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## Project-Based Learning and Active Learning in Creating *BIPA* Material to Bolster SDGs

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### Abstract

This study aimed to explore the effectiveness of collaborative Project-Based Learning (PJBL) and active learning in the BIPA (Indonesian for Foreign Speakers) course, which could serve as a promotional medium for the BIPA program to support the achievement of SDG Quality Education. The method used was classroom action research with a mixed method involving two learning cycles. The study participants were students from the Indonesian Education Study Program who took the BIPA course. The findings show collaboration between these two learning models successfully enhanced student engagement, creativity, and learning outcomes quality. The results in the form of drafts of BIPA teaching materials developed by the students showed good quality. At the same time, the project helped build collaboration, communication, and creativity, which supported SDG Industry, Innovation, Infrastructure, and SDG Peace and Justice through cultural diplomacy and promotion of the Indonesian language at the international level.

### Keywords

Active learning, *BIPA*, project-based learning, SDGs education

### Article History

Received 16 September 2024  
Accepted 12 December 2024

### How to Cite

Mayrita, H., Sari, A. P. I., Yanti, C. H., Suardi, M., & Pratiwi, A. R. (2024). Project-based learning and active learning in creating *BIPA* material to bolster SDGs. *Indonesian Research Journal in Education | IRJE |*, 8(2), 784 - 801. <https://doi.org/10.22437/irje.v8i2.38843>

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## **Introduction**

The Indonesian for Foreign Speakers (BIPA) program aims to help foreign speakers learn Indonesian. This program is important because Indonesian is not only the official language of Indonesia but is also widely used in various formal and informal contexts, domestically and by Indonesian people abroad (Alawiyah, 2023). BIPA is specifically designed for individuals who do not use Indonesian as their first language, helping them gain language skills and an understanding of Indonesia's rich and diverse culture. With the rise of globalization and international interaction, language learning is becoming increasingly important. Mastering Indonesian opens opportunities for wider communication and introduces Indonesian culture to the global community (Budiawan & Rukayati, 2018). In addition, the BIPA program serves as a medium to promote the social values, customs, and cultural diversity of Indonesia, which is in line with the goals of international cooperation (Jannah & Yanti, 2020).

The development of the BIPA program aligns with the vision and mission of the Sustainable Development Goals (SDGs), particularly SDG 4: Quality Education, which emphasizes the provision of inclusive, equitable, and quality education for all. In the context of BIPA, this means designing learning programs that are accessible to all, regardless of background, offering foreign speakers a comprehensive understanding of both the language and culture of Indonesia. Additionally, SDG 16: Peace, Justice, and Strong Institutions is also related to BIPA's efforts to introduce the Indonesian language and culture to foster cross-cultural understanding, build peace, and strengthen international relations.

The implementation of quality learning models in courses related to BIPA is in line with the vision and mission of the Sustainable Development Goals (SDGs), especially SDG 4: Quality Education, which emphasizes the provision of inclusive, equitable, and quality education for all. In the context of BIPA, this means designing learning programs accessible to everyone, regardless of background, and providing a comprehensive understanding of the Indonesian language and culture to foreign speakers. Furthermore, SDG 16: Peace, Justice, and Resilient Institutions is also related to BIPA's efforts to introduce the Indonesian language and culture to foster cross-cultural understanding, promote peace, and strengthen international relations.

The importance of developing the BIPA Program to the vision and mission of the Sustainable Development Goals, especially SDG 4, Quality Education, emphasizes the provision of inclusive, equitable, and quality education for all. In the context of BIPA, this means designing learning programs that are accessible to everyone, regardless of background, and providing opportunities for foreign speakers to gain a comprehensive understanding of the Indonesian language and culture. In addition, SDG 16, which focuses on Peace, Justice, and Strong Institutions, is connected to BIPA's efforts in introducing Indonesian language and culture as a means of increasing cross-cultural understanding, building peace, and strengthening international relations.

On the other hand, the quality of BIPA learning is highly dependent on the development of effective and relevant teaching materials, as well as innovative teaching methods. Therefore, improving the quality of BIPA education requires a more interactive and applicable approach.

