



Pedagogic Competence of Agro-Industry Technology Education Students who Participate in PPLSP and Kampus Mengajar

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ABSTRACT

Students of the Agroindustrial Technology Education Study Program who take part in the Kampus Mengajar program are feared to have lower pedagogic competence than students who take the Education Unit Field Introduction Program (PPLSP). This study aimed to determine the level of pedagogic competence of students of the Agroindustrial Technology Education Study Program who took part in the 2021 PPLSP and the Kampus Mengajar Program Batch 2 and the differences in pedagogic competence in the two groups of students. Pedagogic competence is measured based on students' perceptions by filling out a closed questionnaire. There are 10 pedagogic competence indicators described in 30 statements in the questionnaire. The questionnaire was filled out by 40 students who took part in the 2021 PPLSP and 17 students who took part in the Kampus Mengajar Program 2. Structured interviews to obtain additional data were then conducted with 28 people who were randomly selected from the group of students who took part in the PPLSP and the Teaching Campus. The results showed that the pedagogic competence of students who took part in the 2021 PPLSP and the Kampus Mengajar Batch 2 were in the high category. However, three statements of pedagogical competence are considered to be in the medium category for PPLSP 2021 students but high for Class 2 Kampus Mengajar students on Kampus Mengajar students Batch 2.

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1. INTRODUCTION

The UPI Agro-industrial Technology Education Study Program is an educational institution whose goal is to produce graduates as prospective professional educators who can compete nationally and globally in the field of agro-industrial technology education. Education has a vital role in preparing competitive and superior human resources for the progress of Indonesia. To advance education in Indonesia, not only through changing the curriculum and completing learning facilities and infrastructure, but it is necessary to pay attention to the development of human resources who will carry it, namely teachers (Amanudin, 2019). Nuryana et al., 2020; Pramana et al., 2021)

An academic program that plays an important role and assists in forming the pedagogic competence of Agro-industrial Technology Education students is the Education Unit Field Introduction Program (PPLSP) which is implemented and coordinated directly by the Agro-industrial Technology Education Study Program. A PPLSP-like program organized by the Ministry of Education and Culture, namely the Kampus Mengajar which has the aim of assisting the teaching and learning process in schools, especially at the elementary and junior high school levels as well as providing opportunities for students to learn and develop themselves through activities outside the lecture class (Ministry of Education and Culture, 2021).

Students who graduate from Agro-Industry Technology Education are expected to become professional educators in the form of teachers at SMK Agribusiness Processing Agricultural Products so that PPLSP students are placed in SMKs that can support the pedagogical competencies that are in line with the expected graduates. However, there are concerns regarding the low pedagogic competence of PTAg students who take part in the Kampus Mengajar because these students are placed in elementary and junior high schools, which have different learning characteristics from those in the Agribusiness Processing Agricultural Product Processing Vocational School where students carry out PPLSP. The purpose of this study was to determine the pedagogic competence of PTAg students who took part in PPLSP 2021, to find out the pedagogic competence of PTAg students who took part in Kampus Mengajar Batch 2, and the differences in pedagogic competence between students who took part in PPLSP 2021 and students who took part in Kampus Mengajar Batch 2

2. METHODOLOGY

The approach used in this research is descriptive. According to Abdullah (2018), descriptive research is a description designed to obtain information about the status or symptoms of a particular population or area or to map facts based on a particular perspective or frame of mind when the research was conducted. Sugiyono (2018), quantitative methods are used to research specific populations or samples, data collection uses research instruments, and data analysis is quantitative/statistical.

This study also uses a qualitative data collection method by conducting interviews to support the quantitative data obtained. Participants in this study were Agro-industrial Technology Education students who took part in the 2021 PPLSP and students who took part in the 2nd Kampus Mengajar and validators. Agro-industrial Technology Education students participating in the 2021 PPLSP and Kampus Mengajar Batch 2 are scattered in several elementary, junior high, and vocational schools with a population and sample of 57 students. The validators in this study were three material experts, namely the Head of the UPI Graduate School Teacher Professional Education Study Program, the Head of the UPI P2JK Division, and a lecturer in the Agro-industry Technology Education Study Program.

