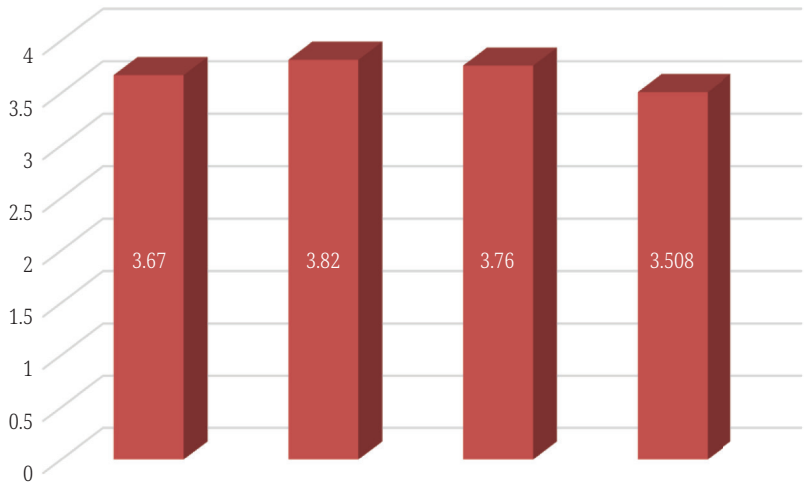

Fig. 4. Self-directed learning diagrams

Based on the results of the questionnaire calculations that were distributed after receiving treatment, it was found that approximately 73.4% of students from UM and UNESA have achieved independence in their learning. This conclusion can be

inferred from the self-management indicator of 3.81. Furthermore, the indicators of the desire to learn and independence are 3.76 and 3.67. The final indicator is the ability to solve problems at a level of 3.5. Moreover, the results of calculating the questionnaire assessment scale for student creativity. The value of the student creativity scale was assessed after being treated and produced (see Figure 4).

Based on the questionnaire results, it was found that students from UM and UNESA who were enrolled in the Social Sciences Education study program exhibited high levels of creativity. This foundation can be seen from the resulting score. 575 students agreed and 287 strongly agreed, which meansa, indicating that a significant number of students already possess high levels of creativity. However, it was also found that 332 students were still in doubt.

Based on the results of the Normality Test, Paired Samples T Test, N-Gain, analysis, self-directed questionnaire, and the creativity attitude scale, it can be concluded that integrated e-book team-based learning can improve self-directed learning abilities and positively impact learning outcomes, independence, and student creativity.

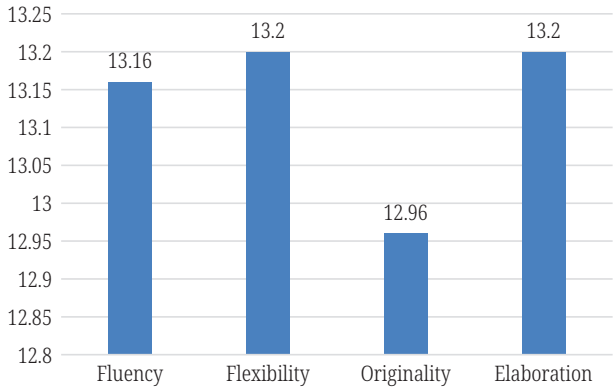

Fig. 5. Creativity attitude scale diagram

3.2 Discussion

1. Application of the team-based project model in Cultural Anthropology

In this section, we will discuss integrated team-based project learning with the e-book in two main stages: 1) pre-learning activities and 2) learning activities. More details are as follows:

Pre-learning activity: The pre-test is the initial activity before using the integrated team-based project e-book. The pre-test is used to assess the initial abilities of students. Multiple-choice questions consisting of 30. After the pre-test, the next activity involves teacher's presentation of the material at a glance. This is done so that students can gain a preliminary understanding of the learning that will be carried out [27]. This activity is important because it is used to communicate the challenges of the project that will be undertaken by students [28] [29].

Pre-learning activities are organized into three sub-activities: opening, core, and closing. The opening activity begins with the teacher conducting several steps to ensure that students are prepared and engaged in learning in class. These steps include: (a) readiness, where the teacher aims to ensure that students are mentally and physically prepared to learn; (b) apperception, which involves connecting the material to be studied with students' prior knowledge and real-life contexts. This can be achieved by asking thought-provoking questions; (c) communicating the learning objectives; and (d) emphasizing the importance of learning the material.