Through the BIPA Teaching Materials Development course, permanent students of the Indonesian Language Education Study Program at Bina Darma University (UBD) learn to create BIPA teaching materials for BIPA learners using the Project-Based Learning (PJBL) and active Learning models. This method not only optimizes student involvement but also improves their skills in applying Indonesian in real-life contexts. Collaboration between PJBL and Active Learning is expected to produce useful products, such as drafts of BIPA teaching materials, which can not only be used in BIPA learning but also as promotional media for the BIPA program.

Based on this background, this study aims to apply the collaboration of PJBL and active learning in BIPA teaching materials in the BIPA Teaching Materials Development course. The goal is to create teaching materials that are not only effective in teaching Indonesian but can also be an attractive promotional tool for prospective BIPA participants at Bina Darma University. The resulting products, including draft teaching materials written in Indonesian and English, are expected to contribute to improving the BIPA program and support the achievement of SDG goals, especially in education.

## **Literature Review**

### ***BIPA***

The BIPA program uses a structured curriculum that is adjusted to the level of ability of the participants, from beginner to advanced. The teaching materials include grammar, vocabulary, and communication skills exercises (Mayrita & Abror, 2024; Mayrita et al., 2024). To introduce the BIPA Program, the Indonesian Language Education Study Program, Faculty of Sharia, UBD, includes BIPA learning into the compulsory course curriculum, namely 'BIPA Teaching Materials Development'. Through learning in this course, it is hoped that students will not only understand the theory but also can compile BIPA teaching materials, by the Course Intended Learning Outcomes (CILO) of the BIPA Teaching Materials Development course. To achieve the learning outcomes of this course, researchers will use a combination of the Project-Based Learning (PJBL) model and active learning.

Therefore, the problem that will be discussed in this study is how the results of student achievement in the BIPA Teaching Materials Development course are influenced by the combination of the PJBL learning model and active learning. The Indonesian Language Program for Foreign Speakers (BIPA) is designed to facilitate Indonesian language learning for foreign speakers. This program focuses not only on language skills but also on understanding the rich and diverse Indonesian culture. In the collaboration between Project-Based Learning (PJBL) and Active Learning in the BIPA Teaching Materials Development course, various approaches and methods are integrated, which are expected to produce useful student products, such as drafts of BIPA teaching materials. These materials are not only intended for BIPA learning but also function as promotional media for the BIPA program. Both approaches are very much in line with the goals of education that are oriented towards the Sustainable Development Goals (SDGs), especially SDG 4, which focuses on quality education.

### *Quality education and SDGs*

The Quality Education Target in SDG 4 emphasizes the importance of providing inclusive, equitable, and quality education for all. BIPA learning makes a significant contribution to this target, as it not only teaches Indonesian but also provides an opportunity to understand Indonesian culture. Through the BIPA program, non-native speakers can access in-depth education on language and culture, which contributes to peace, cross-cultural understanding, and international cooperation, in line with SDG goal 16 on peace and justice.

### *Active learning in BIPA learning*

Active learning is an approach that directly involves students in the learning process, changing students from passive listeners to active learners (Børte et al., 2020). This method has been proven effective in increasing student engagement, strengthening conceptual understanding, and developing critical thinking and teamwork skills (Nguyen et al., 2021). In the context of BIPA, active learning helps students not only learn Indonesian but also actively interact with learning materials through various methods such as group discussions, case studies, and problem-solving. This approach enriches the learning experience by providing opportunities for students to discuss and collaborate in teams, thereby increasing their understanding of the Indonesian language and culture.

The application of active learning in the BIPA Teaching Material Development course at Bina Darma University is expected to accelerate students' understanding of how to create effective teaching materials. With this approach, students are encouraged to be more active in seeking information, discussing, and collaborating to produce quality learning materials.

### *Project-based learning (PJBL) in BIPA learning*

One of the most effective approaches to enhancing student engagement was Project-Based Learning (PJBL). PJBL is a learning method that focuses on real-life projects, allowing students to learn through solving real-world problems and producing tangible outcomes (He et al., 2023). In the context of BIPA, PJBL enabled students to work on projects related to creating teaching materials, allowing them to apply theoretical knowledge to practical and contextual situations.

