Research Article

Developing project-based worksheet enriched with Pancasila student profile for junior high school

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Abstract: This study was motivated by the learning process carried out by the teacher has not facilitated students adequately through the use of student worksheet. Teachers tend to use textbooks that contain a summary of the material and practice questions. The objectives of this study are (1) to describe the validity of the P5-based student worksheet on the theme of Unity in Diversity; (2) to describe the practicality of student worksheet; and (3) to test the effectiveness of student worksheet in increasing the creativity of students. The research method used is research and development (R&D) with the ADDIE model, namely analysis, design, development, implementation, and evaluations. The instruments used are validation sheets, teacher and learner response questionnaires, and creativity tests. From a series of development processes carried out, it can be concluded that the validity of the student worksheet obtained a score of 91.75% and is in very feasible criteria. As for the practicality of student worksheet, teachers and students gave a score of 90% and 92.2% respectively and were in very practical criteria. The relative effectiveness of the student worksheet obtained a score of 41.25% and was in the medium criteria. We also recommend further research on how the student worksheet contributes to the development of learners' social-emotional competencies, such as empathy, communication, and emotion management. This is in line with the strengthening of the Pancasila student profile, which focuses not only on cognitive skills, but also on character building with integrity and empathy.

Keywords: Student Worksheet; project; Pancasila student profile

1. Introduction

Indonesia had implemented curriculum to be refined to ensure its relevance to changing community needs and global challenges (Indarta et al., 2022). The reasons behind is that each generation faces different social contexts and challenges faced by each generation, so the curriculum must continue to be updated to remain contextual and able to accommodate the needs of students at various levels of education (Binkley et al., 2014; Caño De Las Heras et al., 2021; Shernoff et al., 2017). These changes cover aspects of material or content (Sari et al., 2022), learning approaches (Alsaleh, 2020), evaluation (Maniotes & Kuhlthau, 2014; Minarti et al., 2022), and character development (Margerison & Ravenscroft, 2020). Currently, the curriculum applied in Indonesia education is the Merdeka Curriculum (Indarta et al., 2022; Minarti et al., 2022). Through the Ministry of Education and Culture, the government stated that this curriculum contains various intracurricular learning with more optimal content to deepen concepts and strengthen competencies. One of the competencies in question is the personality or character of students. Implementing the Merdeka Curriculum emphasizes strengthening co-curricular learning through project-oriented activities to strengthen character refer to Pancasila student profile (P5) (Irawati et al., 2022; Rohmah et al., 2023).

As a country with a wealth of ethnicities and cultures, Indonesia has the potential to become a great nation (Rohmah et al., 2023; Zidny et al., 2021). However, Indonesia is also facing the threat of disintegration if it cannot manage this potential properly (Febriansyah & Muksin, 2020; Nizar et al., 2021; Waldopo, 2022). Various problems that

refer to issues of ethnicity, religion, race, and inter-groups still occur (Ilmi & Najicha, 2022; Pratistitha, 2023; Santoso & Dawwas, 2021). It impacts the emergence of conflict, especially if the younger generation needs a comprehensive understanding of this intangible wealth. In this context, students need to have a complete understanding and critical thinking skills, such as analyzing a problem, offering solutions, and choosing the most relevant solution. Several researchers believe that good understanding and thinking skills are one way to maintain the differences and diversity of the nation (Meiarti et al., 2020; Retno & Yuhanna, 2016).

Strengthening thinking skills in learning through implementing the Merdeka Curriculum executed integratedly (Suriswo et al., 2023). One thing that can be optimized is the development of students' worksheets that provide more space for thinking through hands-on activities (Fithri et al., 2021; Wang et al., 2021). Unfortunately, most students' worksheets in circulation are still dominant in cognitive strengthening rather than practical activities (Widya et al., 2019). The observations at Junior High School (JHS) Plus – Bustanul Ma'arif, Gumukmas, Jember Regency showed consistent results. The students' worksheets needed to be adequate in facilitating students' critical thinking skills. The indication is that the students' worksheets contain questions rather than activities. This condition impacts students' creativity scores, which are classified as low to moderate. This condition needs to be addressed because creativity cannot be owned immediately and is static; it can be trained and developed (Andini et al., 2022; Paembong, 2019). Pllana (2019) and Siew et al (2016) also stated that increasing creativity needs to be done simultaneously through a meaningful process in life. In this case, strengthening creativity is carried out in an integrated through students' worksheets.

