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Project Based Learning (PjBL) Oriented Textbook to Increase Student Creativity

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Abstrak

Proses pembelajaran yang berlangsung selama ini belum maksimal dan mendorong kemampuan berpikir dan kreativitas belajar siswa. Hal ini dapat dilihat dari proses pembelajaran mata kuliah pendidikan IPS dan proses pembelajarannya cenderung menggunakan pendekatan yang kurang memaksimalkan pengembangan kreativitas mahasiswa. Penelitian ini bertujuan untuk menciptakan bahan ajar berupa buku ajar mata kuliah Pendidikan IPS berorientasi Project based learning dan melihat efek potensialnya terhadap kreativitas mahasiswa. Subjek yang terlibat dalam penelitian ini berjumlah 45 siswa dan melibatkan 3 jenis ahli yaitu ahli materi, ahli desain dan ahli bahasa. Jenis penelitian ini adalah penelitian pengembangan (development research), dengan model pengembangan yang digunakan adalah model ASSURE yang dimodifikasi dengan evaluasi formatif dari Tessmer. Metode pengumpulan data yang digunakan dalam penelitian ini adalah teknik tes, angket dan observasi serta wawancara dengan menggunakan instrumen berupa lembar kuesioner dan tes dengan bentuk esai. Setelah data dikumpulkan kemudian dianalisis menggunakan metode analisis data deskriptif kualitatif dan kuantitatif berupa n-gain. Hasil utama penelitian ini menunjukkan bahwa produk buku ajar berorientasi Project Based Learning yang dikembangkan memenuhi kriteria validitas, praktisitas, dan efektivitas. Sehingga dapat disimpulkan bahwa produk buku ajar mata kuliah Pendidikan IPS berorientasi Project based learning yang dikembangkan valid, praktis, dan efektif dalam meningkatkan kreativitas mahasiswa. Penelitian ini diharapkan dapat memberikan kontribusi yang berarti dalam bidang pendidikan, khususnya dalam pengembangan bahan ajar yang berorientasi pada proyek.

Kata Kunci: *Buku Ajar, Project Based Learning (PjBL), Kreativitas, Pendidikan IPS.*

Abstract

The learning process that takes place so far has yet to maximize and encourage students' thinking skills and learning creativity. This can be seen from the learning process of social studies education courses, which tends to use approaches that do not maximize the development of student creativity. This study aims to create teaching materials in the form of teaching books for social studies education courses oriented to project-based learning and see the potential effect on student creativity. The subjects in this study amounted to 45 students and involved three types of experts: material experts, design experts and linguists. This type of research is development research, with the development model used as the ASSURE model modified with formative evaluation from Tessmer. The data collection methods used in this research are tests, questionnaires, observation techniques, and interviews using instruments in the form of questionnaire sheets and tests with essay forms. After collecting the data, they were analyzed using descriptive qualitative and quantitative data analysis methods like n-gain. The main results of this study indicate that the project-based Learning-oriented textbook products developed meet the criteria of validity, practicality, and effectiveness. So, the product of the Project-based learning-oriented Social Studies Education course textbook developed is valid, practical, and effective in increasing student creativity. This research makes a meaningful contribution to the field of education, especially in developing project-oriented teaching materials.

Keywords: Textbooks, Project Based Learning (PjBL), Creativity, Social Sciences Education.

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1. INTRODUCTION

One of the problems facing the world of education in Indonesia is the weak learning process. The learning process that has taken place so far has not maximized and encouraged students' thinking abilities and learning creativity. To overcome these problems then, the focus of improving education in Indonesia is directed at how learning activities can facilitate the emergence of students' learning creativity. In this case, teachers are the key in awakening and developing students' creativity. The essence of creativity is to produce something better

