

Development of Peace Education Modules through Problem-Based Learning to Improve Women's Conflict Resolution Skills

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Abstract

This study aimed to develop a peace education module based on Problem-Based Learning (PBL) to strengthen students' conflict-resolution skills, particularly female students, at STKIP Taman Siswa Bima. The research employed the ADDIE model of Research and Development (R&D). The participants consisted of 90 students for the needs analysis and 30 purposively selected students for a limited trial. Data were collected through needs questionnaires, expert validation, practicality tests, classroom observations, authentic assessments, and pre-/post-tests of conflict-resolution skills. The findings revealed that the module achieved an average expert validation score of 4.45 (very valid) and a practicality score of 4.4 (very practical). Classroom observations resulted in an average score of 4.34 (very good), while authentic assessments of conflict-resolution skills reached an average of 4.34 (87%), categorized as very good. Effectiveness testing showed a significant improvement in conflict-resolution skills, increasing from $M = 65.9$ ($SD = 8.7$) at the pre-test to $M = 78.8$ ($SD = 7.8$) at the post-test, $t(29) \approx 6.5$, $p < 0.001$, Cohen's $d \approx 1.1$ (large effect size). In conclusion, the PBL-based peace education module, which integrates the local cultural values of *Maja Labo Dahu* and moderate Islam, is valid, practical, and effective in enhancing students' conflict-resolution skills. The module is recommended for broader implementation across study programs and community service activities as a tangible contribution to strengthening peace education in higher education.

Keywords: Module; Peace Education; Problem-Based Learning; Conflict Resolution; Moderate Islam.

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INTRODUCTION

Violence and social conflict remain serious problems in various regions of Indonesia, including in Bima, West Nusa Tenggara, which has a long history of horizontal conflict due to political, religious, and socio-economic differences. In this context, women occupy a strategic position as agents of change, but they are the group most vulnerable to the effects of conflict. Data from the National Commission on Violence Against Women (Komnas Perempuan, 2023) recorded 457,895 cases of violence against women, most of which occurred within the household and community (Rentika

et al., 2023). The UN Women report (2022) shows that only 19% of global peace agreements are signed by women, and less than 25% of mediation delegates are from women's groups. The Wahid Foundation survey also shows that most women do not yet have access to peace education that equips them with conflict resolution, mediation, and non-violent communication skills.

Peace education, as described by Harris and Morrison, is a transformative process that equips individuals with the ability to resolve conflicts peacefully and through dialogue (Harris & Morrison, 2012). However, this approach has not been systematically integrated into higher education curricula, especially in conflict-prone areas such as Bima. In this context, the Problem-Based Learning (PBL) approach is a potential solution because it encourages students to think critically, collaborate, and solve real-world problems (Rambe & Nurwahidah, 2023) (Nurkhin & Pramusinto, 2020). Barrows asserts that PBL not only strengthens theoretical understanding, but also shapes the practical skills needed in a social context (Barrows, 1986). By adopting PBL in peace education, women can be better prepared to become effective agents of conflict resolution in their communities (Mustahiqurrahman et al., 2023)(Esteves, 2020).

Women in Bima have significant potential as agents of peace, but are often marginalized in conflict resolution capacity building efforts. In fact, their involvement is crucial in creating a culture of peace in their social environment (Ahlan et al., 2024; Krampe et al., 2021). This study aims to address the need for contextual peace education through the development of modules using the PBL approach, which are designed in accordance with the realities and challenges faced by women in Bima.

The urgency of this research supports the achievement of SDG Goal 5 (gender equality) and Goal 16 (peace and justice) (Nations, 2016), and in line with the Asta Cita Vision, which is to strengthen the ideology of Pancasila and human rights through peace education that instills values of tolerance and social justice, as well as strengthening human resource development that promotes gender equality and reinforces the strategic role of women in national development.

Theoretically, this approach is based on Paulo Freire's critical pedagogy, which emphasizes education as a tool for liberation and critical consciousness raising. (Freire, 1970). This module is expected to serve not only as a learning medium, but also as a tool for empowering women to play an active role in social transformation and conflict resolution at the local level.

Based on this phenomenon, the research question in this study is: How can the development of a peace education module based on Problem-Based Learning improve the conflict resolution skills of women in Bima, NTB? This question is very important to

answer, given the lack of systematic, applicable learning tools that are sensitive to the conflict experiences of women.