The sample of respondents for filling out the questionnaire uses saturated or census sampling. Saturated sampling or census according to Sugiyono (2018), "Unsaturated sampling or census is a sampling technique when all members of the population are used as samples. Another term for saturated sampling is a census. This study used 57 people. Interviews in this study were conducted to obtain supporting data for research results obtained from questionnaire answers. Not all members of the population were selected, namely as many as 28 people. The selection of population members for the interview respondent sample used proportionate stratified random sampling. According to Christoffel (2018), "Proportionate stratified random sampling is a technique used when the population has members/elements that are not homogeneous and proportionally stratified." The instrument that will be given to the respondent is validated using the CVR (Content Validity Ratio) technique to measure the instrument's content validity. According to Sugiyono (2018), content validity can be done by comparing the contents of research instruments with indicators that have been determined as benchmarks.

3. RESULTS & DISCUSSION

3.1. Pedagogic Competence of Agro-industry Technology Education Study Program Students Participating in PPLSP 2021

Tabulation of data from the findings regarding PPLSP students on pedagogic competence can be seen in Table 2, showing that the pedagogic competence of students of the Agro-industrial Technology Education Study Program participating in PPLSP in 2021 is in the high category with a total percentage of 79.23%.

Table 2. Pedagogic Competency Results of Agro-industry Technology Education Study Program Students Participating in PPLSP 2021

Indicator	Questions	Percentage(%)	Category
1	1	82,5	High
	2	81,25	High
	3	81,875	High
2	4	80,625	High
	5	76,875	High
	6	62,5	Medium
3	7	80,625	High
	8	80	High
	9	86,25	High
4	10	81,25	High
	11	71875	High
	12	73,75	High
5	13	81,25	High
	14	76,25	High
	15	85,625	High
6	16	86,875	High
	17	80,625	High
	18	71,875	High
7	19	79,375	High
	20	11,5	High

Indicator	Questions	Percentage(%)	Category
8	21	82,5	High
	22	77,5	High
	23	78,75	High
	24	80	Medium
	25	78,75	Medium
9	26	80	High
	27	78,125	Medium
	28	60	Medium
10	29	77,5	High
	30	80	High
Average Percentage Overall		79,23	High

3.2. Indicators of Mastering Student Characteristics (Statements 1-3)

The indicator of mastering the characteristics of students has a high category. Based on the results of the interviews, this is because PPLSP 2021 students carry out the orientation and adaptation process first so that they can adapt to the school environment, including the characteristics of students. According to Janawi (2019), educators (teachers) play an essential role in the learning process in the classroom and even in improving the quality of education in a school. Teachers, as a critical component in the educational process, are required to be able to carry out educational learning processes.

3.3. Indicator of Mastering Learning Theory and Educational Learning Principles (Statements 4 and 5)

The indicators of mastering learning theory and educating learning principles are in the high category. Based on the results of interviews, all PPLSP 2021 students carried out the debriefing and already knew the basic theory about this because they had studied it while attending lectures. Therefore the second indicator has a high category which shows that PPLSP 2021 students are capable of mastering learning theory and educational learning principles. According to Suparlan (2005), teachers must be able to master several learning theories which will enrich the methods used by the teacher so that it is easier for the teacher to form several variations of learning that can increase student motivation.

3.4. Indicators of Developing a Curriculum Related to Subjects Taught (Statements 6-10)

The indicator of developing a curriculum related to the subject being taught has a high category. Based on the results of the interviews, this was because PPLSP 2021 students prepared a plan of activities to be carried out under the direction of the tutor, such as developing a curriculum. Activities were carried out for approximately one week. Therefore, the third indicator is in the high category, which shows that PPLSP 2021 students have been able to develop a curriculum related to the subjects taught. According to Musfah (2011), teachers are required to have the ability to implement because, without it, the curriculum will not be meaningful as an educational tool. Conversely, learning will not be effective without the curriculum as a guide. Thus the teacher occupies a key position in implementing the curriculum.

3.5. Indicator of Implementing Educational Learning (Statements 11-14)

The indicator of organizing educational learning has a high category. The statement of understanding the principles of designing learning that educates has a medium category. Based on the results of the interviews, this is because PPLSP 2021 students carry out debriefing on educational learning. Therefore the fourth indicator is in the high category, which shows that PPLSP 2021 students can conduct educational learning. According to Winarno (2013), teachers can compile and implement learning plans that educate thoroughly. Teachers can carry out learning activities that suit the needs and character of students.