In BIPA learning, PJBL integrated interdisciplinary knowledge, problem-solving skills, critical thinking, and teamwork. The project provided students with the opportunity to produce real-world products, such as drafts of BIPA teaching materials and learning videos, which could be used to promote the BIPA program to prospective learners. Through PJBL, students could better understand and appreciate the importance of developing effective teaching materials that met the program participants' needs.

*Collaboration between PJBL and active learning in developing BIPA teaching materials*

Collaboration between PJBL and active learning is expected to create a dynamic and interactive learning environment in the development of BIPA teaching materials. Project-based learning provides authentic challenges that connect theory with practice, while active learning strengthens students' understanding by involving them in active discussions and collaboration. The combination of the two approaches supports the achievement of competencies in the BIPA Teaching Materials Development course, such as the ability to develop teaching materials that are appropriate to the needs of BIPA participants and teamwork skills and apply knowledge in real-life situations (Safitri et al., 2024).

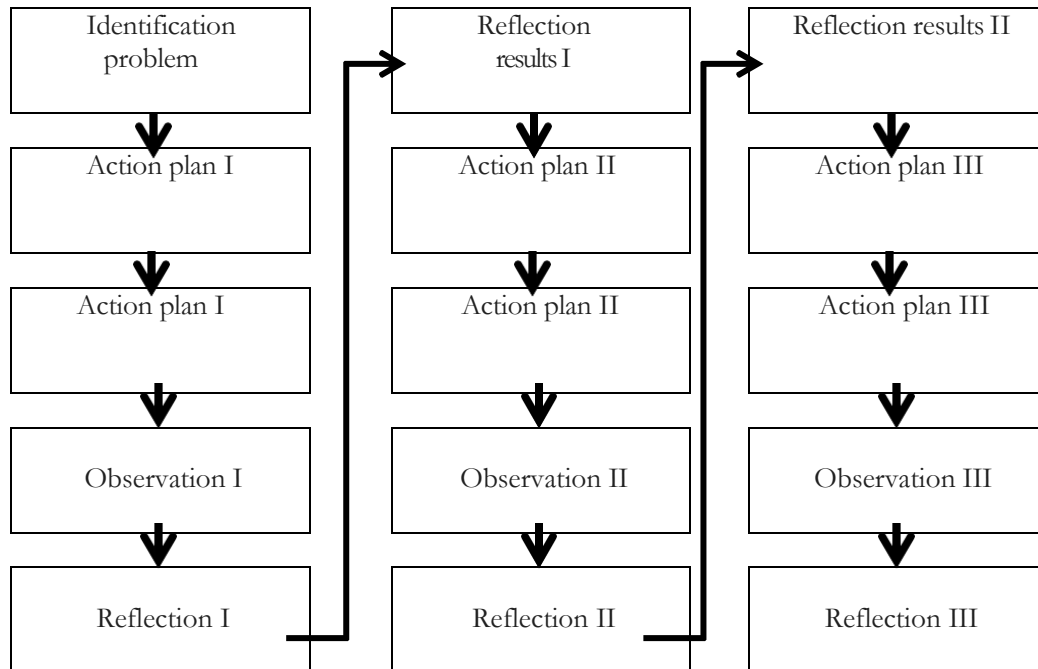
This study also refers to the research of Masitoh et al. (2024), which highlights the importance of language and culture integration in BIPA learning. The BIPA program, designed with a project-based and active approach, provides students with the opportunity to understand Indonesian in a broader context, including the culture and customs of the Indonesian people. Researchers developed a learning model that combines the two approaches to create an interesting and interactive learning process and produces products that can function as promotional media for the BIPA program itself. By combining PJBL and active learning (Carlos et al., 2024; Fuadin & San Fauziah, 2022; Larasati & Rasid, 2018), this study aims to make a significant contribution to the development of the BIPA program, as well as to support the achievement of SDG goals, especially in quality education and increasing cross-cultural understanding. This approach is expected to improve the quality of learning for students and have a positive impact on the promotion of Indonesian language and culture to the international community.