or something new. Creativity makes a person better because through creativity new, unique things can be produced that can change the general perspective that has been going on so far. Creativity allows someone to see and solve a problem from a different perspective that they may not have thought of until now. Creativity will be able to give birth to ideas about how to respond to a problem and find a solution. Even according to other researchers, creativity is not only creating new objects, but also combining existing ideas to be different from previous ideas (Asbari & Chiam, 2023; Febry et al., 2022; Hidayat, 2021; Shinta et al., 2023; Yusika & Turdjai, 2021). Creativity can be interpreted as: 1) the ability to respond, respond and provide solutions to all existing solution; 2) the ability to involve oneself in the problem discovery process; 3) intelligence ability, cognitive style, and personality/motivation; 4) the ability to produce or create something new. Therefore, this creativity is based on: flexibility, fluencely, smartly, and intelligency. The essence of creativity is being able to find novelty and being able to overcome problems brilliantly. In this creativity, a person always thinks positively to discover new things by creating processes (systems) and products. Later, students will be encouraged to be more creative in participating in learning. Creativity is a person's ability to create something new and is the result of a combination of innovations that make a person have the ability to think imaginative. Operationally, creativity can be formulated as an ability that reflects fluency, flexibility, originality in thinking, and the ability to elaborate (develop, refine, detail) an idea (Hidayat, 2021; Sugandi et al., 2023; Zulfia Latifah et al., 2020).

Project based learning is an effective method of developing 21st century skills, because there is problem solving and critical thinking, communication, collaboration, information and media literacy, creativity and innovation. In facing the 21st century, it is very important to develop critical thinking and problem solving, communication, collaboration, creativity and innovation skills (Indriani, 2024; Lubis et al., 2024; Mu'minah, 2021). Project-based learning has characteristics centrality means projects become central to learning, driving question (focuses on questions that lead students to solve problems), constructive investigation (students build their knowledge), autonomy (student as problem solver of the issues discussed) and realism (activities are focused on work that is similar to the actual situation) (Mantau & Talango, 2023; Mardhiyah et al., 2021; Saputra, 2024). So that learning using the PjBL model can run well, learning resources are needed that are able to accommodate the characteristics of project-based learning. These learning resources can be in the form of image, films, slide, module, worksheets and textbooks and others. Several previous studies on the use of PjBL-based learning resources concluded that project-based learning resources can improve students' critical thinking abilities and creativity.

The Social Sciences education course or social studies, is one of the courses offered and must be taken by all students in the Study Program in the Social Sciences Education Department, FKIP Sriwijaya University. The main objective of Social Sciences as an educational program at both primary, secondary and higher education levels is to develop the potential of students to be sensitive to social problems that occur in society, have a positive mental attitude towards improving all inequality that occurs in society, and be skilled in overcoming every problem that occurs every day, whether it befalls oneself or the community, is a preparation for becoming a global citizen (Alfiandra et al., 2023; Setiawan, 2020). The results of reflection and observation on the learning process of social studies education courses so far and the learning process tends to use approaches that do not maximize the development of student creativity. If explored further, this condition is related to the available textbooks. The available textbooks mostly contain concepts and theories that position students as "glasses" that are filled with a collection of theories that they must master without any opportunity for them to try to be creative in constructing knowledge, implementing the concepts and theories they construct real social problems in society as the

object of study of IPS. students pass passively through available learning resources, making social studies an uninteresting subject and considered meaning less for students. Some previous research results show the effect of using the PjBL learning model on student creativity. The results of research conducted by the first researcher concluded that students have high creativity and unique ideas and can design projects and solve problems well with the Project Based Learning model to increase student creativity. Thought. Next, research concludes that learning using the Project Based Learning model positively improves students' creative thinking skills. Other researchers concluded that creativity increases through project-based income. In addition, other studies conclude that project-based learning tools can improve students' science process skills. Project-based learning is a learning model that organizes project-based learning, characterized by five indicators in its learning method: 1. In the Project-based Based Learning model, the project is the centre of learning, not the curriculum; 2. Project Based Learning focuses on questions or problems that are important to direct students to find concepts and principles in the topics taught; 3. Projects developed in learning invite students to conduct investigations to construct the concepts found; 4. Projects that are prepared must encourage students to reach a significant level; 5. And the projects carried out are realistic because they are based on the concepts of science they have. Knowledge is obtained through various learning resources that students can access. It should also be noted that project-based learning is active in improving creativity in elaboration, resolution, novelty, fluency, originality and flexibility. This shows that the Project Based Learning model can increase student creativity (Fatmawati et al., 2022; Fatnah et al., 2021; Ratnawati, 2020; Tobing & Nainggolan, 2020; Vantika et al., 2024).