Furthermore, this research not only contributes theoretically to the development of a contextual peace education model, but also has practical implications for the development of a local curriculum that is responsive to the social and cultural challenges of the Bima community. The developed module will integrate local values, such as *mbojo* (Bima traditional values that uphold honor and togetherness), with universal principles of peace. Thus, this study is expected to encourage the formation of a generation of young women who are not only academically intelligent but also have critical awareness and skills in creating and maintaining peace in their environment. This research approach uses research and development (R&D) (Sugiyono, 2016) combined with the Problem-Based Learning (PBL) model as the core strategy in developing peace education modules. The problem-solving strategy is carried out through the identification of women's needs in Bima for conflict resolution skills through PBL-based contextual modules. The PBL approach is one of the approaches that enables students to face and resolve conflicts through real-life case simulations in learning. (Sri Wahyuni, 2022; (Aririguzoh, 2022).

This approach is constructivist in nature, whereby students are not merely recipients of knowledge, but also active subjects who reflect on the values of peace in their social dynamics. (do Amaral & Fregni, 2021; Purwoko et al., 2023). Critically, this approach is able to respond to local challenges in the form of high levels of gender-based and social conflict by offering practical educational solutions. This strategy is considered scientific because it uses stages of validity and effectiveness testing of the modules, and is considered in-depth because it integrates cognitive, affective, and psychomotor dimensions in strengthening conflict resolution skills in a sustainable and contextual manner.

Previous studies have explored various approaches to conflict resolution education and peace education. For example, research by Purwoko et al. used bibliotherapy-based group counseling and sociodrama to improve students' positive perceptions of conflict and collaborative tendencies in conflict resolution (Suharso et al., n.d.). Meanwhile, Suharso et al. developed a conflict resolution education model in high schools in Banyuwangi, emphasizing the importance of understanding peaceful values in managing social conflicts (Istianti et al., 2022). Another study by Istianti et al. integrated the local wisdom of 'Sabilulungan' into conflict resolution education to build social skills among elementary school students (Creswell, 2014). Further research by Rarasati et al. on the development of anti-bullying and focus modules for elementary school students (Rarasati et al., 2024) and Nasution et al.'s research on the Habituation/Integration Module for Peace and Conflict Resolution Skills for Schools (Nasution & Tambunan, 2021). An approach that specifically combines the Problem-Based Learning (PBL) model in the development of peace education modules to improve conflict resolution skills,

especially those focused on women in Bima, NTB, has not been widely researched. As can be seen in Figure 1, the results of bibliometric mapping using VOSviewer. The novelty of this research proposal lies in the integration of PBL as a core strategy in the development of modules that are contextual to the specific needs of women in Bima. This approach allows students to actively engage in real-life case simulations, encouraging critical reflection and the application of peace values in their social context. This method also considers cognitive, affective, and psychomotor dimensions simultaneously, which is expected to result in improved conflict resolution skills that are sustainable and relevant to the local challenges faced.

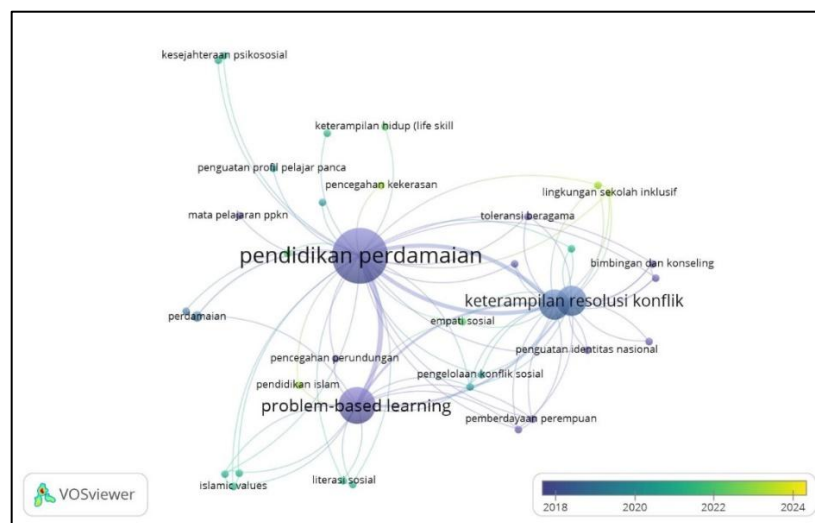


Figure 1. Bibliometric visualization using VOSviewer

This study uses the Research and Development (R&D) method with a qualitative and quantitative approach (Branch & Varank, 2009). The development model applied is the ADDIE model, which includes the stages of analysis, design, development, implementation, and evaluation (Gustafson, 1991; Sistermans, 2020) to develop peace education modules using a Problem-Based Learning approach to improve women's conflict resolution skills.