Development research, in this case, students' worksheets, with the integration and strengthening of Pancasila student profiles, has begun to be widely developed in the last five years (Haqiem, 2023; Irawati et al., 2022; Syafi'i, 2021). However, the development of profiles that use contextual problems related to diversity issues is still relatively limited. Furthermore, the contextualization of problems from previous studies needs to comprehensively link the context of the problem with a holistic approach. The contextualization of problems in project learning is one of the critical components that also determines student learning achievement. Therefore, this study aims to develop students' worksheets for project learning by enriching Pancasila profile characters.

2. Materials and Methods

2.1 Types of research

This research and development uses the ADDIE model, which covers all stages from analysis to evaluation. The ADDIE model offers a systematic and structured approach, allowing developers to follow logical stages from needs analysis to final product evaluation (Branch, 2010). This model is flexible because each stage can be repeated or improved based on the evaluation results. It allows further adjustment and development if the desired results still need to be achieved.
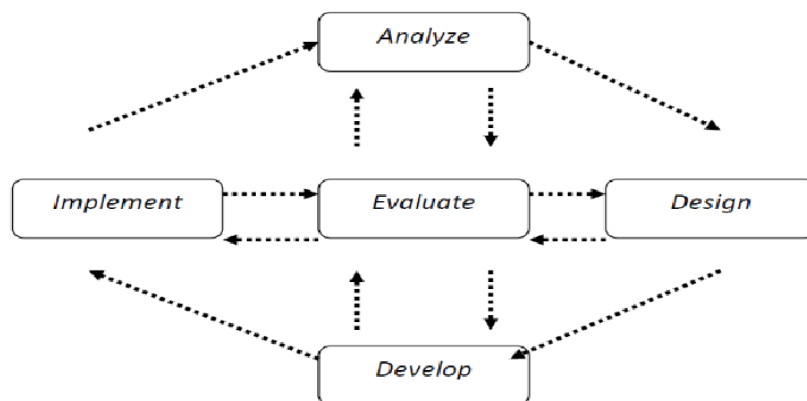

Figure 1. Stages of the ADDIE development model

2.2   Research Subjects and Objects

The subjects in this study were 25 students of seventh grade in Junior High School (JHS) Plus Bustanul Ma'arif Gumukmas, Jember Regency. The study was conducted in the odd semester of the 2023/2024 academic year. The theme taken in developing this student's worksheet is *Bhinneka Tunggal Ika* (Unity in Diversity).

2.3   Data Types and Sources

The data sources in this research are primary and secondary data. Primary data are teachers and students, while secondary data are relevant documents that support this research. The types of data collected in this study consist of qualitative and quantitative data.

2.4   Data collection technique

Data collection techniques in this study are questionnaires, tests, and documentation. In the context of this study, questionnaires were given to teachers and students to determine their responses to the use of student worksheets through questionnaire instruments. In contrast, tests are used to collect numerical data, in this case, to determine the creativity of students after using the worksheet (Table 1).

Table 1. Creativity indicators

Indicator		Criteria
Fluency	1.	Plenty of ideas and solutions generated
	2.	Generating ideas
Flexibility	1.	Ability to adapt concepts and thoughts
	2.	Ability to generate variation of ideas
Originality	1.	Originality of idea or solution
	2.	Uniqueness of idea or solution
Elaboration	1.	Ability to elaborate the idea or solution
	2.	Quality of explanation and development of ideas

2.5   Data Analysis Techniques

The data collected in this study were analyzed to determine the level of validity, practicality, and effectiveness of the student worksheet that had been developed. The analysis carried out followed the following formula (1). The validation results will be confirmed with the product validity criteria in Table 2.

$$P = \frac{\sum x}{\sum xi} \times 100\% \tag{1}$$

Information:

P   = Product validity

$\sum$x   = Score achieved

$\sum$xi   = Maximum score that can be achieved

Table 2. Product validity criteria

Range	Validity Criteria
81.00 -100	Very worthy
61.00 - 80.99	Worthy
41.00 - 60.99	Decent enough
21.00 - 40.99	Inadequate
0 - 20.99	Very inadequate

Furthermore, the student worksheets are tested for practicality until they are declared feasible and practical to use. The practicality test follows formula 2, and the calculation results are confirmed with the product practicality criteria as in Table 3.

$$P = \frac{F}{N} \times 100\% \tag{2}$$

Information:
P   = Teacher and student responses
F   = Score achieved
N   = Maximum score that can be achieved

Table 3. Product practicality criteria

Range	Practicality Criteria
81.00 - 100	Very practical
71.00 - 80.99	Practical
61.00 - 70.99	Quite practical
41.00 - 60.99	Not practical
0 - 40.99	Very impractical

Data analysis of students' creativity test results is carried out with the following Formula 3.

$$ER = \frac{MX1 - MX2}{2} \times 100\% \tag{3}$$

Information:
ER   = relative level of effectiveness
MX1 = Mean of group control
MX2 = Mean of experiment control

The paired t-test above was conducted with the help of SPSS software by comparing before and after treatment data from one sample group. The results of the calculation with the formula above will then be confirmed with the product effectiveness criteria in the Table 4.