The novelty of this research lies in developing and implementing a Project Based Learning (PjBL) oriented social studies education course book. Although the PjBL model has been proven effective in enhancing creativity and 21st-century skills such as critical thinking, communication, and collaboration, this research highlights the importance of learning resources designed to accommodate project-based learning characteristics in social studies education. In this research, the course book developed contains concepts and theories and provides project guidelines that allow students to apply their knowledge to solve real problems in the community. Thus, this research offers a concrete solution to the weak learning process that has yet to maximize the development of student creativity, as well as fill the gap in the literature related to PjBL-based learning resources in social studies education. The results of this research are expected to significantly improve the quality of education, especially in awakening and developing student creativity through an approach that is more applicable and relevant to real-world needs. Therefore, this study aims to create teaching materials in the form of teaching books for social studies education courses oriented to project-based learning and see the potential effects on student creativity. This research is expected to make a meaningful contribution in the field of education, especially in the development of project-oriented teaching materials.

2. METHODS

The research was conducted at the History Education Study Program, Social Sciences Education Department, FKIP, Sriwijaya University. The research method used is development research. The development model used is the ASSURE model modified with formative evaluation from Tessmer. The ASSURE learning design model in this research emphasizes the development of social studies-oriented textbooks for education courses Project Based Learning. The stages of this model begin with analyzing student characteristics, setting goals, selecting materials, methods and media, as well as designing and developing products. After designing and developing the product, a formative evaluation

is carried out by Tessmer whose procedures include: self evaluation, expert review, one to one, small group, and field tests. This study involved 9 students for the small group test and 45 students for the field trial. In addition, this study also involved two types of experts, namely material experts and design experts, which amounted to two people each (Farid Rosidi, 2023; Fitrio & Merliza, 2023; Tarial et al., 2022). The data collection method used in this research is test techniques, questionnaires and observations and interviews. Test techniques are used to collect data about aspects of students' knowledge and creativity in working on projects. Questionnaire techniques were used to collect data about student creativity profiles and student responses to the textbook products being developed. Observation techniques are used to collect data about product validation for product assessment by experts. Interview techniques are used to collect data about measuring aspects of learning attitudes, skills aspects and student needs.

The instruments used were questionnaire sheets and essay tests. Instrument development in this study begins with identifying aspects and indicators by the research parameters, which are then described into measurable descriptors that respondents will fill in. The learning-based project-oriented textbook product validation instrument includes the suitability of the material and design by adapting the BSNP textbook validation sheet. Material validation comprises three aspects: content suitability, presentation, and language. It consists of 14 indicators and is developed into 42 descriptors. The design validation also included three factors, with 13 indicators developed into 42 descriptors. Student creativity was assessed from aptitude (fluency, flexibility, originality, elaboration) and non-aptitude (curiosity, imagination, sense of challenge, courage to take risks, respect), which were developed into 30 descriptors. The grid of student creativity instruments is presented in **Table 1**.

Table 1. Student Creativity Instrument Grid

No	Aspect	Indicator	Deckriptor
1.	Aptitude	1. Fluency	1. Alertness
			2. Fluency in thinking
		2. Flexibelity	3. Ability to generate ideas
			4. Ability to use various methods to solve problems
			5. Ability to produce a number of ideas
			6. Answer Variations
			7. See problems from different points of view
			8. Look for alternative solutions
			9. Use a variety of approaches (flexibility of thinking)
		3. Originality	10. Ability to generate original ideas
			11. Give a different answer than usual
		4. Elaboration	12. Ability to do detailed things
			13. Ability to develop ideas
			14. Ability to detail
			15. Adding
2.	Non aptitude	5. Curiosity	16. Pay attention to the lecturer’s explanation
			17. Frequently ask questions
			18. Respond to problems by using the textbooks provided as a reference
			19. Respond to problems by using the textbooks provided as a reference and looking for other sources
			20. Look for various information from various sources