The research subjects consisted of two different groups. First, a needs analysis was conducted on 90 students from various study programs at STKIP Taman Siswa Bima to map the initial conditions of conflict resolution skills. Second, a limited trial of the peace education module was conducted on 30 students (1 class) who were selected purposively. The selection of the trial sample took into account the diversity of the students' backgrounds and their active involvement in campus activities. The research instruments included a needs analysis questionnaire, expert validation instruments, practicality test instruments, authentic assessment rubrics, and conflict resolution skills tests (pre-test and post-test). The content validity of the instruments was ensured through expert assessment involving experts in education, gender, local culture, learning design, and language. The results of the expert assessment were analyzed using

a percentage formula to determine the level of validity, while the reliability of the instruments was tested using Cronbach's Alpha coefficient, which showed a value of $\alpha = 0.87$, thus categorizing it as highly reliable.

Data analysis was conducted quantitatively and qualitatively. Validation and practicality data were analyzed descriptively using percentages and category interpretations, while module effectiveness was analyzed using a paired-sample t-test to measure differences in pre-test and post-test scores for conflict resolution skills in $N = 30$ students. In addition to statistical significance, this study also calculated the effect size (Cohen's d) to see the strength of the module's influence. All participants voluntarily participated in the study by providing informed consent, and the confidentiality of their identities was maintained in accordance with applicable research ethics. The research flow can be seen in Figure 2.

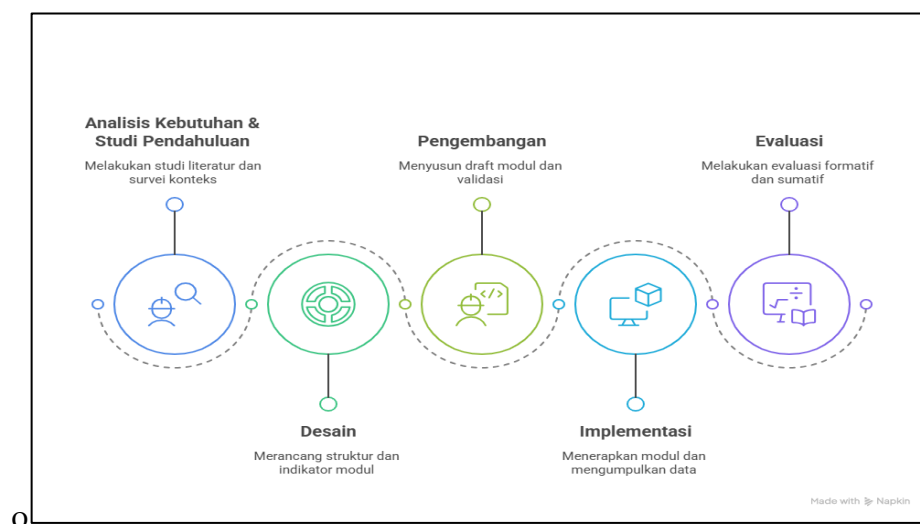


Figure 2. Research Flow Chart

This research procedure was carried out through five main stages of the ADDIE model, namely analysis, design, development, implementation, and evaluation. In the analysis stage, researchers identified the needs, problems, and local context of women in Bima, NTB. This process was carried out through the distribution of questionnaires and interviews with students and lecturers on issues of social and gender conflict, analysis of student characteristics with a focus on the socio-cultural conditions of women in Bima, and a study of curriculum documentation that did not yet integrate peace education. This analysis was enriched by a literature review on the effectiveness of Problem-Based Learning (PBL) and the identification of field constraints, including the limitations of contextual modules and the lack of training for female facilitators.

The design stage was carried out by compiling modules based on PBL theory and peace education principles. The design included formulating learning objectives that emphasized conflict resolution skills, compiling PBL scenarios in the form of local

conflict case studies, determining active learning strategies based on dialogue and group work, developing authentic assessment instruments, and integrating local values and moderate Islam. Next, the development stage produced a draft module that was validated by experts in education, gender, and local culture, then revised according to the input. The product was equipped with supporting media such as narrative videos and facilitator guides to ensure the feasibility of implementation.

