

RESEARCH ARTICLE



Mentoring the Implementation of Student PPL in Improving Pedagogical Competence in Partner Schools

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ABSTRACT

The Field Introduction Program (PPL) is a strategic tool for preparing students as prospective professional teachers, particularly in developing pedagogical competence. However, the implementation of PPL still faces various obstacles, such as limited teaching experience, suboptimal lesson planning, and a lack of pedagogical reflection. This Community Service (PKM) activity aims to assist the implementation of PPL for FKIP Abulyatama University students at SMA Negeri 1 Ingin Jaya in order to improve their pedagogical competence. The methods used include assistance with lesson planning, guided teaching practice, learning observation, and reflection and evaluation. The results of the activity show an increase in students' pedagogical competence in all measured aspects. The average score of pedagogical competence increased from 2.30 before mentoring to 3.46 after mentoring. The results of the N-Gain test showed an average value of 0.68 in the moderate category, while the percentage increase in pedagogical competence reached 50.8%. These findings indicate that mentoring for PPL implementation is effective in improving students' pedagogical competence and has a positive impact on the quality of learning in partner schools.

KEYWORDS

Community service; PPL; pedagogical competence; mentoring; partner schools

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1. Introduction

The Field Experience Program (PPL) is an essential component of prospective teacher education, providing real-world experience in the learning process at school. PPL serves as a vehicle for integrating theoretical knowledge acquired in higher education with real-life learning practices in schools, thus contributing significantly to the development of prospective teacher students' pedagogical competencies. Empirical research shows that field experience is effective in improving students' pedagogical skills, particularly in planning lessons, managing classrooms, and implementing learning strategies appropriate to student characteristics (Nirmala et al., 2025).

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Pedagogical competence is an essential aspect that encompasses the ability to understand student characteristics, design meaningful learning experiences, manage the learning process effectively, and carry out systematic learning evaluations (Wahidah & Elfri, 2025). Other studies also emphasize that optimizing field experience practices is crucial for enhancing students' understanding of pedagogical competence and encouraging the application of theory to classroom learning practices (Wulanndari et al., 2024).

The implementation of the internship program (PPL) for students from the Faculty of Teacher Training and Education (FKIP) at Abulyatama University at SMA Negeri 1 Ingin Jaya, Aceh Besar Regency, demonstrated the need for more systematic pedagogical assistance. Initial findings from observations and discussions with mentor teachers indicated that some students still experienced difficulties in developing learning materials, managing classes effectively, selecting appropriate learning methods and media, and implementing comprehensive learning evaluations. This is in line with findings in various other contexts that show that student teachers often face challenges in applying pedagogical skills practically during field experiences (Perceptions of mentor teachers regarding the competencies of PPL students, 2024).

Mentoring during the implementation of PPL allows students to receive ongoing guidance, feedback, and reflection, thus encouraging the development of their pedagogical competence more optimally (Handayani, 2025). Therefore, this community service activity is designed to provide mentoring in the planning, implementation, and evaluation stages of learning for PPL students at SMA Negeri 1 Ingin Jaya. This activity is expected to improve students' pedagogical competence and strengthen the university's real contribution to efforts to improve the quality of learning in partner schools.

2. Literature review

2.1. Field Familiarization Program (PPL)

The Field Familiarization Program (PPL) is a form of experiential learning designed to provide prospective teacher students with the opportunity to apply pedagogical and professional knowledge in a real-world school environment. PPL serves as a bridge between the theory learned in higher education and the practice of teaching in schools (Ministry of Education and Culture, 2020). Through PPL, students are expected to develop teaching skills, classroom management, and professional attitudes as educators.

Several studies have shown that PPL plays a crucial role in shaping students' teaching readiness. Wulanndari et al. (2024) stated that well-planned field experience practices can

improve the pedagogical competence and self-confidence of prospective teacher students. However, PPL implementation is often suboptimal due to limited mentoring and systematic learning reflection (Handayani, 2025).

2.2. Pedagogical Competence of Prospective Teachers

Pedagogical competence is a teacher's ability to manage student learning, encompassing understanding student characteristics, lesson planning, effective learning implementation, utilization of instructional media, and evaluation and reflection on learning (Law of the Republic of Indonesia Number 14 of 2005). This competence serves as the primary foundation for determining the quality of the learning process and outcomes.