Fig. 6. Team-based project Integrated E-Book Barcode

In core activities, educators explain the material using an integrated team-based project e-book as an outline. This e-book can be downloaded using the barcode provided (see Figure 6). This activity is combined with the question-and-answer method to monitor student understanding [30].

In closing activities, students, along with educators, engage in the following tasks: (a) collectively drawing conclusions related to the discussed material; (b) conducting a brief evaluation to assess learning achievement through an oral test; (c) assigning follow-up tasks, such as exploring the material further and preparing project plans for the next meeting.

2. Implementation of team-based project learning

The first step is to determine the project's theme. The teacher communicates the themes that students will work on and the types of projects that will be produced. An example of a project theme in this Cultural Anthropology course is "Ethnicity in East Java (Javanese, Madurese, Osing, Tengger, Samin, Bawean)." The title can be chosen freely as long as it remains within the presented theme. The final product is agreed upon in the form of a poster. Example titles:

The second step is to divide the class into several groups. Learners are divided into groups of four to five members, ensuring a heterogeneous balance in terms of gender, academic ability, religion, etc. This optimal group formation facilitates the maximum sharing of information resources, promotes social sensibility among students, and encourages cooperation, thereby enhancing efficiency [31].

The third step is assigning problems to the group. This is important because it is the essence of project-based learning [32]. Indonesia is a diverse country with various ethnicities, religions, and races. One problem that still persists is the issue of intolerance. In some cases, discrimination within the community still occurs. In your group's opinion, why did this intolerance occur? What ideas can your group contribute to addressing this problem of intolerance? The resolution of this problem is one of the subchapters or sections that must be included in the poster.

The fourth step is to give the group space to create a work plan. At this stage, educators can provide students with worksheets to assist them in setting up their projects. With this, each student can play a role in developing a project work plan [33].

The fifth step is when the group prepares the presentation or final work. Each group presented its work as a poster in front of the class. Not to forget, evaluation and reflection of the work are also carried out at this stage. Thus, there will be conclusions in the form of advantages and disadvantages of a product, as well as the meaningful learning obtained after completing the work [34].

3. The effectiveness of the team-based project model in improving self-directed learning and student creativity

This section discusses the analysis of research findings on implementing an integrated e-book team-based project to enhance student self-directed learning and foster creativity. Based on research data, it is known that an integrated team-based project e-book has proven to be effective in enhancing student self-directed learning and fostering creativity. Second, the development of a team-based project learning design model is based on a constructivist and cybernetic approach, which combines various strategies, methods, and learning resources.

A qualitative description of the effectiveness of the team-based project model in promoting self-directed learning and student creativity can be observed in the following explanation.

Self-directed learning. This section discusses 1) independence, 2) self-management, and 3) problem-solving skills in learning. For more details, please refer to the following:

First, the results of implementing the team-based project model found that student independence in learning increased. This result can be observed when students plan project activities using posters. The same finding was observed in another study on project-based learning, which indicated that students' capacity for independent learning tends to increase [35]. After compiling the project schedule, each group determines the best strategy to complete the project outside the classroom, in accordance with the desired target. The chosen strategies are diverse. Some individuals are self-taught or rely on various learning sources, while others prefer to learn from experts by seeking guidance from experienced individuals. There is also a combination of both approaches. This result shows that students can learn with or without the assistance of others.

Project assignments given by educators (or lecturers) should be completed accurately and within the agreed-upon targets and schedule. This result shows that the increase in learning independence aligns with students' growing sense of responsibility. Not only that, flipbooks also significantly attract students to study independently because they can be accessed anywhere, anytime, and on any device. The same thing also happens in project-based learning, integrating other forms of blended learning [34] [36] [37].

The ability of students to learn independently and develop a sense of responsibility cannot be separated from the role of educators as facilitators. Educators do not lecture or dictate, but instead assume the role of facilitators. Playing this role is certainly not easy. Educators must have confidence in the existence and richness of student learning experiences. Thus, students' will have confidence in their ability to complete projects.