The implementation stage was carried out through a limited trial in one class with 30 students, facilitated by trained lecturers. The learning process involved conflict simulation, group discussions, participatory observation, and feedback collection from participants and facilitators. Evaluation was conducted formatively and summatively, including measuring the effectiveness of the module through pre- and post-tests of conflict resolution skills, analyzing improvements in critical thinking and empathy, and evaluating the acceptance of the module from the perspective of women and local culture. Data were analyzed using descriptive quantitative and qualitative approaches. Expert validation and practicality test results were analyzed using percentage formulas, while module effectiveness was tested using paired-sample t-tests and effect sizes (Cohen's d). The evaluation results form the basis for recommendations for module refinement and wider implementation in the context of peace education.

RESULT AND DISCUSSION

This study aims to develop a contextual Problem-Based Learning (PBL) peace education module for women in Bima, NTB, and measure its effectiveness in improving conflict resolution skills. Initial needs analysis (N = 90) shows that the majority of female students in Bima face social conflicts in their daily lives, whether in their families, campuses, or communities. As many as 73% of respondents stated that they had experienced conflict, which confirmed the need for conflict resolution skills as part of their education. Data on respondent characteristics also showed that the majority were aged 18–23 years (80%) and came from education (60%) and social (40%) majors, thus having adequate academic readiness to participate in problem-based learning (Table 1).

Table 1. Characteristics of Female Student Respondents in Bima (N = 90)

Characteristics	Frequency	Percentage (%)
Age		
18–20 years old	36	40
21–23 years old	36	40
>23 years old	18	20
Major		
Education	54	60
Social	36	40
Ever faced social conflict		
Yes	66	73

No	24	27
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In addition, respondents also showed high motivation to participate in peace activities, as reflected in their PBL readiness and local involvement scores. This indicates that PBL-based peace education modules need to utilize participants' real experiences as learning resources, while strengthening critical thinking, empathy, and conflict resolution skills. Thus, developing modules that are responsive to the local conditions and needs of women not only increases the effectiveness of learning, but also ensures the social and cultural relevance of the designed peace education interventions.

Table 2. Results of Student Learning Motivation in Peace Education (N = 90)

No	Statement of Motivation for Learning	Average Score (1-5)	Percentage (%)	Category
1	I am motivated to learn because the material on peace is relevant to everyday life.	4,3	86	Very High
2	I am more enthusiastic when learning involves discussion and group work.	4,2	84	High
3	I feel I need modules to help me understand conflict and how to resolve it.	4,4	88	Very High
4	I am encouraged to apply the values of peace in my daily social interactions.	4,1	82	High
Average	-	4,25	85	High-Very High

Note: Scores were obtained through a learning motivation questionnaire using a Likert scale of 1-5 (1 = very low, 5 = very high). The average score was then converted to a percentage.

The results of the analysis of learning motivation among 90 students show that, in general, students have high to very high motivation in participating in peace education. The average overall score reached 4.25 out of 5, or equivalent to 85%, which falls into the high to very high category.

More specifically, the most prominent motivational aspect is students' need for modules as additional learning resources, with an average score of 4.4 (88%), which is categorized as very high. This confirms that students not only recognize the importance of conflict resolution skills, but also need structured and contextual learning media. Additionally, motivation to learn due to the relevance of the material to everyday life is also high (4.3 or 86%), indicating that students see a direct connection between peace education and their real-life experiences.

Meanwhile, enthusiasm for learning through group discussions (4.2 or 84%) and encouragement to apply the value of peace in social interactions (4.1 or 82%) were also rated highly. These findings show that students are well prepared to engage in Problem-Based Learning (PBL), which emphasizes discussion, collaboration, and participatory problem solving.

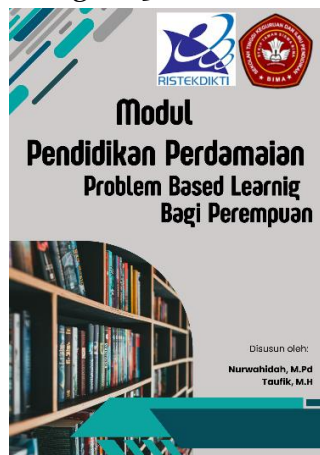
Based on the results of an analysis of the needs and local conditions of women in Bima, a peace education module was developed using a Problem-Based Learning (PBL)

approach to improve conflict resolution skills. This module is designed to be contextual, responsive to women's experiences, and culturally relevant. The development of the module follows a systematic process: formulation of learning objectives, preparation of PBL scenarios, determination of active learning strategies, development of assessment instruments, and integration of local values and moderate Islam.