### **Methodology**

The researcher is a lecturer in charge of the BIPA Teaching Materials Development course in class ID3A of the Indonesian Language Education study program at Bina Darma University. Based on the researcher's experience in the teaching and learning process in previous semesters, improvements are needed in the teaching methods of the BIPA Teaching Materials Development course, especially in the material on compiling BIPA teaching materials. Therefore, the researcher uses the Classroom Action Research (CAR) approach as a solution. CAR is a type of research conducted by educators in the classroom (Samsu, 2013; Utomo et al., 2024; Tanjung et al., 2024). This research is classified as qualitative research, although the data collected can be qualitative or quantitative data because this research is to solve teaching problems in the classroom (Pratiwi & Mayrita, 2023). This research focuses on the teaching process and student learning outcomes (Arikunto, 2019), especially the interaction between lecturers and students or between students and the expected learning outcomes. The results of observations and learning outcomes determine the success of the teaching methods used.

*Research interventions and participants*

**Figure 1.** *The flow of classroom action research*



The research subjects were students from the ID3A class of the Indonesian Language Education Study Program for the 2024/2025 odd academic year. This research referred to several observation indicators as follows:

- Aspects of student learning activity.
- Aspects of the learning process: a. Affective b. Psychomotor
- Aspects of the learning atmosphere.
- Aspects of learning outcomes.

***CAR cycle***

To assess improvements in learning outcomes and student activities during the learning process through the collaboration of PJBL and active learning, if the results did not meet the research indicators and the expected Course Learning Outcomes (CPMK) were not achieved, the next cycle would have been conducted. The following is a representation of the cycle.



Before Classroom Action Research (CAR) was conducted, various instrumental inputs were prepared to be used in the CAR treatment, such as the Course Syllabus (SMP). In addition, learning tools were also created, including (1) student worksheets, (2) discussion observation sheets, and (3) evaluation sheets. During the preparation, a list of heterogeneous discussion groups was also prepared.

The data used in the qualitative aspect were in the form of field notes, observation results, and documentation during the learning process. Quantitative data were in the form of test results for each cycle and student work results. Data sources in this study included several sources, namely lecturers, students, and members of the collaborator team (especially collaborator lecturers). Data collection in this study included tests, observations, interviews, and discussions. Data collected in each observation activity from the implementation of the research cycle were analyzed descriptively using percentage techniques to determine the tendencies that occurred during learning activities.

### *Implementation procedure*

#### *Cycle 1*

The first cycle of this Classroom Action Research (CAR) consisted of the stages of planning, implementation, observation, and reflection, which were as follows:

- Planning
- Implementation
- Observation
- Reflection

This Classroom Action Research was considered successful if it met the following criteria:

- a. 50% of the students were active and engaged in the learning process.
- b. 50% of the students were active members of the group.
- c. The completion of group tasks followed the instructions given by the lecturer.

### **Findings**

This study aims to determine the effectiveness of the collaboration between the Project Based Learning (PjBl) and Active Learning models in the BIPA Teaching Materials Development course. This study was conducted in the odd semester of 2024/2025 involving 8 students from class ID3A of the Indonesian Language Education Study Program, at Bina Darma University. The study results showed a significant increase in the learning process and student learning outcomes. The data on student learning outcomes in Cycle 1 are as follows:

#### *Cycle 1*

The following is a table of teacher observation results in cycle 1 of the study "Collaboration of Project-Based Learning and Active Learning in the BIPA Teaching Material Development Course". In Cycle 1, students carried out group activities to create drafts of

teaching materials. However, in cycle 1, of the 8 students involved in the study, only 65% were enthusiastic about learning. Some students showed a good understanding of the material and succeeded in developing drafts of BIPA teaching materials according to the guidelines provided. Most other students did not meet the established criteria, although they were actively involved in the learning process.

In cycle 1, collaborative learning based on Project-Based Learning (PjBl) and Active Learning showed quite good results. Students were active in discussions, asking questions, and participating in groups, although some still needed encouragement to be more confident and improve teamwork management. The learning process was dynamic, with a good understanding of the material and high enthusiasm for completing the project. Most students achieved the Targeted Learning Outcomes (CPMK), although character development and variations in teaching techniques needed to be improved for more optimal results in the next cycle. The distribution of scores is as follows: 1 student scored 70, and 7 other students did not meet the criteria set (scores below 70).