Second, self-management problems can be seen in the tendency of students to procrastinate and complete assignments at the end of the deadline. They use the overnight speeding system, so the results are not optimal [38]. Because they are pressed for time, they engage in fraudulent actions such as directly copying and pasting answers from friends and Internet sources without properly paraphrasing them. This fact shows that students have not been able to manage themselves properly. According to him, they are often tempted by activities that are more enjoyable. Assignments are often prioritized later, when there is still time.

The data from this research can be quite interesting because it suggests that one of the main challenges in learning, particularly self-management, can be addressed gradually by adopting a team-based project model [39]. Through project assignments, each team will collaboratively develop the schedule, assign responsibilities,

and set expected targets, emphasizing the importance of self-management. By adhering to a mutually agreed-upon schedule, students will be able to better concentrate on effectively managing their learning activities and time. They are aware and understand that if they do not comply with the schedule, the project will not be completed properly.

Third, the ability of students to solve problems in learning can be said to increase. At first, they frequently sought guidance from the lecturer whenever they encountered difficulties. They believed that a competent lecturer would present the material in a structured manner, and the students would diligently take notes from the start to the end of the lecture. However, with project assignments, this assumption began to fade away. Their collaborative and competitive spirit begins to emerge. Students are more enthusiastic and eager to achieve the best results. With this hope, the problems are attempted to be solved together in groups [19].

Several factors influence the increase in students' ability to solve problems. These factors include: (1) making the learning process more interesting by giving students the confidence to complete projects independently; (2) creating a sense of competition in learning activities, where each group strives to showcase their best results in project progress report is reports, motivating other groups to do the same; (3) studying material that is relevant to real life, making it easier to reason and understand, and avoiding boredom and; and (4) having a flexible study schedule that can be done anywhere and anytime by agreement with the group.

Students' creativity comprises three aspects: 1) fluency, 2) flexibility, and 3) originality or novelty. Fluency can be interpreted as the ability to generate numerous ideas or responses. The more frequently discussions and question-and-answer dialogues occur in learning, the more students' fluency in expressing opinions and proposing new ideas can improve. The ideas of students vary. There is something right and something false. This is where the role of educators is needed—not to patronize but to provide the right direction as facilitators. This fluency can increase for several reasons, namely: (1) educators and classmates respecting each idea given; (2) educators always responding positively to every idea; (3) thorough discussion and question and answer sessions for every idea; and (4) returning the final decision to the student in conclusion.

Second, flexibility allows for different lines of thinking. Even though the problem is the same, the method of solving each group differs. This condition demonstrates that students are adaptable when addressing problems. They are aware that there is no one definitive answer. Students provide the best solutions to the given problems. Before selecting the optimal solution, they perform an analysis using the data and make a rational evaluation of each potential solution.

Third, originality, or novelty, refers to the ability to generate unique ideas. This skill requires perseverance, discipline, and attention. It involves mental activities such as asking questions, sorting and selecting the right information, checking consistency, connecting concepts, and using imagination. The results of implementing the team-based project model showed that students' ability to generate original ideas started to emerge. This result is inseparable from the learning environment that consistently encourages students to develop creative ideas. Thus, it was found that each group was able to create posters (project products) with unique, polished, sophisticated, and captivating designs. Problem-solving ideas also appear original. They strive to generate innovative ideas as solutions to the given problems.

4 CONCLUSION

This research aims to develop an e-book that integrates a team-based project with the goal of enhancing students' self-directed learning abilities and fostering creativity in cultural anthropology courses. Development was carried out using the ADDIE model stages, namely analysis, design, development, implementation, and evaluation. The result of the development is an e-book that is integrated with a team-based project. This is based on the results of the design stages and analysis. At this stage, material validation was also conducted, and both validators confirmed that the material in this e-book was deemed suitable for implementation. Implementation was carried out in anthropology courses at UNESA and UM. The implementation results show that there is an increase in student learning outcomes after using the integrated team-based project e-book. Not only that, the questionnaire also revealed that UM-UNESA students possess self-directed learning abilities and a high level of creativity. This shows that this e-book can be used to improve students' self-directed learning abilities and creativity. Therefore, in future research, similar studies can be conducted on diverse subjects to assess the impact on individuals with varying characteristics. Seeing the limitations of this research, particularly the focus on developing only one course, future research on similar studies should consider conducting and developing other courses as well.

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