At the design stage, learning objectives were formulated with an emphasis on strengthening students' conflict resolution skills. The competencies to be achieved included the ability to identify sources of conflict, use peaceful communication strategies, and develop consensus-based solutions. These objectives were in line with the principles of peace education, which emphasize a balance between cognitive, affective, and psychomotor aspects (Bar-Tal, 2002). To achieve these objectives, a PBL-based learning scenario was developed based on the social realities of female students in Bima, such as family conflicts due to early marriage, gender inequality in the division of domestic labor, and disputes between groups in social activities. The selection of these real-life cases is expected to encourage students to engage in dialogue about concrete experiences in their environment, thereby making the learning process more contextual and meaningful (Hmelo-Silver, 2004).

The method used emphasizes active learning based on dialogue, reflection, and group work, in line with the characteristics of PBL, which places students as active learners who construct knowledge through interaction and collaboration (Hmelo-Silver & Ertmer, 2015). Small group discussions were used to explore cases, individual reflections were directed at cultivating empathy, while class dialogues became a space for sharing perspectives and developing peaceful solutions. To support the achievement of objectives, authentic assessment instruments were developed in the form of communication, empathy, and conflict resolution skill rubrics so that lecturers could assess students' actual skills, not just cognitive knowledge (Johnson & Johnson, 2006). This module also integrates the local values of Maja Labo Dahu, which emphasize shame for doing wrong and fear of breaking rules, as well as moderate Islamic values such as *tasamuh* (tolerance), *musyawarah* (deliberation), and *ukhuwah* (brotherhood). This integration is expected to make the module more culturally and religiously relevant, in line with a contextual educational approach that connects learning with the local and spiritual values of the community (Tilaar, 2002).

Figure 3. Module Cover



The module design at this stage shows harmony between student needs, local context, and peace education theory. The formulation of learning objectives that emphasize conflict resolution skills provides a clear direction that this module not only transfers knowledge but also develops students' social-emotional competencies. The PBL scenario based on the real-life case of the women of Bima underscores the importance of contextualizing learning. According to (Hmelo-Silver, 2004), The relevance of cases to students' experiences increases cognitive engagement and motivation to learn. Thus, local cases can be an effective means of building critical awareness and practical skills in managing conflict. The active learning strategy chosen reinforces the role of students as active learners. In line with Savery (2015), PBL facilitates collaboration, problem solving, and dialogue-based decision making. This is crucial in peace education, as peaceful communication and empathy skills are more easily cultivated through active interaction than lectures. The development of authentic assessment instruments is also an important step in ensuring that learning outcomes can be measured comprehensively. Johnson & Johnson (2006) emphasize that conflict resolution skills must be observed in real practice, so that communication and empathy rubrics can be valid indicators for assessing student learning outcomes. Finally, the integration of local values and moderate Islam ensures that this module does not merely follow global theory but is also grounded in Bima culture. This is relevant to Tilaar's (2012) opinion that meaningful education is education rooted in local culture and the noble values of society. With this integration, it is hoped that the module will be more accepted by students while strengthening their identity as agents of change based on cultural and religious values.

During the development stage, the initial product of the module was compiled in the form of a draft based on thematic learning units. Each unit contained learning objectives, case studies, PBL steps, authentic assessment instruments, and the integration of Maja Labo Dahu values and moderate Islam. The compilation of this draft was a continuation of the previous design, with an emphasis on the integration of

materials and systematic learning activities so that students could follow the learning process in a coherent manner.

The draft module was then reviewed by experts in education, gender, and local culture to ensure the validity of its content. The involvement of multidisciplinary experts was important to ensure that the module was not only academically valid, but also sensitive to gender issues and appropriate to the socio-cultural context of the Bima community.

Table 4. Expert Validation Results for the Peace Education Module (N = 5 experts)

Aspects Assessed	Average Score (1-5)	Description
Alignment of content with learning objectives	4,6	Very valid
Relevance of case studies to local context and gender	4,4	Very valid
Clarity of language and presentation of material	4,2	Very Valid
Appropriateness of learning methods and strategies	4,5	Very valid
Meaningfulness of authentic assessment instruments	4,3	Valid
Integration of Maja Labo Dahu values and moderate Islam	4,7	Very valid
Overall average	4,45	Very valid

Note: The validation scale uses a range of 1–5 (1 = not valid at all, 5 = very valid). The overall average of 4.45 indicates that the module is in the very valid category.