Some of the main reasons for the lack of student success in Cycle 1 include a lack of in-depth understanding of the material being taught and difficulty in developing BIPA teaching materials that meet the required standards. Nevertheless, Cycle 1 provides important insights into students' readiness to participate in project-based learning and their engagement in the learning process.

**Table 1.** *Teacher's observation results - Cycle 1*

Meeting	Assessment Criteria	Rating (1—4)	Description
Meeting 1	Student involvement in discussions	3 (Adequate)	Students participated in the discussion, but still needed more encouragement.
	Use of effective teaching media	4 (Very Good)	Teaching media, effectively and attractively.
	Application of Project-Based Learning (PBL)	3 (Adequate)	Students began working project and was not yet fully optimal.
	Application of Active Learning (AL)	3 (Adequate)	Active learning activities were conducted. Interactions were limited.
Meeting 2	Student involvement in discussions	3 (Adequate)	Active participation
	Use of effective teaching media	4 (Very Good)	Varied and effective.
	Application of Project-Based Learning (PBL)	3 (Adequate)	Still required further guidance.
Meeting 3	Application of Active Learning (AL)	3 (Adequate)	Some students = more active and were still passive.
	Student involvement in discussions	4 (Very Good)	Students = very active in discussions and shared ideas.
	Use of effective teaching media	4 (Very Good)	Media = very effective in supporting learning; with many sources used.



Application of Project-Based Learning (PBL)	4 (Very Good)	Students could complete the project well and meet the goals.
Application of Active Learning (AL)	4 (Very Good)	Learning activities = more intense; students were highly engaged.

**Table 2.** *Average rating of cycle 1*

Assessment Criteria	Average Rating
Student involvement in discussions	3.3 (Adequate)
Use of effective learning media	4 (Very Good)
Implementation of Project-Based Learning (PBL)	3.3 (Adequate)
Implementation of Active Learning (AL)	3.3 (Adequate)

Here was the table of the percentage of assessments per meeting using a Likert scale:

**Table 3.** *Percentage of grades meeting*

Meeting	Achievement Percentage	Average Score	Description
Meeting 1	65,5 %	3 (Adequate)	Fairly good
Meeting 2	71,5 %	3 (Adequate)	Fairly good
Meeting 3	75,3 %	3 (Adequate)	Fairly good
Average			Fairly good

All meetings received an average score of 3 (Adequate), resulting in an overall assessment of Fairly Good.

**Table 4.** *Results of the researcher's evaluation of the observation activities*

No	Aspect Observed	Observation Indicator	Observation Results Cycle 1	Notes
1	Student Learning Activity	Collaboration within the group, ability to adapt to group members.	Students showed good cooperation, but some groups needed guidance in role adjustment.	Some groups needed reinforcement in managing cooperation.
		Students were active in learning.	Most students actively participated in discussions and group activities.	The class activity went well.
		Asking questions, giving suggestions, expressing opinions, and discussing.	Students were active in asking questions and giving suggestions, though some were more passive.	More efforts were needed to boost the confidence of passive students.

2	Learning Process	Implementation of PjBl and Active Learning Collaboration.	The implementation model ran smoothly, and students were involved in discussions and group projects.	Collaboration worked well, but more feedback was needed.
		Learning was not one-way, not monotonous.	Learning was more dynamic with the use of various interactive methods.	Learning was not monotonous, but a wider variety of techniques needed to be introduced.
3	Cognitive	Students understood the material and were enthusiastic about completing group projects.	Students seemed enthusiastic about completing projects and understood the material.	Most students understood the material well.
4	Affective	Active participation in class discussions.	Students actively gave responses and suggestions in class discussions.	The class discussions were productive.
5	Psychomotor	Students were brave enough to ask questions and express opinions.	Some students started to ask questions and express opinions.	More encouragement was needed to boost students' confidence to ask questions.
6	Learning Atmosphere	The use of Active Learning increased the enthusiasm for learning.	The learning atmosphere became livelier, and students were more enthusiastic about learning.	The use of this method increased enthusiasm.
		Students understood the material, and learning completion was achieved.	Most students showed good understanding and completed tasks well.	The achievement of the material could be further improved.
7	Learning Outcomes	CPMK was achieved.	Most students had achieved the targeted learning outcomes.	Some students needed more time to reach the CPMK.
		Improved the quality of learning and student character development.	There was improvement in students' skills, especially in group work.	Character development needed more focus.