3.6. Indicator Utilizing Information and Communication Technology for Learning (Statements 15 and 16)

Indicators of utilizing information and communication technology for the benefit of learning have a high category. Based on the results of the interviews, this is because PPLSP 2021 students carry out debriefing on learning media that can be used by utilizing existing information and communication technology. Therefore, the fifth indicator is in the high category, which shows that PPLSP 2021 students can utilize information and communication technology for learning purposes. According to Utama (2015), students are required to be broad-minded, and this will be more easily achieved by meeting information needs quickly and efficiently using information and communication technology devices.

3.7. Indicators of Facilitating the Development of Potential Students to Actualize Various Potentials (Statements 17 and 18)

Indicators facilitate the development of students' potential to actualize their various potentials, which are included in the high category. Based on the results of interviews, even though students cannot facilitate students outside the classroom because PTM is still limited when carrying out learning, students optimize the achievements of their students. Therefore the sixth indicator is in the high category, which shows that PPLSP 2021 students have been able to facilitate the development of the potential of students to actualize their various potentials. According to Florency (2015), the self-potential possessed by each student should be adequately channeled by schools as educational institutions.

3.8. Pedagogic Competence of Agro-industry Technology Education Study Program Students Joining Kampus Mengajar Batch 2

Tabulation of data from findings regarding Kampus Mengajar students Batch 2 on pedagogic competence, can be seen in Table 3 showing that the pedagogic competence of PTAg Study Program students participating in Kampus Mengajar Batch 2 is in the high category with a total percentage of 78.94%.

Table 3. Pedagogic Competency Results of Agro-industry Technology Education Study Program Students Joining Campus Teaching Batch 2

Indicator	Questions	Percentage(%)	Category
1	1	83,82	High
	2	82,35	High
	3	86,76	High
2	4	80,88	High
	5	77,94	High

Indicator	Questions	Percentage(%)	Category
3	6	63,24	Medium
	7	79,41	High
	8	76,47	High
	9	88,24	High
	10	80,88	High
4	11	80,88	High
	12	76,47	High
	13	79,41	High
	14	80,88	High
5	15	82,35	High
	16	86,76	High
6	17	75	High
	18	76,47	High
7	19	82,35	High
	20	82,35	High
	21	83,82	High
8	22	80,88	High
	23	77,94	High
	24	73,53	Medium
	25	73,53	Medium
9	26	76,47	High
	27	73,53	Medium
	28	67,65	Medium
10	29	76,47	High
	30	76,47	High
Average Percentage Overall		78,94	High

3.9. Indicators of Mastering Student Characteristics (Statements 1-3)

The indicator of mastering the characteristics of students has a high category. Based on the results of the interviews, this is because Campus Teaching students in Batch 2 carry out the orientation and adaptation process first so that they can adapt to the school environment, including the characteristics of students. Therefore, the first indicator shows that Class 2 Kampus Mengajar students are very capable of mastering the characteristics of students. According to Hanifah (2020), in this modern era in the field of education, the different characteristics of students need to be considered and paid attention to in teaching and learning activities. Therefore, every implementation of teaching and learning activities in schools must be by each student's characteristics, learning styles, and intelligence.

3.10. Indicators of Mastering Learning Theory and Educational Learning Principles (Items 4 and 5)

The indicators of mastering learning theory and educating learning principles are in the high category. Based on the results of interviews, all students of the Kampus Mengajar Batch 2 carry out debriefing and already know the basic theory about this because they have studied it when attending lectures. Therefore the second indicator shows that Class 2 Kampus

Mengajar students are very capable of mastering learning theory and educational learning principles. According to [Suparlan \(2005\)](#), teachers must be able to master several learning theories which will enrich the methods used by the teacher so that it is easier for the teacher to form several variations of learning that can increase student motivation.

The indicator of developing a curriculum related to the subject taught has a high category. Based on the results of the interviews, this was because Campus Teaching students in Batch 2 received initial debriefing regarding school pedagogy materials and other matters regarding teaching activities. Therefore, the third indicator shows that Class 2 Kampus Mengajar students can develop a curriculum related to the subjects taught. According to [Alkornia \(2016\)](#), teachers can develop curricula related to the development field, and teachers must be able to carry out educational development activities for students.