Based on the validation results, the module received an average score of 4.45 on a scale of 1–5. This indicates that the module is in the “highly valid” category and is suitable for use with minor revisions. The aspect with the highest score was the integration of Maja Labo Dahu values and moderate Islam (4.7), which demonstrates the module's strength in linking peace education theory with local and religious wisdom.

Meanwhile, aspects with relatively lower scores were language clarity and material presentation (4.2), which provided important input for improving the consistency of terminology, simplicity of sentences, and layout of the module to make it easier for students to understand. The relevance of case studies (4.4) also received comments from validators, particularly the need for a greater variety of cases that more broadly represent the experiences of women in Bima.

In general, the results of the validation data analysis show that the module has met the criteria for content, language, strategy, and learning instruments. However, minor improvements are needed to make the module more responsive to gender issues and more communicative in its presentation.

The implementation stage was carried out through limited trials to observe the effectiveness of the module in improving students' conflict resolution skills. Data was

obtained through observation of activities, feedback questionnaires, and authentic skill assessments. As can be seen in Table 5, Table 6, and Table 7.

Table 5. Results of the Practicality Test of the Peace Education Module by Students (N = 30)

Aspects Assessed	Average Score (1-5)	Category
Ease of use of the module	4,5	Very Practical
Clarity of learning instructions	4,4	Very Practical
Comprehensibility of content	4,3	Very Practical
Attractiveness of appearance and design	4,2	Very Practical
Completeness of module components	4,4	Very Practical
Overall average	4,4	Very Practical

Description: The overall average of 4.4 indicates that the module is very practical for use in learning.

The practicality test results show that the peace education module was considered very practical by students, with an overall average score of 4.4 out of 5. This indicates that the module is easy to understand, interesting, and can be used effectively in the learning process.

More specifically, the aspect with the highest score was ease of use of the module (4.5), which means that students did not experience difficulties in following the designed learning activities. The aspects of clarity of learning instructions (4.4) and completeness of module components (4.4) also received excellent ratings, indicating that the learning instructions and the completeness of the materials and exercises were appropriate for the needs.

In addition, the comprehensibility of the material (4.3) and the attractiveness of the module layout (4.2) received relatively lower scores than other aspects, although they were still considered very practical. This suggests that the presentation of the material could be made more concise and the visualization of the module could be strengthened to make it more attractive to students.

Overall, these results confirm that the peace education module is not only valid in terms of content, but also practical for use in the classroom setting, thereby supporting the effectiveness of its implementation in the field.

Table 6. Results of Observations on the Implementation of the Peace Education Module in Class (N = 30)

Observed Aspects	Average Score (1-5)	Category
Active student participation in discussions	4,3	Very Good
Students' ability to relate the material to real-life experiences	4,2	Very Good
Application of peace values in simulations	4,4	Very Good
The role of facilitators in guiding learning	4,5	Very Good
Class dynamics during the PBL process	4,3	Very Good
Overall average	4,34	Very Good

Note: Observations were conducted using a Likert scale-based instrument ranging from 1 to 5 (1 = very low, 5 = very high).

The results of observing the implementation of the module in class show that learning took place very well. The average overall score reached 4.34, which is in the very good category. Student participation in discussions, the application of peace values in

simulations, and class dynamics during the PBL process were active and focused. The role of the facilitator was also considered to be optimal in directing the learning process.

These findings reinforce the results of the practicality test in Table 5, in which students assessed the module as easy to use, with clear instructions and content that was easy to understand. In other words, the practicality of the module as perceived by students (Table 5) is consistent with the results of direct observation in the classroom (Table 6). The consistency of quantitative and observational data shows that the module is not only practical in perception but also feasible in actual learning practice..

Table 7. Results of Authentic Assessment of Conflict Resolution Skills of Students (N = 30)

Skills Assessed	Indicators	Average Score (1-5)	Percentage (%)	Category
Conflict Analysis	Able to identify the root causes of conflict and contributing factors	4,3	86	Very Good
Peaceful Communication	Able to express opinions assertively without offending others	4,2	84	Good
Teamwork	Able to collaborate in finding peaceful solutions within a group	4,4	88	Very Good
Empathy and Social Awareness	Able to understand other people's perspectives and show concern for others	4,3	86	Very Good
Reflection on Peace Values	Able to reflect on learning experiences and apply the values of peace	4,5	90	Very Good
Overall Average	-	4,34 4,34	87 87	Very Good

Description: Authentic assessment uses a Likert scale-based rubric of 1-5 (1 = very low, 5 = very high). The percentage is calculated from the average score for each indicator, and categories are determined based on conversion to a rating scale (0-20% = Very Low, 21-40% = Low, 41-60% = Fair, 61-80% = Good, 81-100% = Very Good). Authentic assessment shows student achievement in the good to very good categories (M = 4.2 or 84%). The highest score was in conflict resolution skills (86%), while the empathy score (82%) was relatively lower, so that in the next stage, reflection exercises need to be added to strengthen the ability to understand other people's perspectives.