### *Cycle 2*

The following is a table of teacher observation results in Cycle 2 in the study "Collaboration of Project-Based Learning and Active Learning in the BIPA Teaching Material

Development Course." In the second cycle, student activities were carried out in groups, with all students active and enthusiastic in learning and making drafts of teaching materials. The following are the results of observations based on the indicators that have been set:

**Table 5.** *Teacher's observation results - Cycle 2*

<b>Meeting</b>	<b>Assessment Criteria</b>	<b>Likert Scale (1-4)</b>	<b>Description</b>
Meeting 1	Student involvement in discussions	4 (Very Good)	Students were very active in discussions and shared ideas.
	Effective use of teaching media	4 (Very Good)	Teaching media was very engaging and effective.
	Implementation of Project-Based Learning (PBL)	4 (Very Good)	Students cooperated well in groups and completed projects effectively.
Meeting 2	Implementation of Active Learning (AL)	4 (Very Good)	Learning activities were very dynamic and students were actively involved.
	Student involvement in discussions	4 (Very Good)	Participation in discussions increased, with students actively giving suggestions and opinions.
	Effective use of teaching media	4 (Very Good)	Use of more varied and effective media supported learning.
	Implementation of Project-Based Learning (PBL)	4 (Very Good)	Projects were completed well and aligned with goals, students managed tasks effectively.
	Implementation of Active Learning (AL)	4 (Very Good)	Activities involved all students in the active learning process.
Meeting 3	Student involvement in discussions	4 (Very Good)	All students participated actively in discussions, offering ideas and suggestions.
	Effective use of teaching media	4 (Very Good)	Teaching media was used very effectively and supported learning.
	Implementation of Project-Based Learning (PBL)	4 (Very Good)	Students successfully completed projects with great quality, following guidelines.

**Table 6.** *Average assessment for cycle 2*

Assessment Criteria	Average
Student involvement in discussions	4 (Very Good)
Effective use of teaching media	4 (Very Good)
Implementation of Project-Based Learning (PBL)	4 (Very Good)
Implementation of Active Learning (AL)	4 (Very Good)

**Note:** Cycle 2 showed very good results, with all students active, enthusiastic, and working well together in groups. The results of the BIPA Level 1 teaching material project worked on for 4 meetings showed very satisfactory progress.

**Table 7.** *Achievement percentage for cycle 2*

Meeting	Achievement Percentage	Grade	Description
Meeting 1	80%	4 (Very Good)	Very Good
Meeting 2	85%	4 (Very Good)	Very Good
Meeting 3	90%	4 (Very Good)	Very Good
Meeting 4	92%	4 (Very Good)	Very Good
Average	86.75%	4 (Very Good)	Very Good

**Table 8.** *Researcher's evaluation of observation activities in cycle 2*

No	Observed Aspect	Observation Indicator	Observation Results	Notes
1	Student Learning Activity	Cooperation in groups, ability to adapt to group members	All students worked very well together in groups.	The groups worked very effectively.
		Active student participation in learning	All students were active in discussions and group projects.	The class activities were very dynamic.
		Asking questions, giving suggestions, expressing opinions, and discussing	Students were very active in asking questions, giving suggestions, and discussing.	The interaction was very good.
2	Learning Process	Implementation of PJBL and	The collaboration	The teaching model was very effective.

		Active Learning collaboration	went smoothly, and students were actively involved in projects.	
		Learning was not one-way, not monotonous	The learning was very dynamic and engaging.	More variation in teaching techniques is needed.
3	Cognitive	Students understood the material and were enthusiastic about completing the group project	Students were very enthusiastic and successfully completed the project.	The understanding of the material was very good.
4	Affective	Active participation in class discussions	Students were very active in class discussions.	The class discussions went well.
5	Psychomotor	Students were confident in asking questions and expressing opinions	Students were very confident in asking questions and expressing opinions.	Students' confidence increased.
6	Learning Environment	Use of Active Learning increased learning enthusiasm	The learning environment was very lively, and students were enthusiastic and motivated.	The method used was very successful in increasing enthusiasm.
		Students understood the material and learning completion was achieved	All students understood the material well and completed the tasks.	Learning completion was achieved very well.
7	Learning Outcomes	CPMK was achieved	All students achieved CPMK very well.	All CPMK were achieved.
		Improving the quality of learning and student character development	Skills and character development of students were achieved.	Character development needs further focus.