No	Aspect	Indicator	Deckriptor
		6. Imaginative	21. Solve problem in a different way than usual
			22. Can see imperfections in answers to problem
		7. Feel challenged with pluralism	23. Challenged to solve new problems
			24. Never give up
			25. Work individually to solve problems without the help of others
			26. Try to complete tasks on time
		8. Dare to take risks	27. Be sure of the answer given
			28. Ask for more assignments
			29. Optimistis about the tasks being carried out
		9. Appreciate	30. Take other people’s opinoin into account

Data obtained from research on the development of PjBL-oriented social studies education textbooks includes data regarding analysis of student needs, analysis of teaching materials, validation of textbook products by material expert validators, design experts and language experts, student learning creativity values, and product assessment data by students. The data obtained was then tabulated and converted into percentage form and then analyzed. The data analysis used is qualitative and quantitative data analysis methods in the form of n-gain. The results of module validation, attitude scores, skill scores and product assessment results were analyzed and converted into a 4 scale, then descriptive analysis was carried out on the results. Results pretest and posttest from the student learning creativity questionnaire, it is analyzed and the improvement is determined by looking at it n-gain with effectiveness interpretation criteria; less than 40% ineffective, 40% to 50% less effective, 50% to 75% quite effective and above 76% effective.

3. RESULTS AND DISCUSSION

Result

Research procedures include preliminary study stages, instrument design stages research, product development, product validation and product expansion as well as the analysis stage of the potential effects of implementing oriented textbooks project based learning on student creativity. The results of a questionnaire regarding student creativity profiles in social studies learning at thethe Social Sciences Education Department, FKIP Unsri, which has been taking place so far, shows that social studies learning with available learning resources has not accommodated student creativity. Of the 13 statements with 4 answer choices (strongly agree, agree, disagree, disagree) which were asked in the form of positive statements, 83% of students responded with answers of neither agree nor disagree. This means that they less and do not agree that learning social studies education courses has facilitated student creativity. For project assignment design (project based learning) in textbooks refers to PjBL syntax step; 1) prepare questions or project assignments, in the textbook the rubric is integrated "What social problems occur in your environment that are relevant to the concept and with in material in this textbook chapter"; 2) project design is integrated in the book under the rubric "Please design the project activities that you plan to answer the problems that have been formulated"; 3) preparation of the schedule in the textbook is integrated into the rubric "Please prepare the schedule as a concrete step for the project you are planning"; 4) monitoring project progress in textbooks is integrated into the rubric "Monitoring the progress of the project"; 5) testing results in textbooks is integrated into the rubric "Let's Test Project Results"; 6) evaluating experiences in textbooks is integrated into the rubric "Let's Share Experiences".

The average result of two validators' assessments of the suitability of the content was 4.21, which is significant Social Studies Oriented Education Textbook Project Based Learning that has been developed is very suitable for use in terms of content suitability indicators. The average result of two validators' assessments of the suitability of the presentation was 3.84, which means that the Social Studies Education Textbook is Oriented Project Based Learning that is developed is suitable for use seen from the indicators of suitability for presentation. Furthermore, the average result of two validators' assessments of the appropriateness of the language was 4.20, which means that the Social Studies Education Textbook is Oriented Project Based Learning that is developed is suitable for use in terms of language suitability indicators. When combining the results of two validators' assessments of the three indicators, an average of 4.08 is obtained, which means that the Social Sciences Education Textbook product is Oriented. Project Based Learning developed Valid. The results of the assessment of the two validators on the Social Science Education Textbook Product Project Oriented Based on Learning developed can be seen in Table 2.

Table 2. Validation Results of Material Experts and Practitioner Lecturers on Project Based Learning Oriented Social Sciences Education Textbooks

Assessment Aspect	Expert (Validator)	Score Validation	Average Validation Score	Category
Content Eligibility	Validator 1	4.18	4.21	Very Valid
	Validator 2	4.23		
Feasibility of Presentation	Validator 1	3.80	3.84	Valid
	Validator 2	3.88		
Language Eligibility	Validator 1	4.10	4.20	Valid
	Validator 2	4.30		
Average			**4.08**	**Valid**

