

# Identification of Pedagogic Competency of Pre-Service Teachers: A Case Study in the Primary School Teacher Education Study Program, University of Borneo Tarakan

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## ABSTRACT

This study aims to identify the pre-service teacher's pedagogical competencies at the Elementary School Teacher Education study program, University of Borneo Tarakan. This research is an exploratory case study research. The aspects studied in this study consisted of 6 aspects of pedagogic competence. The aspect consists of 1) skills to analyze student knowledge; 2) knowledge and skills in implementing learning theory; 3) formulation of learning objectives; 4) use of information technology; 4) management of learning outside the classroom; and 5) evaluation design. The results obtained on skills to analyze student knowledge, formulation of learning objectives, and information technology get excellent results for pre-service teachers. However, there are still many weaknesses in other aspects because pre-service teachers rarely implement it in class or design it.

**Keywords:** pedagogical competencies, pre-service teachers,

## 1. INTRODUCTION

Currently, teacher competence is an obligation that needs to be possessed not only for a teacher who has been teaching for a long time but also for pre-service teachers at educational institutions in Indonesia. The tight competition for teacher graduates in Indonesia requires efforts to improve pre-service teachers before they graduate. Competencies that need to be owned by teachers include four competencies following Law No. 14 of 2005 concerning teachers and lecturers[1]. The law states that teachers must have competencies consisting of pedagogic, professional, social, and personality.

Of the four competencies, pedagogic competence as the "soul" of a teacher has many problems in the field. The problem with pedagogic competence is that many teachers have not fulfilled this competency. Problems start from poor teaching skills, not mastering classes, not choosing and implementing learning models, and other problems [2][3][4].

Pedagogical competence refers to educational qualifications and classroom teaching[5]. Therefore, to improve teacher pedagogical competence, it is necessary to make

early efforts to identify it[6]. One of the efforts made in this study is to identify the aspects of pre-service teachers' pedagogical competence during *Praktik Pengalaman Lapangan* (Internship Course). It is hoped that this will later provide an overview of pre-service teachers' pedagogic competence conditions at the University of Borneo Tarakan so that efforts can be made to improve in the future.

## 2. METHODS

This research is an exploratory case study, where this research aims to explore a case that occurs as consideration for further research[7]. The research subjects in this study were 33 pre-service teachers in the Elementary School Teacher Education Department of the University of Borneo Tarakan.

Data was collected through questionnaires (questionnaire), interviews and observations. The questionnaire data were assessed based on the criteria in Table 1[8]. The data, especially the questionnaire data in the form of quantitative data, are processed in a percentage in formula 1. Meanwhile, interview and

observation data are descriptive data to support quantitative data.

$$P = \frac{f}{n} \times 100\% \text{ (Formula 1)}$$

Formula 1 has information, including  $P$  as the percentage,  $F$  is the percentage to be searched for,  $n$  is the number of individuals or samples.

The score interval obtained from the questionnaire will be determined again through the percentage results obtained in the form of a percentage. The percentage of 0 to 25% has an inadequate criterion, 26 to 50% sufficient criteria, 51 to 75% good criteria, 76 to 100% outstanding criteria.

Table 1. Questionnaire Criteria

Criteria	Score
Often	4
Sometimes	3
Never	2
Do not know	1

### 3. RESULT DISCUSSION

The aspects observed in this study included six aspects in the pedagogic competence of pre-service teachers. These aspects include skill to analyze student knowledge, knowledge and skills in implementing learning theory, formulation of learning objectives, use of information technology, management of learning outside the classroom, and evaluation design.

The first aspect observed in the study was the ability of pre-service teachers to analyze students in terms of differences in ability in terms of skills knowledge and students' attitudes. The results of the first aspect show that as many as 25 pre-service teachers stated that they often carry out the process of analyzing students' abilities in the class. While the remaining seven pre-service teachers chose occasionally, and the remaining two never chose (Fig 1).