Recent research indicates that prospective teacher students' mastery of pedagogical competence still needs improvement, particularly in classroom management and learning evaluation (Wahidah & Elfri, 2025). Nirmala et al. (2025) also emphasized that improvements in pedagogical competence are significantly influenced by the quality of their teaching practice experience and the intensity of guidance students receive during fieldwork.

2.3. Mentoring in the Implementation of PPL

Mentoring is the process of providing ongoing guidance, direction, and feedback to help individuals achieve expected competencies. In the context of PPL, mentoring by supervising lecturers and mentor teachers plays a crucial role in helping students reflect on their teaching practices and correct emerging pedagogical weaknesses (Uno, 2017).

Effective mentoring focuses not only on teaching practice but also encompasses learning planning and evaluation. Handayani (2025) stated that reflection-based mentoring can improve the teaching readiness and professionalism of student teachers. Collaborative mentoring models between universities and partner schools have also been shown to improve the quality of PPL implementation and benefit both parties (Wulandari et al., 2024).

2.4. Measuring Pedagogical Competency Improvement

Pedagogical competency improvement in educational and community service activities is generally analyzed using a quantitative descriptive approach. One widely used technique is Normalized Gain (N-Gain), which measures the effectiveness of a program based on a comparison of pre- and post-treatment scores (Hake, 1998). Although originally developed in the context of science education, N-Gain has been widely

adopted in research and community service activities in education to assess competency improvement and learning outcomes (Sundayana, 2018).

The use of N-Gain and percentage improvement is considered appropriate for PKM activities because it can demonstrate the program's measurable impact without requiring complex inferential testing. Therefore, this analysis is relevant for evaluating the effectiveness of PPL mentoring in improving students' pedagogical competency.

2.5. The Position of PKM Activities in Previous Studies

Based on the literature review, it can be concluded that PPL plays a strategic role in developing the pedagogical competence of student teachers, but its implementation requires systematic and ongoing mentoring. This PKM activity positions itself as an effort to strengthen PPL implementation through structured mentoring involving supervising lecturers and mentor teachers. By integrating mentoring, learning reflection, and data-based evaluation, this activity is expected to optimally bridge the gap between PPL practice and pedagogical competence development

3. Methods

3.1. Implementation Method

This Community Service activity uses a participatory mentoring approach, which positions lecturers, mentor teachers, and internship students as active partners in all stages of the activity. This approach was chosen because it is considered effective in improving pedagogical competence through direct guidance, reflective practice, and ongoing feedback (Handayani, 2025; Wulandari et al., 2024).

3.2. Location, Time, and Subjects

The activity took place at Ingin Jaya 1 State Senior High School, Aceh Besar Regency, from October 20-29, 2025. The participants included students participating in the PPL program from the Faculty of Teacher Training and Education at Abulyatama University, mentor teachers, and students. Partner schools were selected based on institutional collaboration and their willingness to support collaborative PPL mentoring.

3.3. Activity Design and Stages

The implementation method is designed in several main stages: needs analysis, learning planning assistance, guided teaching practice, observation and feedback, and reflection and evaluation. Details of the activity stages are shown in the [Table 1](#).

Table 1. Stages of Implementation of PKM Activities

No.	Activity Stage	Form of Activity	Output
1	Needs Analysis	Initial observation and discussion with the supervising teacher	Map of students' pedagogical problems
2	Learning Planning	Assistance in preparing lesson plans/teaching modules	Learning tools
3	Teaching Practice	Guided teaching practice	Implementation of learning
4	Observation	Assessment of pedagogical competence	Assessment data
5	Reflection and Evaluation	Discussion and feedback	Improvement recommendations

These stages are in line with the experiential learning-based pedagogical competency development model, which emphasizes cycles of practice, reflection, and continuous improvement (Kolb, 2015; Nirmala et al., 2025).

3.4. Mentoring Method

Mentoring is conducted through focused discussions, classroom observations, and learning reflections. Supervisors and mentor teachers provide guidance in developing learning materials, implementing classroom instruction, and evaluating learning outcomes. This mentoring model has proven effective in helping student teachers integrate pedagogical theory with practical learning in the field (Uno, 2017; Wahidah & Elfri, 2025).

3.5. Data Collection Techniques

Data was collected through observation, interviews, questionnaires, and documentation. Observation and questionnaire data were analyzed quantitatively using average scores, percentage increases, and the N-Gain test. Meanwhile, interview and documentation data were analyzed qualitatively to strengthen the interpretation of the activity results. Quantitative descriptive analysis was chosen because it aligns with the characteristics of PKM activities, which focus on the impact and benefits of the program (Sugiyono, 2019).