Table 4. Product effectivity criteria

Range	Criteria
81.00 – 100.00	Very High
61.00 – 80.00	High
41.00 – 60.99	Moderate
21.00 – 40.99	Low
0 – 20.99	Very Low

3. Results

3.1 Analysis

At this stage, researchers identify the needs prioritized by teachers and students when implementing learning. In the preparation phase, teachers need to plan activities that can support the strengthening of Pancasila student profiles (Branch, 2010). On the other hand, student activities are designed by prioritizing the principle of active involvement in project activities. Strengthening student activities is carried out to equip students with various situations and challenges faced in everyday life (Ahied et al., 2020; Berge et al., 2016). It is in line with the curriculum guidelines, which emphasize strengthening Pancasila values through integration in all academic activities (Denissa et al., 2022; Rohmah et al., 2022). This condition is understandable, considering that Pancasila, as the foundation of the Indonesian state, is the foundation and guideline for the formation of national character. It is the trigger to accommodate through the development of student worksheets with the enrichment of Pancasila values.

The product development carried out refers to the cognitive development of students. The subjects in this study were seventh grade students with formal operational cognitive abilities. At this stage, it is marked by the ability to think logically in concrete situations (Arends, 2012; Rubinstein & Chor, 2014). Variations in different learning styles

are also a major consideration in the development of student worksheets to increase student acceptance (Reis & Renzulli, 2018). Recognizing learning styles is very important to ensure that the students' worksheets developed can be accessed by all students (Hidayat et al., 2023). Students' worksheets also provide reading texts or instructions that encourage students to write and read carefully. Through learning style analysis, researchers can design products that are accommodating and responsive to students' learning needs.

3.2 Design

Specifically, at this stage, the researcher designed the student worksheet, which consisted of a cover, project introduction, stage achievements, work steps, and progress flow obtained by students while working on the project. The selection of the *Bhinneka Tunggal Ika* theme teaches that although Indonesia consists of various tribes, religions, races, and cultures, all of these elements must unite in harmony. It is in line with one of the main elements of the Pancasila student profile, namely global diversity, which requires students to understand, appreciate, and live side by side with differences (Charles, 2000; Tagore & Aurobindo, 2024). Developing this understanding is important so that students are able to interact in a multicultural society without losing their national identity (Caires-Hurley et al., 2020; Selvaretnam, 2024).

3.3 Develop

This stage is the development of the previously designed worksheet. The student worksheet product developed at this stage is scenario-based with the project-based learning model. The use of this model is used because it is in accordance with the final goal planned to be obtained by students after learning. Furthermore, at this stage, experts, including material experts, learning design experts, and practitioners, validate the student worksheet. The student worksheet cover consists of the title, group member names, developer (researcher) identities, and themes. The introduction includes aspects of the topic, a brief description of the project, the relevance of the theme to the topic, and the facilities used (Table 5).

Table 5. The project introduction

Project Topic: Strengthening of brotherhood through of peace and anti-violence in schools		
Project Description	Topic Relevance	Facilities
Analyzing of violence cases in daily life then actualizing the results through anti-violence activity	Introducing peace culture and anti-violence school activity to empowering solidarity, unity, and nationality as a citizen of Indonesia	Schoolyard, classroom, stationery, videos, articles, pictures, and cases in daily life

Table 6. Learning outcomes

Dimension	Element	Sub-element	Target Achievement
Have faith in God Almighty and noble character	Human morality	Prioritize similarities with others and respect differences	▪ Recognizing perspectives and emotions/feelings from the perspective of other people or groups that one has never met or known. ▪ Prioritizing similarities and appreciating differences as a unifying tool in situations of conflict
Global Diversity	Reflective and responsible towards	Eliminating stereotypes and prejudice	Confirming, clarifying and demonstrating an attitude of rejecting stereotypes and

Dimension	Element	Sub-element	Target Achievement
	the experience of diversity		prejudices regarding group and ethnic identity

Learning outcomes (Table 6) integrated into the worksheet refer to learning outcomes at D-phase contained in the curriculum. The elements integrated include dimensions, elements, sub-elements and achievement targets. The students' worksheet development flow section includes aspects of elements and sub-elements (Table 7).