Next, the average results of the assessments of two validators, namely design experts and practitioner lecturers the appropriateness of the content is 3.84, which means that the social studies education textbook is oriented Project Based Learning that is developed is suitable for use in terms of content suitability indicators. The average result of the assessment of two material expert validators regarding the appropriateness of the presentation is 3.84, which means that the Social Studies Education Textbook is Oriented Project Based Learning that is developed is suitable for use seen from the indicators of suitability for presentation. Furthermore, the average result of two material expert validators' assessments of language suitability was 4.10. which means Social Studies Oriented Education Textbook Project Based Learning that is developed is suitable for use in terms of language suitability indicators. When combining the results of the assessments of two material expert validators on the three indicators, an average of 3.92 is obtained, which means that the product is an Oriented Social Sciences Education Textbook. Project Based Learning developed Valid. The results of the assessment by design experts and practitioners regarding textbook products Social Studies Oriented Education Project Based Learning developed can be seen in Table 3.

Table 3. Validation Results of Design Experts and Practitioner Lecturers on Social Studies Oriented Textbooks Project Based Learning

Assessment Aspects	Expert (Validator)	Score Validation	Average Validation Score	Category
Content Eligibility	Validator 1	3.82	3.84	Valid
	Validator 2	3.86		
Feasibility of Presentation	Validator 1	3.80	3.84	Valid
	Validator 2	3.87		
Language Eligibility	Validator 1	4.10	4.10	Valid
	Validator 2	4.10		
Average			**3.92**	**Valid**

Table 2 and table 3 above show that the Social Sciences Education Textbook is Oriented Project Based Learning that was developed has been declared valid after various improvements were made to the product based on suggestions from the validator. The results of the development at the expert review stage became prototype 1 of the product development of Oriented Social Sciences Education Textbooks Project Based Learning which is then tested through stages one to one evaluation. At stage one to one evaluation Prototype1 was tested on 3 students with high, medium and low abilities. A trial was carried out to see the difficulties that might arise during the process of using the Oriented Social Sciences Education Textbook Project Based Learning in learning. After studying using the Oriented Social Sciences Education Textbook Project Based Learning. The three students were asked to provide their comments by filling in the questionnaire sheet provided.

At the small group evaluation stage, prototype two was tested on nine students with heterogeneous abilities who were not research subjects. Students were asked to use the textbook product and work on projects on specific sub-matter that required project work. Their work showed unique ideas, diverse and detailed solutions to social problems, and project analysis using various concepts in social studies and other sources of information. This indicates that the use of PjBL-oriented textbooks that have been developed can encourage student creativity and are practical to use. After the pilot test, students were asked to fill out a questionnaire and provide comments and suggestions to see the practicality and improvement of the product before the field test. There are several suggestions and comments from students at this stage small group evaluation this can be seen in Table 4.

Table 4. Student Comments on Stage Small Groups to Wards Social Studies Oriented Textbook Products Project Based Learning and Revision Decisions

Student Comments		Revision Dicision
Advantages/Positive	**Disadvantages/Negative**	
● Textbooks stimulate students to think more active, creative and innovative. ● With project carried out information in textbooks make understanding us to the concept selected social science concepts studied in	● Most of the time given to work on project in textbooks is short, while project assignments require quite a long time collect information and field data. ● Images of images blurred is corrected shown in the	● The time to work on a project is adjusted to the breadth and depth of the task as well as the level of difficulty in collecting data and information. ● Image that is less clear

Student Comments		Revision Dicision
Advantages/Positive	**Disadvantages/Negative**	
social studies courses are easier and more applicable. ● Learning process using this textbook teaches and trains us to work together inner group do and planning a project and generating new ideas ● The learning process trains us to be active and active think critical deeply see and solve social problems that exist in society.	Book teachings are unclear and vague. ● There should be a rubric for project assignments beforehand "Introduction" to Project assignments for each chapter to relate the project assignments to be carried out with the material, concept studied and breast feed with rubric	and blurred is corrected ● The introduction to the project assignments given has been improved so that students have guidance in working on the project.which is displayed before the rubric.