3.6. Data Analysis Techniques

The data obtained will be subjected to a Normalized Gain (N-Gain) test to determine the effectiveness of PPL mentoring in improving students' pedagogical competence. The N-Gain score, N-Gain percentage, and N-Gain category are calculated using the formula proposed by Hake and Meltzer (Musriandi., et al., 2017).

$$Score N_{Gain} = \frac{Score_{post} - Score_{pre}}{Score_{maks} - Score_{pre}}$$

$$Percentage N_{Gain} = \frac{Score_{post} - Score_{pre}}{Score_{pre}} \times 100\%$$

As for the N-Gain category, it is as follows (Table 2):

Table 2. N-Gain Categories

Score N-Gain	Category
$g \geq 7,0$	High
$3,0 \leq g < 7,0$	Currently
$g < 3,0$	Low

3.7. Pedagogical Competency Assessment Instrument

The instrument used to measure the pedagogical competence of PPL students is a Likert scale of 1–4, with the following categories: 1 = Poor, 2 = Adequate, 3 = Good, and 4 = Very Good (see Table 3).

Table 3. Pedagogical Competency Assessment Instrument for PPL Students

No	Pedagogical Competence Aspects	Indicator	Score
1	Understanding Student Characteristics	Adapting methods to students' abilities	1–4
2	Learning Planning	Compiling lesson plans/teaching modules according to the curriculum	1–4
3	Material Mastery	Explain the material systematically	1–4
4	Learning methods	Using a variety of methods	1–4
5	Classroom Management	Manage the class effectively	1–4
6	Media Utilization	Using learning media	1–4
7	Learning Interaction	Encourage student participation	1–4
8	Learning Evaluation	Developing and implementing assessments	1–4
9	Learning Reflection	Reflect on learning	1–4

4. Results

4.1. Results of PPL Implementation Assistance

The The mentoring of the implementation of the PPL (Practice Practice) of students from the Faculty of Teacher Training and Education (FKIP) Abulyatama University at SMA Negeri 1 Ingin Jaya has had a positive impact on improving their pedagogical competence. Observation and assessment results indicate improvements in all aspects of pedagogical competence, including in the planning, implementation, and evaluation stages of learning. In general, students demonstrated significant improvements in their

teaching readiness, classroom management, and ability to use a wider variety of learning methods and media. This indicates that structured mentoring can help students overcome pedagogical challenges encountered during their internship.

The results of the N-Gain test of the pedagogical competence of PPL students are as shown in the [Table 4](#).

Table 4. Results of the N-Gain Test of Pedagogical Competence of PPL Students

Aspect	Pretest Score	Posttest Score	N-Gain	Category
Learning Planning	2,4	3,5	0,69	Currently
Implementation of Learning	2,5	3,6	0,73	High
Classroom Management	2,3	3,4	0,65	Currently
Methods & Media	2,2	3,5	0,72	High
Learning Evaluation	2,1	3,3	0,63	Currently
Average	-	-	0,68	Currently

Source: Data analysis results

Meanwhile, the results of the N-Gain percentage test of the pedagogical competence of PPL students are as follows ([Table 5](#)).

Table 5. Percentage of Increase in Pedagogical Competence

Aspect	Pretest Score	Posttest Score	N-Gain (%)
Learning Planning	2,4	3,5	45,8%
Implementation of Learning	2,5	3,6	44,0%
Classroom Management	2,3	3,4	47,8%
Methods & Media	2,2	3,5	59,1%
Learning Evaluation	2,1	3,3	57,1%
Average	-	-	50,8%

Source: Data analysis results

Graphically, the results of the N-Gain test of Pedagogical competency of PPL FKIP Abulyatama University students at SMA Negeri 1 Ingin Jaya can be described as follows.