The learning process in Cycle 2 showed significant improvement compared to Cycle 1. All students were active, involved in discussions and projects, and produced satisfactory BIPA teaching materials. The implementation of Project-Based Learning and Active Learning models has proven effective in improving the quality of learning and student learning outcomes.

## **Discussion**

### *Cycle 1*

A mixed method approach that combines PJBL with other methods was also studied by [Imbaquingo & Cardenas \(2023\)](#). They stated that PJBL is effective in improving students' reading skills by gathering insights and experiences through PJBL and descriptive mixed methods. In contrast to the research by [Imbaquingo & Cardenas \(2023\)](#), in the first cycle of the research "Collaborative Project-Based Learning (PJBL) and Active Learning in the BIPA Teaching Materials Development Course", the learning process was carried out using a collaborative method involving group activities to draft teaching materials. Of the 8 students involved, 65% showed enthusiasm for the learning process, while the rest needed encouragement to be more active. Enthusiastic students could understand the material well and draft teaching materials according to the guidelines, although some had difficulty aligning teaching materials with the established standards. Overall, only 1 student scored above the minimum criteria (score 70), while the remaining 7 did not meet the standards. In learning activities, students showed fairly good cooperation in groups, although some groups needed guidance to organize roles and responsibilities. Active participation in discussions began to emerge, including asking questions and providing suggestions, but some students were still passive and needed to improve their confidence.

The learning process based on PJBL and Active Learning was dynamic, with productive discussions and a lively classroom atmosphere. Learning media were used effectively and interestingly, providing significant support to increase student engagement. This is in line with [Guo et al. \(2020\)](#), which stated that project-based learning is an approach that can improve student learning in higher education because their research shows that project-based learning focuses more on student learning outcomes. Meanwhile, active learning aims to involve students directly in the learning process. Through active learning, students are not only passive listeners but must be actively involved, as stated by ([Børte et al., 2020](#); [Carlos et al., 2024](#)).

From the results of the process evaluation, the implementation of PJBL and Active Learning during three meetings obtained an average score of 3.3 (sufficient category) for involvement in discussions, use of media, and implementation of active learning methods. Students showed increased skills, especially in completing group projects, although character development, such as self-confidence and communication skills, still needed to be improved. The use of varied learning media succeeded in creating a learning environment that was not monotonous and interactive.

Although the Learning Outcomes (CPMK) of most students had been achieved, some still needed more time and guidance to meet the set targets. The distribution of scores showed that most students had not met the expected standards, with the main challenges being a lack of in-depth understanding of the material and technical difficulties in preparing BIPA teaching



materials. The first cycle provided important initial insights into students' readiness to engage in project-based learning and became the basis for improvements in the next cycle, such as adding variations in teaching techniques, providing more intensive feedback, and providing more targeted guidance for groups that were less than optimal.

The second cycle in this study was needed to address the weaknesses found in the first cycle while increasing the effectiveness of Project-Based Learning (PJBL) and Active Learning. One of the main causes is the incomplete understanding of the material by some students. Although some students have understood the material and drafted BIPA teaching materials according to the guidelines, most other students have not met the success criteria. This is reflected in the distribution of scores, only one student received a score above the standard. The second cycle is expected to provide more intensive guidance so that all students gain a deeper understanding of the material.

In addition, student learning activities still show an imbalance. Most students are active in discussions and group activities, but some students are still passive. Therefore, the second cycle can be designed to increase the confidence of passive students through a more supportive learning approach and encourage active participation. This approach can also help improve the dynamics of group cooperation because some groups still need guidance in adjusting roles and managing their teamwork.