3.11. Indicator of Implementing Educational Learning (Statements 11-14)

The indicator of organizing educational learning has a high category. Based on the results of the interviews, this was due to all Campus Teaching Batch 2 students compiling activity programs by looking at the needs of students and schools. Program preparation is carried out for approximately one week for five months of activities. Therefore, the fourth indicator shows that Class 2 Kampus Mengajar students can conduct educational learning. According to [Wuisan \(2014\)](#), to achieve indicators of conducting educational learning, increasing teacher professionalism which includes increasing competency and increasing performance, depends entirely on the teacher's personality.

3.12. Indicator Utilizing Information and Communication Technology for Learning (Statements 15 and 16)

Indicators of utilizing information and communication technology for the benefit of learning have a high category. Based on the results of the interviews, this is because there are mandatory programs implemented by Campus Teaching students Batch 2, namely technological adaptation, one of which is by socializing the AKSI application to support offline and online learning. Therefore, the fifth indicator shows that Class 2 Kampus Mengajar students can utilize information and communication technology to benefit learning. According to [Utama \(2015\)](#), students are required to be broad-minded, and this will be more easily achieved by meeting information needs quickly and efficiently using information and communication technology devices.

3.13. Indicators of Communicating Effectively, Empathically, and Politely with Students (Statements 19-21)

Indicators of communicating effectively, empathetically, and politely with students have a high category. Based on the results of the interviews, this is because Campus Teaching students in Batch 2 have adapted to students for about one week, making it easier for students to communicate effectively, empathetically, and politely. Therefore, the seventh indicator shows that Campus Teaching Class 2 students can communicate effectively, emphatically, and politely with students. According to [Arnold \(2017\)](#), this vital role of communication also occurs in the school environment, which covers the classroom, such as the teaching and learning process, which requires communication between teachers and students so that the process of conveying information can run according to the objectives of learning.

3.15. Indicators of Conducting Assessment and Evaluation of Processes and Learning Outcomes (Statements 22-25)

The indicator of carrying out assessment and evaluation of processes and learning outcomes has a high category. Based on the results of interviews with Campus Teaching students, Batch 2 has learned about the theory of assessment and evaluation during lectures. Therefore the eighth indicator shows that Campus Teaching students in Batch 2 can carry out assessments and evaluations of learning processes and outcomes. According to [Floreny \(2015\)](#), the ability to analyze assessment results is one of the learning points that must be improved by teachers in schools because, without assessment activities, it will not be possible for a teacher to develop or improve the learning process carried out due to the unavailability of accurate information about advantages/advantages, as well as deficiencies/weaknesses of various learning processes.

3.16. Indicator Utilizing the Results of Assessment and Evaluation for Learning (Statements 26- 28)

Indicators utilizing the results of assessment and evaluation for the benefit of learning have a moderate category. Based on the results of the interviews, even though there were students from the Kampus Mengajar Batch 2 who designed and enriched it because the values the students already had were sufficient. In addition, some students did not communicate the evaluation results to the parents of students because this was the teacher's obligation. Therefore the ninth indicator shows that Class 2 Kampus Mengajar students can utilize the results of assessment and evaluation for the importance of learning. According to [Sabariah \(2020\)](#), the use of evaluation results is very significant and urgent in the learning process; without evaluation and reflection on the implementation of the evaluation, the learning process cannot be measured or assessed to what extent students in the teaching-learning process have achieved the abilities and successes.

3.17. Indicators of Taking Reflective Action to Improve the Quality of Learning (Statements 29 and 30)

The indicator of taking reflective action to improve the quality of learning has a high category. Based on the results of interviews with several students from the Kampus Mengajar Batch 2, they received responses from tutors and supervisors, making it easier to reflect on the learning process. Therefore the tenth indicator shows that Campus Teaching Class 2 students can take reflective action to improve the quality of learning. According to [Pratiwi \(2012\)](#) doing reflection, teachers can see that this reflection activity can bridge theory and implementation. Teachers can also see problems, situations, and learning conditions from various perspectives.

3.18. Differences in Pedagogic Competence Between Students Participating in PPLSP 2021 and Campus Teaching Batch 2

Analysis and data on the findings of answers based on the perceptions of PPLSP 2021 student respondents and the Kampus Mengajar Batch 2 through a questionnaire form regarding pedagogic competence. The average achievement of the pedagogic competence of PPLSP 2021 students is higher than the Kampus Mengajar Batch 2. Even so, statements with different categories will be discussed in the following discussion. Even though statistically, it shows no significant difference, several categories of pedagogic competency assessment are in different categories for PPLSP 2021 students and Kampus Mengajar Batch 2.