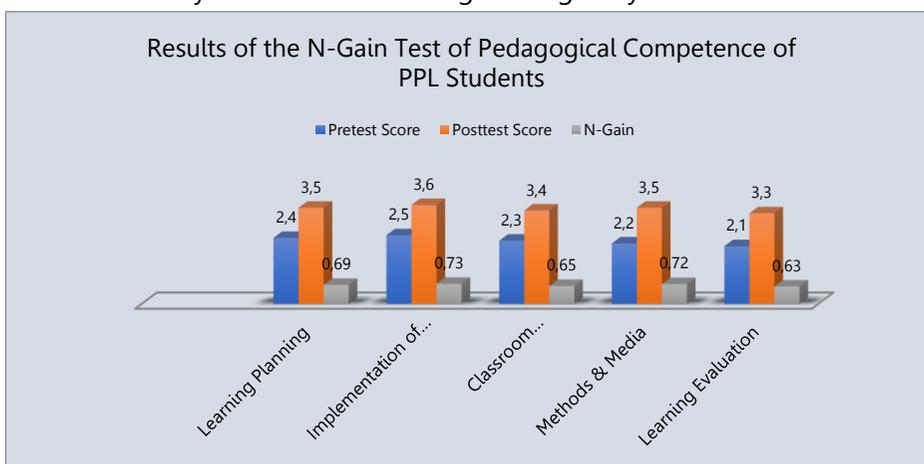


Figure 1. Results of the N-Gain Test of Pedagogical Competence of PPL Students

Figure 1 shows that all aspects experienced an increase in scores after mentoring. The highest increase was seen in the aspects of learning implementation and the use of methods and media, reflecting the success of guided teaching practice and the direct feedback provided by the supervising lecturer and mentor teacher. Meanwhile, the N-Gain graph shows that the N-Gain score was in the moderate to high category, with an average N-Gain of 0.68.

The aspects of learning implementation and the use of learning methods and media received a high category, while the other aspects fell in the moderate category. These findings confirm that PPL mentoring is effective in improving students' pedagogical competence, particularly in aspects directly related to classroom teaching practices.

5. Discussion

5.1. Empathy

The results of the mentoring activities for the implementation of PPL for FKIP students Abulyatama University at SMA Negeri 1 Ingin Jaya showed that the mentoring carried out in a structured and continuous manner had a positive impact on improving students' pedagogical competence. This was indicated by an increase in the average score in all aspects of pedagogical competence, N-Gain values that were in the medium to high category, and the percentage increase in competence reaching more than 50%.

The most significant improvements occurred in the implementation of learning and the use of learning methods and media. These findings indicate that guided teaching practices, classroom observations, and direct feedback from supervisors and mentor teachers play a crucial role in helping students develop concrete pedagogical skills. Students not only understand learning concepts theoretically but are also able to apply them according to the characteristics of students at SMA Negeri 1 Ingin Jaya.

The planning and evaluation aspects of learning have also seen significant improvements. Assistance in developing learning tools encourages students to design more systematic learning that aligns with the applicable curriculum. Meanwhile, improvements in the evaluation aspect of learning indicate that students are increasingly able to develop and apply assessment instruments relevant to learning objectives.

The average N-Gain value of 0.68, which is in the moderate category, indicates that the PPL mentoring activities are effective in improving students' pedagogical competence. This finding aligns with the PPL's goal of developing the competence of prospective teachers and supporting the role of community service as a means of applying higher education knowledge in partner schools.

Overall, this PPL mentoring activity not only improved the pedagogical competence of FKIP Abulyatama University students but also contributed to improving the quality of

learning at SMA Negeri 1 Ingin Jaya. The mentoring, which involved synergy between supervising lecturers, mentor teachers, and students, proved to be an effective strategy and can be recommended for implementation in PPL implementation at other partner schools.

6. Conclusion

The Community Service (PKM) program, which provided mentoring for the implementation of the Field Introduction Program (PPL) for FKIP Abulyatama University students at SMA Negeri 1 Ingin Jaya, has proven effective in improving students' pedagogical competence. The structured mentoring, implemented through lesson planning, guided teaching practice, observation, reflection, and evaluation, has had a positive impact on students' learning management abilities.

The evaluation results showed an increase in pedagogical competence across all measured aspects. The average pedagogical competence score increased significantly after the mentoring program, with the N-Gain value in the moderate category and the percentage increase indicating the program's effectiveness. These findings indicate that PPL mentoring plays a crucial role in bridging the gap between students' theoretical understanding and classroom learning practices.

Overall, this PKM activity not only contributes to improving the pedagogical competence of students as prospective teachers but also strengthens partnerships between universities and partner schools. The mentoring model for implementing PPL can be recommended as an alternative strategy for mentoring PPL students and has the potential to be adapted and developed at other partner schools.

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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