Based on the results of the recapitulation of questionnaire data consisting of 15 statements with the lowest score being 1 and the highest being 5 for each statement, the responses from 9 students at the small group evaluation stage obtained an average score of 53.33 in the highest score range of 75, lowest 15, which means the practical category. This means that the project-based learning-oriented textbook product developed is practical for use. Recapitulation results of student questionnaires regarding the practicality of oriented textbook products project based learning can be seen in Table 5.

Table 5. Practical Value of Oriented Textbooks Project Based Learning on Stage Small Group Evaluation

No	Respondent	Score	Category
1	AZ	58	Practical
2	WD	55	Practical
3	EL	58	Practical
4	TN	50	Practical
5	MA	55	Practical
6	A	48	Quite Practical
7	L	47	Quite Practical
8	JK	51	Practical
9	SS	58	Practical
Average		**53.33**	**Practical**

The results of improvement to prototype 2 are based on input and evaluation from the stage one to one evaluation this results in 3 prototype which will be tested at the stage field tests. After obtaining prototype 3 in the form of a social studies education oriented textbook project based learning valid and practical, this product was tested on research subjects. The field trial was carried out on 45 students in the Social Sciences Education class. The implementation of lectures using PjBL-oriented textbooks can be summarized in Table 6.

Table 6. Implementation of Lectures Using Oriented Textbooks Project Based Learning and Aspects of Creativity

Stages Learning	Integration in PjBl Assignment Rubric	Learning Activities	Aspects of Creativity	
			Aptitude	Non aptitude
Question assignment Project	What social do problems Our environment	Students in the group bring up question question that are relevant to the material and concepts studied in Social Sciences. Question this formulated as “Project Title”	Fluency Flexibelity	*A feeling of wanting know
Planning Project	Project design you formulate	*Students in groups discuss solutions to problems according to project formulation *Students come up with ideas, for look for various alternative solution to the problem. *Students discuss methods, sources, and data collection techniques order to realize the ideas that are raised for answer problem which formulated. *Students discuss the form and systematic contents of the project report are in accordance with the selected ideas and selected ideas.	*Fluency *Flexibelity *Originality *Elaboration	*Imaginative *Challenged
Drafting schdule	Please arrange timetable as step real project which you plan”	*Student make schdule design activity project *Students group together data which required based on data source along with timetable collection.	*Flexibelity	
Collection field data	Please Collect required	*Student do simple research data for collect field data as material for answer problem according to the formulated project title.	*Elaboration *Fluency	*Challenged *A feeling of wanting now
Supervision progress project	Monitoring progress of the project	*Student report the way activity collection data in accordance with timetable which planned.	*Fluency *Elaboration	*Challenged
Testing results	Let’s Test the Results Project	*Student reported and explain all stages projects carried out. *Student show truth and	*Fluency *Flexibelity *Originality *Elaboration	*risk *brave take risk *desire

Stages Learning	Integration in PjBl Assignment Rubric	Learning Activities	Aspects of Creativity	
			Aptitude	Non aptitude
		argumentation new ideas they offer from the project.		know
Evaluation	Share Experience	*Past discussion class student share experience about the what they do. *Through class discussions, students ask each other questions and answers about the projects they are working on.	*Fluency *Flexibelity *Originality *Elaboration	*desire know *challenged *brave take risk *value

This field trial was carried out in order to see the potential effect of the textbook product being developed on student creativity as seen from the aspects aptitude and aspects non aptitude. Assessment of student creativity is carried out using pre-test and post test from the student learning creativity questionnaire based on the learning process before and after using Pjbl-oriented textbooks. The results of the pre-test and post-test of student learning creativity based on the learning process before and after using PjBL-oriented textbooks are seen in Table 7.