Statements regarding determining assessment procedures and evaluating processes and learning outcomes have a high category for students in PPLSP 2021, while the Kampus Mengajar Batch 2 is in the moderate category. Statements regarding developing assessment instruments and evaluating processes and learning outcomes by learning objectives have a high category for PPLSP 2021 students, while Campus Teaching Batch 2 is in the moderate category. These two statements are included in the indicators for assessing and evaluating learning processes and outcomes. Based on the results of the interviews, this was because all PPLSP 2021 students carried it out, while only a few of the Kampus Mengajar students carried out the development of assessment instruments and evaluation of processes and learning outcomes. According to [Fadrusiana \(2016\)](#), in carrying out assessments and evaluations of learning processes and outcomes, teachers must fully comply with the general evaluation principles: continuity, comprehensive, fair and objective, cooperative, and practical. The statement regarding using the assessment and evaluation results to design remedial and enrichment programs has a high category for PPLSP 2021 students, while Campus Teaching Batch 2 is in the medium category. This statement is included in the indicators of utilizing the assessment and evaluation results for learning. Based on the interview results, PPLSP 2021 students designed a remedial program eight times, while Campus Teaching Batch 2 students only did it twice. The teacher's ability to carry out assessments is related to the extent to which the teacher has qualified professional and pedagogic competence ([Dudung, 2018](#); [Hakim, 2015](#); [Jamin, 2018](#); [Mahdiansyah, 2018](#); [Sopandi, 2019](#)).

Competent teachers can create various forms of assessment to collect information about students' learning progress related to attitudes, knowledge, and skills. The use of the assessment results is to determine the extent to which students understand the learning material. Statements regarding understanding the principles of educational learning design have a high category for Campus Teaching students in Batch 2, while PPLSP 2021 is in the moderate category. The statement regarding developing the learning design component has a high category for Campus Teaching Batch 2 students, while PPLSP 2021 is in the moderate category. These two statements are included in the indicators of organizing educational learning. Based on the results of the interviews, this is because Campus Teaching Class 2 students carry out debriefing from the organizers for 7 days so that students can maximally organize educational learning, while PPLSP 2021 students carry out debriefing for only 1 day. According to [Khairuddin \(2013\)](#), educational learning will take place well if the learning conditions and atmosphere allow students to be actively and proactively involved. The creation of learning conditions and atmosphere enables students to try on their initiative about things that must be experienced during the learning process ([Bada & Olusegun, 2015](#); [Cahyono, 2017](#); [Faruqi, 2018](#); [Leithwood et al., 2021](#)). That is, the conditions and atmosphere of learning will be created if several learning experiences have been designed that students must do.

The statement regarding facilitating the various potentials of students and their creativity has a high category for Campus Teaching Batch 2 students, while PPLSP 2021 is in the medium category. This statement is included in the indicator of facilitating the development of students' potential to actualize their various potentials. Based on the results of the interviews, this is because Campus Teaching students in Batch 2 have enough time to carry out other activities, while PPLSP 2021 students have less time to develop other things outside of class. Students are emphasized to develop learning achievements, especially in the APHP field. According to [Baharuddin & Palerangi \(2020\)](#), the teacher does not only act as a teacher who transfers his knowledge, knowledge, and skills to students but also helps students to develop

all their potential, especially related to academic and non-academic potential. In today's education, the teacher is no longer the center of transferring knowledge, knowledge, and skills. However, the teacher acts as a facilitator who facilitates students to develop all the potential that exists in students.

4. CONCLUSION

PPLSP 2021 students and Kampus Mengajar Batch 2, based on their self-assessment, show that the pedagogic competence of students participating in PPLSP 2021 and Kampus Mengajar Batch 2 as a whole is in the high category. However, three statements of pedagogic competence are considered to be in the medium category for PPLSP 2021 students but high for Campus Teaching students in Batch 2. In addition, there are also three statements of pedagogic competence which are considered to be in the high category for PPLSP 2021 students but are in the medium category for Campus Teaching students Batch 2. Therefore, future researchers, to be able to dig deeper into the causes of low pedagogic competence related to indicators of utilizing the results of assessment and evaluation for the benefit of PPLSP student learning and the Teaching Campus.

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