Table 7. The work steps on student worksheet

No	Work Steps
1	The teacher gathers information from students about their experiences of seeing violent incidents in their environment (schools brawls, fighting, bullying, etc.)
2	Students respond to the trigger questions from the above presentation. Explore information and student concerns through video presentations, articles, and images about violent events that have occurred. Students analyze the cases that occurred and discuss them;
3	Students form groups according to topics of interest after watching videos, articles, and images. Students discuss and analyze problems found in their environment related to the selected stimulus;
4	Students design real actions;
5	Students convey the results of their discussions through various interesting works (for instance; peace campaigns, peace speeches, peace and anti-violence poems, drama, etc.);
6	Students presents their work in front of the community and inviting others to uphold peace and be anti-violence campaign;
7	Students can reflect and evaluate their activities;
8	Students promote and follow up action after evaluation

Table 8. Students' worksheet validation

	Aspect	V1	V2	V3	Average	Percentage (%)
1.	Suitability of student worksheet with the Pancasila student profile *Bhinneka Tunggal Ika*	3.25	4	3.5	3.58	89.5
2.	The ability of student worksheet to provide knowledge according to the topic	3.75	3	3.25	3.33	83.25
3.	Coloring and graphic composition	4	4	4	4	100
4.	Display supporting images	3.75	3.5	4	3.75	93.75
5.	Text size and font	3.75	3.75	3.75	3.75	93.75
6.	The text can be read well	3.5	3.5	3.5	3.5	8.5
7.	The language used is easy to understand	3.5	4	4	3.83	95.75
	Validation Score				3.67	91.75
	Validity Criteria				Very Worth It	

Based on the Table 8, the overall validation results of students' worksheet obtained a score of 91.75%. By referring to the validity criteria table, the worksheet is very feasible to use in learning activity.

3.4 Implementation

The results of the product implementation show that the contextualization of the problems raised are problems that are relevant to acts of violence in the surrounding environment (including at school), such as fights and bullying. Furthermore, these problems can attract students' interest in providing responses and exploring more comprehensive information through videos, articles, and images about incidents of

violence that have occurred. The stimulation from these problems includes space for students to analyze cases and discuss them in small groups. Collaboratively, students formulate solutions and design concrete actions based on their creativity and experiences. Furthermore, the results of group discussions are then created through works such as campaigns, speeches, poems, and even dramas to increase public awareness. Students can also reflect on and formulate follow-up steps for the proposed solutions.

The above activities could not be completed in one day or a meeting. Depending on the learning objectives' achievement and the material's depth, they can take one, two, or even three days. After the activities were completed, the researcher gave teachers and students a questionnaire to determine the student worksheet's practicality. The results can be seen as Table 9 and Table 10.

Table 9. Teacher responses on students' worksheet

No	Statements	Scoring Scale				Score	Percentage (%)
		4	3	2	1		
1	I have to provide student worksheet more often in learning	√				4	100
2	The implementation of learning will be better if you use student worksheet		√			3	75
3	Using student worksheet is a part of my professional development		√			3	75
4	The enriched student worksheet with the Pancasila is relevant to currently curriculum	√				4	100
5	The enriched student worksheet is easy to use and suits to the my teaching style	√				4	100
	Practical Score					3.6	90
	Practicality Criteria					Very Practical	

Table 10. The student responses on students' worksheet

No	Statements	Scoring Scale				Score	Percentage (%)
		4	3	2	1		
1	The enriched student worksheet have a excellent quality	7	15	3	0	79	79
2	enriched student worksheet used in the lesson helped me achieve the learning objectives	19	3	3	0	91	91
3	enriched student worksheet is easy to apply according to my learning style	23	2	0	0	98	98
4	enriched student worksheet helps me study independently and in groups	21	4	0	0	96	96
5	Student worksheet based helps me be actively involved in learning	22	3	0	0	97	97
	Practical Score					92.2	92.2
	Practicality Criteria					Very Practical	

The results of the module's implementation shows that average of students' creativity is 86. The results were measured in the group of students who studied using the module, while the other group, who studied without the module, showed an average score of 74.25. On the other hand, the relative effectiveness level is 41.25% so the effectiveness criteria was a moderate level.

3.5 Evaluation

This stage is the stage where researchers conduct an evaluation to assess the effectiveness and efficiency of the student worksheet. However, the evaluation that

researchers conducted was only limited in the context of follow-up to the results of the implementation of student worksheet. With reference to the implementation results, the student worksheet is ready to be tested again with a wider sample and a different theme.