The results of the authentic assessment show that students' conflict resolution skills are in the excellent category with an overall average score of 4.34 (87%). Of the five aspects assessed, reflection on the value of peace received the highest score (4.5 or 90%), followed by teamwork (4.4 or 88%), which confirms students' ability to collaborate in resolving conflicts peacefully. The aspects of conflict analysis and empathy both scored 4.3 (86%), while peaceful communication scored relatively lower (4.2 or 84%), although it remained in the good category.

These findings indicate that students not only understand the concept of conflict resolution theoretically, but are also able to apply it in real simulations. In addition, this authentic assessment reinforces the findings of the practicality test (Table 5) and implementation observation (Table 6), namely that the peace education module developed is truly practical and effective in improving students' conflict resolution skills.

In addition to the quantitative analysis above, the observation results also showed an improvement in the quality of classroom interactions. Female students appeared to be more courageous in sharing their personal experiences related to conflicts they had experienced, while male students demonstrated argumentation skills that were more focused on finding solutions. This is in line with (Rahman & Na'ima, 2024) which emphasizes that PBL combined with Islamic values can improve students' critical and collaborative thinking skills. The role-play method in conflict simulation has been proven to provide students with opportunities to practice peaceful communication in real life. Participants found it easier to understand the concepts of tolerance and deliberation because they were directly practiced in situations that resembled social reality. These findings are consistent with (Annisa, 2025) which states that PBL and cooperative learning are effective in improving problem-solving skills in the context of Islamic education, especially related to tolerance.

Thus, the results of this implementation show that the PBL-based peace education module is not only valid and practical, but also effective in increasing active participation, empathy, and conflict resolution skills among students. The success of the implementation was influenced by the quality of facilitation, the relevance of real-life cases, and the integration of Maja Labo Dahu cultural values and moderate Islam in the learning process, as confirmed by the latest findings in peace education literature. (Hukom et al., 2023; Nadhirah & Adiputra, 2023).

Module evaluation was conducted using formative and summative approaches to assess effectiveness, acceptance, and recommendations for further development. The instruments used included pre-test and post-test questionnaires on conflict resolution skills, observation rubrics, written reflections, in-depth interviews, and participatory observation. The pre-test and post-test data are shown in Table 8.

Table 8. Results of the Peace Education Module Effectiveness Test Based on Aspects (N = 30)

Aspects Assessed	Pre-test Average (M±SD)	Average Post (M±SD)	Difference (Δ)	t(29)	p	Cohen's d	Description
Assertive Communication	64,5 ± 9,0	77,2 ± 8,1	12,7	≈ 6,2	< 0,001	≈ 1,0	Effective (large)
Empathy	66,8 ± 8,5	79,4 ± 7,6	12,6	≈ 6,4	< 0,001	≈ 1,1	Effective (large)
Negotiation	65,1 ± 8,9	78,0 ± 8,0	12,9	≈ 6,5	< 0,001	≈ 1,1	Effective (large)
Mediation	67,2 ± 8,3	80,5 ± 7,7	13,3	≈ 6,7	< 0,001	≈ 1,1	Effective (large)
Total Conflict Resolution Skills	65,9 ± 8,7	78,8 ± 7,8	12,9	≈ 6,5	< 0,001	≈ 1,1	Effective (large)

Description: All aspects of conflict resolution skills improved significantly after the implementation of the Problem-Based Learning (PBL) module. Values of $p < 0.001$ in all

aspects indicate strong statistical significance, while Cohen's d values ≈ 1.0 – 1.1 indicate a large effect on each aspect.

After implementing the Problem-Based Learning (PBL) module, all aspects of conflict resolution skills showed significant improvement. In terms of assertive communication, the average score increased from 64.5 to 77.2 ($\Delta = 12.7$; $t(29) \approx 6.2$; $p < 0.001$; $d \approx 1.0$), indicating an improvement in students' ability to express their opinions firmly while still respecting others. The empathy aspect also increased from 66.8 to 79.4 ($\Delta = 12.6$; $t(29) \approx 6.4$; $p < 0.001$; $d \approx 1.1$), reflecting a higher sensitivity to the feelings and perspectives of others.