The results of observations in the first cycle also showed the need to increase the variety of teaching techniques. Although the media used were effective and the learning process was dynamic, exploration of newer and more interactive methods was needed to create a more engaging learning experience. Thus, the second cycle can introduce various innovative teaching approaches to accommodate learning styles. Another aspect that needs to be improved is the achievement of CPMK (Course Learning Outcomes) and the development of student character. The first cycle showed satisfactory achievement, but there is room for improvement, especially in communication skills, self-confidence, and time management. The second cycle is expected to provide students with the opportunity to hone these skills through more complex and structured projects. Finally, the second cycle provides an opportunity to provide more intensive feedback to students, especially in preparing BIPA teaching materials. This feedback is crucial to help students improve their work results and meet the expected standards. By implementing the second cycle, it is expected that the problems in the first cycle can be resolved, so that learning becomes more effective, CPMK achievement is more consistent, and student character development becomes more optimal.

### *Cycle 2*

Based on the results of the cycle 2 study, the Project-Based Learning (PJBL) and Active Learning approaches showed significant improvements compared to cycle I. In this cycle, all students were actively involved, enthusiastic, and can work well together in their groups. At each meeting, student involvement in discussions increased, marked by students' courage in asking questions, giving suggestions, and expressing opinions confidently. This shows that the learning process is very dynamic and has succeeded in creating a conducive atmosphere. In terms of the use of teaching media, the results of observations show very good effectiveness. Teaching media not only attracts students' attention but also supports the achievement of

learning objectives. The variety of media used can increase students' enthusiasm for learning and make it easier for students to understand the material. All students can utilize the media optimally, resulting in a BIPA Level 1 teaching material project that is very satisfying and by the rules.

The application of PJBL and Active Learning in cycle 2 gave very good results, especially in increasing student learning activities. Group collaboration is very effective, with students showing the ability to adapt and manage tasks independently. Research by (Zhang & Ma, 2023; Safitri et al., 2024) also concluded that PJBL is effective in learning. In addition, students succeeded in developing cognitive, affective, and psychomotor skills, as seen by increased self-confidence, enthusiasm in completing projects, and completeness in understanding the material. From the results of the evaluation of learning activities, the achievement of CPMK for the course has been achieved. All students could meet the targets set, in terms of project quality and character development. With an average score of 4 (very good) for all assessment criteria, cycle 2 is proof of the success of the applied learning model.

Overall, cycle 2 has significantly improved the quality of learning. However, for further development, it is still necessary to add variations in learning techniques so that the class remains dynamic. In addition, the development of student character such as communication skills and time management need more attention so that learning does not only focus on academic achievement but also holistic student development. Furthermore, based on the researcher's observations, the collaboration of the PJBL and Active Learning methods in the BIPA Teaching Material Development course could improve students' thinking skills in compiling BIPA Level 1 materials for the drafts they made. Anazifa & Zukri (2017) found that PJBL-PBL method can build students' thinking skills.

### **Conclusion and Recommendations/Implications**

This study shows that the collaboration between Project-Based Learning (PJBL) and Active Learning in the BIPA Teaching Materials Development course not only succeeded in increasing student engagement, creativity, and learning achievement quality but also supported the achievement of Sustainable Development Goals (SDGs), especially SDG 4 on quality education. The significant increase from the first cycle to the second cycle showed that students were more active and enthusiastic in collaborating to produce quality BIPA teaching materials, which can also be used as promotional media for the BIPA program. This project-based learning approach also strengthens 21st-century skills such as collaboration, communication, creativity, and problem-solving, which are very relevant to improving the global competitiveness of BIPA programs and universities.

Based on the findings of this study, it is recommended to apply the PJBL and Active Learning collaboration model more widely in similar courses to support the achievement of SDG 4 on quality and inclusive education. This approach can enrich students' learning experiences while introducing the BIPA program more widely to the international community. In addition, the development of training modules for prospective BIPA instructors and the use of digital technology to create innovative teaching materials will support SDG 9 related to industry, innovation, and infrastructure. This will also optimize the use of technology in education, which in turn can contribute to the development of the BIPA program as a tool

for cultural diplomacy and promotion of the Indonesian language globally, as well as supporting SDG 16 on peace and justice through cross-cultural understanding.

### **Disclosure statement**

The authors declared no potential conflicts of interest.

### **Acknowledgments**

Thanks were extended to Bina Darma University, DRPM Bina Darma University, Faculty of Social and Humanities, Indonesian Language Education Study Program, and English Literature Study Program, who have helped in conducting research and compiling this scientific article.

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