4. Discussion

Specifically, the product validation results show that the validity criteria are met very well. The assessment results from the experts can be interpreted as if the student worksheet developed by the researcher is valid, feasible and meets the standards or validity criteria of an educational product. So that it can be implemented to achieve learning objectives. This discussion is in line with that put forward by Plomp and Nieveen, (2013) that a feasible educational product must have valid, practical, and effective criteria, where validity is guided by the extent to which the level of intervention design is based on state-of-the-art or current knowledge (content validate), as well as several types of intervention components that consistently have relevance between one another (construct validate) (Akker et al., 2010).

The development of student worksheets with high validity values can make a significant contribution to the quality of learning, especially in the context of strengthening the profile of Pancasila learners (Haqiem, 2023; Sari & Sinthiya, 2022). On the other hand, this shows that the product has been designed by considering various important elements such as accuracy of content, suitability with learning objectives, and effectiveness in encouraging optimal student involvement. This is in line with research conducted by Hapsari and Prasetyaningtyas (2023); Prasetyaningtyas et al (2023) which states that high validity indicates that the contents of the student worksheet are in accordance with the desired curriculum and learning objectives, especially in the context of strengthening Pancasila values. This ensures that every activity in the student worksheet is truly designed to develop relevant skills and understanding, both in terms of knowledge and character. Thus, students are better prepared to face real challenges, both in academic environments and in community life.

4.1 Practicality of Student Worksheet

The easy-to-use educational products, it can indirectly help facilitate more active learning for its users, both teachers and students (Fahyuni et al., 2020; Firmansyah et al., 2022). This is in line with the results of practicality tests conducted by teachers and students which show that the developed students' worksheets are very practical in their use. This discussion is relevant to Plomp and Nieveen (2013) statement that the characteristic of a good quality product is that the product can be applied and is easy to use by teachers and students based on the methods determined by the researcher. The development of students' worksheets with high practicality values has a significant influence on the ease of implementation in learning. If students' worksheets are considered to have high practicality, it means that the product is not only easy to use by students and teachers, but can also be implemented in everyday learning situations efficiently and supports a more interactive learning process.

Sari et al (2024) in their research stated that practical student worksheets allow teachers to easily integrate project materials and activities into the learning process, without the need for complicated adaptations. With an intuitive design and clear instructions, the student worksheet makes it easy for teachers to provide direction and guidance to students during project activities (Baeng et al., 2022). In addition, practical students' worksheets help students understand instructions better, so they can focus on independent learning and collaborative activities. Karunanayaka et al (2016) and Sasmita et al (2021) stated that practical students' worksheets support students to participate more actively in learning. Students no longer rely entirely on teacher explanations because clear and coherent instructions in the students' worksheets allow them to actively participate in project activities. This involvement not only increases students'

learning motivation but also strengthens collaboration and communication skills that are important in the Pancasila learner profile.

4.2 The Effectiveness of Student Worksheet

According to Plomp and Nieveen (2013), the following characteristic of good quality is when learning objectives can be achieved. In the context of this study, learning carried out with the facilitation of students' worksheets aims to increase student creativity, which has been achieved based on the results of the study above. The development of students' worksheets that have high effectiveness values have positive implications for the overall quality of the product in supporting learning objectives. The effectiveness value obtained (41.25%) shows that students' worksheets are able to support the development of student competencies in the aspect of creativity (Anwar et al., 2012; Rohmah et al., 2023). Fajri (2020) and Sasmita et al. (2021) stated that effective students' worksheets are those that are able to facilitate students to achieve basic competencies and expected achievement indicators in learning. By utilizing project-based learning (PjBL), students' worksheets allow students to be actively involved in the learning process, encouraging deep understanding and development of 21st century skills (Nair et al., 2020; Trevallion & Nischang, 2021), such as collaboration, communication, creativity, and problem solving (Astutik et al., 2020; Spoelstra et al., 2014). This supports the development of the Pancasila student profile which emphasizes the integration of Pancasila values in students' daily lives (Alfaqi, 2015). Khairini et al (2021) and Sasmita et al 2021) said that effective students' worksheets also make it easier for teachers to evaluate students' learning progress. With clear evaluation instruments in students' worksheets, teachers can easily measure students' achievements based on predetermined criteria. This not only helps in formative assessment, but also in providing constructive feedback to improve students' performance during the learning process.

5. Conclusion

Based on the results of the research and discussion above, it can be concluded that the students' worksheet on the theme of Bhinneka Tunggal Ika developed by the researcher obtained very valid criteria from the experts; (2) the developed students obtained very practical criteria from the teachers and students. Based on the results of this research, further trials are needed on the effectiveness of the product.

6. References

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