Furthermore, negotiation skills increased from 65.1 to 78.0 ($\Delta = 12.9$; $t(29) \approx 6.5$; $p < 0.001$; $d \approx 1.1$), indicating the students' ability to reach mutually beneficial peaceful agreements. In terms of mediation, students' scores rose from 67.2 to 80.5 ($\Delta = 13.3$; $t(29) \approx 6.7$; $p < 0.001$; $d \approx 1.1$), which means that their skills in facilitating conflict resolution between other parties have also been honed.

Overall, the average conflict resolution skill score increased from 65.9 (SD = 8.7) on the pre-test to 78.8 (SD = 7.8) on the post-test, with a difference of 12.9 points ($t(29) \approx 6.5$; $p < 0.001$; $d \approx 1.1$). This improvement proves that the peace education module developed is not only valid and practical, but also effective in strengthening students' conflict resolution skills in various key aspects.

Qualitative findings from interviews and participatory observations further reinforce the quantitative results. Female students feel more confident in voicing their experiences of conflict, while male students emphasize that conflict simulations make them more aware of the importance of peaceful communication. Facilitators assessed that the practical module was useful because of its clear guidelines, allowing class discussions to be focused without losing their participatory nature. The local values of Maja Labo Dahu were also recognized as relevant and easy for students to internalize, as they are rooted in the social norms they live by every day.

Although the results were positive, the evaluation also identified several aspects that need improvement, such as the limited diversity of case examples and the use of language in the module, which needs to be simplified to be more inclusive. Overall, the results of the formative and summative evaluations show that this module is not only valid and practical, but also effective in improving students' conflict resolution skills. Therefore, the module is recommended for wider implementation, both in various study programs and community service activities, as a tangible contribution to strengthening peace education based on cultural values and moderate Islam.

The results of the study show that the Problem-Based Learning (PBL)-based peace education module is effective in improving students' conflict resolution skills in various

aspects, including assertive communication, empathy, negotiation, and mediation. Consistent score improvements in all aspects with large effect sizes (Cohen's $d \approx 1.0-1.1$) indicate that integrating the PBL approach with local wisdom can create meaningful learning experiences. These findings are in line with (Freire, 1970) view that dialogical and contextual education will enable learners to develop critical awareness and social skills that are relevant to everyday life.

In terms of assertive communication, significant improvements show that students are increasingly able to express their opinions clearly and respect others. This supports the findings of Harris and Morrison (2013) that peaceful communication skills are the main foundation of peace education. Similarly, in terms of empathy, the results of the study confirm that modules that link material to local experiences are able to broaden students' social sensitivity. Research (Annisa, 2025) also emphasizes that empathy is a prerequisite for reducing conflict escalation, especially among adolescents and students.

Improved negotiation and mediation skills indicate that students are not only better able to find joint solutions, but also play an active role as facilitators in resolving conflicts. The integration of local wisdom into learning strengthens students' capacity as agents of peace in their communities. Thus, the findings of this study reinforce previous literature and add new evidence that contextual modules combining PBL with local cultural values are effective in higher education in rural areas.

Overall, this discussion confirms that the peace education module developed has proven to be valid, practical, and effective, and has contributed significantly to strengthening students' conflict resolution skills. This supports efforts to achieve the Sustainable Development Goals (SDGs), particularly Goal 16 on peace, justice, and strong institutions.

CONCLUSION

This study confirms that the Problem-Based Learning (PBL)-based peace education module developed is highly relevant to the needs of university students, particularly in the socio-cultural context of Bima. The integration of local Maja Labo Dahu values and moderate Islamic principles in this module makes peace education more contextual, inclusive, and easier for students to internalize. The results of the study show that the module is not only academically valid and practical, but also effective in improving conflict resolution skills. This shows that a learning approach that combines innovative methods with local wisdom is able to respond to contemporary educational challenges that require the younger generation to have peaceful, collaborative, and adaptive competencies.

The main contribution of this research is to enrich the literature on peace education through a locally-based approach that has rarely been studied before. This module proves that peace education can be designed in a more authentic way, so that it is not only theoretical discourse, but also a practical application that has a direct impact on students and their social environment. Thus, this research provides a strong basis for the development of a curriculum that is responsive to cultural diversity and community needs. In practical terms, this module is worthy of wider implementation in various study programs and community service activities, while theoretically, this research opens up opportunities for further study on the integration of local culture and moderate religious values in peace education in Indonesia.

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