Table 7. Results of Average Pre-Test and Post-Test Scores for Student Creativity in the Learning Process Before and After Using Project Based Learning Oriented Textbooks

Aspect Creativity	Indicator	Average score Pretest	Average score Posttest	N gain	Category
Atitude	Fluency	8.5	11	71.42	Effective enough
	Flexibelity	12.5	22.5	86.95	Effective
	Originality	4.3	6.8	67.56	Effective enough
	Elaboration	8.5	14.5	80.00	Effective
Non Atitude	Desire know	7.8	14.5	81.70	Effective
	Imaginative	2.5	6.8	78.18	Effective
	Challenged with pluralism	3.5	19.2	95.15	Effective
	Brave take risk	4.5	9.8	70.66	Effective enough
	Value	2.4	3.8	87.50	Effective
Average		**6.05**	**12.1**	**79.90**	**Effective**

Table 7 above shows that students' creativity scores improved across various indicators before and after using project-based learning (PjBL) oriented textbooks. In the fluency aspect, scores increased from 8.5 to 11 with an n-gain of 71.42% (quite effective). Flexibility scores rose from 12.5 to 22.5 with an n-gain of 86.95% (effective). Originality scores increased from 4.3 to 6.8 with an n-gain of 67.56% (quite effective). Elaboration scores went up from 8.5 to 14.5 with an n-gain of 80.00% (effective). In non-attitude aspects, curiosity scores rose from 7.8 to 14.5 with an n-gain of 81.70% (effective), imagination scores increased from 2.5 to 6.8 with an n-gain of 78.18% (effective), and scores for being

challenged by diversity went from 3.5 to 19.2 with an n-gain of 95.15% (effective). Risk-taking scores improved from 4.5 to 9.8 with an n-gain of 70.66% (quite effective), and appreciation scores increased from 2.4 to 3.8 with an n-gain of 87.50% (effective). Overall, the use of PjBL-oriented textbooks effectively enhanced student creativity.

Discussions

This study has several significant advantages that contribute to developing teaching materials and learning. Firstly, the ASSURE model modified with Tessmer's formative evaluation provides a structured and comprehensive approach to developing the coursebook, ensuring the product is appropriate to the student's characteristics and needs (Savika et al., 2024; Sukmawati, 2020; Vantika et al., 2024). Second, thorough validation by learning design experts, material experts, and practicing lecturers gave high credibility to the resulting product, with validation scores indicating that the coursebook met rigorous academic and practical standards. Third, the practicality of the coursebook, as evidenced through one-to-one and small group evaluation trials, showed that this product was easy for students to use, with a high practicality score. Fourth, the significant increase in student creativity through the use of Project Learning-oriented coursebooks, as evidenced by the N-gain value in the effective category, shows that this coursebook not only conveys material but also stimulates creative thinking. Fifth, using various data collection methods such as tests, questionnaires, observations, and interviews allowed for rich and varied data collection, providing a comprehensive picture of the effectiveness and practicality of the textbooks (Azzahra et al., 2023; Fajri & Chusni, 2024; Prajoko et al., 2023; Sutrisno et al., 2023; Tirtawati, 2020). Finally, this study is relevant to modern educational trends that emphasize developing 21st-century skills such as problem-solving, critical thinking, communication, and collaboration, making it a significant contribution to improving the quality of education in Indonesia .

However, this study has several limitations that need to be considered. First, the pilot test of Project Based Learning (PjBL) oriented textbooks was conducted with a limited sample of only nine students at the small group evaluation stage. This limited number of samples may need to represent the student population's diversity adequately. The solution is to expand the trial by involving more students from various backgrounds and study programs to get more generalized results. Secondly, this study focuses more on the validation and practicality of coursebooks and increasing student creativity without exploring the long-term impact of their use. The effectiveness of this coursebook needs to be measured over a more extended period to ensure that the observed increase in creativity is not just temporary. The solution is to conduct further research with a longitudinal design that monitors the development of student creativity over several semesters or years. Overall, this research makes a meaningful contribution to the field of education, especially in developing project-oriented teaching materials. Implementing PjBL-oriented textbooks that have been proven valid, practical, and effective can be adopted more widely to improve the quality of learning in various study programs. In addition, these findings also provide a foundation for the development of similar textbooks in other fields to continue to encourage innovation and creativity in the educational process.

4. CONCLUSION

This study concluded that the Project Learning-oriented textbook product developed was declared valid after expert review by learning design experts and material experts who tested the suitability of content, presentation, and language. This product is declared practical after being tested at the one-to-one and small group evaluation stages, with the results showing that students find it easy to use. Furthermore, implementing this project-based

coursebook proved effective in improving students' creativity, indicating that this product is valid, practical, and effective in enhancing students' creative thinking skills.

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