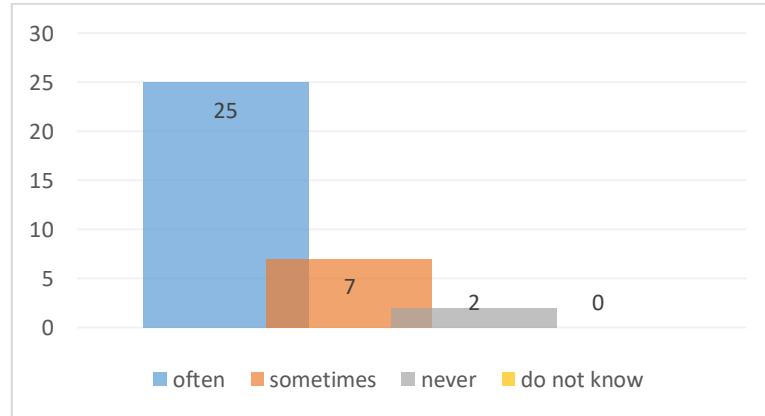


Fig 1. Preservice teachers' responses about the implementation of student analysis

The results of filling out this questionnaire were then continued to semi-structured interviews and observations to validate the pre-service teachers' answers. The results obtained are in accordance with the results of filling out the questionnaire by them. Several methods are used by pre-service teachers to analyze students' abilities, for example, by conducting pre-tests or conducting independent interviews with students regarding difficulties experienced during the learning process. Analyzing student abilities is very important for teachers, where this ability can help teachers

analyze problems in the classroom and formulate lesson plans that are more suitable for students [9][10].

The next aspect that was observed was related to the pre-service teachers' knowledge of learning theory and their efforts to apply the learning theory obtained during classroom learning lectures. The results between pre-service teachers who chose frequently and occasionally had a slight margin. The pre-service teachers who choose sometimes are 16 people, while there are often 15 people (Fig 2). It is made clear that applying learning theory to actual conditions in

the classroom is very troublesome because of students' diverse characteristics.

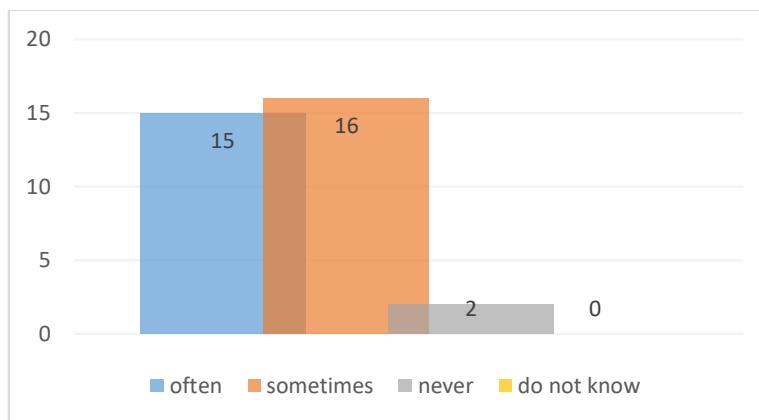


Fig 2. Preservice teachers' responses about the implementation of learning theory

The next aspect observed was the ability of pre-service teachers to formulate learning objectives according to the conditions of students in the classroom. From the results of filling out a questionnaire for pre-service teachers, 26 people stated that the goal-setting was adjusted to the class's conditions. The heterogeneity of learning styles forces pre-service teachers to reformulate learning goals. Several studies state that student

learning styles will affect the teacher's reformulation of learning objectives [11]. The formulation of learning objectives needs to be reviewed many times in a learning process. Based on this, the pre-service teachers have good abilities based on the developed lesson plans' observation results.

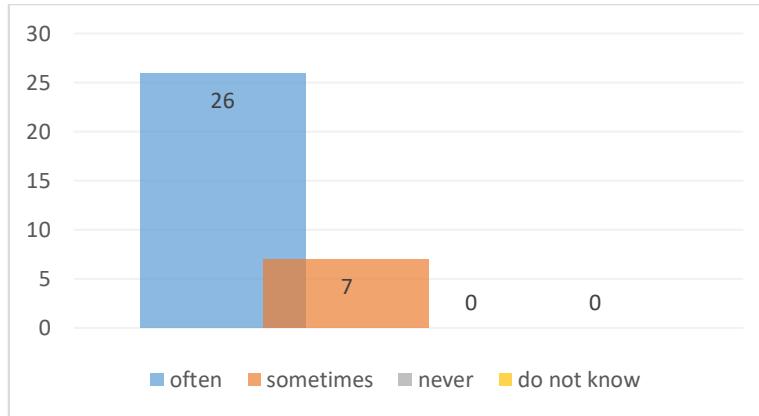


Fig 3. Preservice teachers' responses about planning learning objectives

The use of information technology is also an essential aspect of a teacher's pedagogic competence. Therefore, pre-service teachers are deemed necessary to analyze their information technology management capabilities. From filling out the questionnaire, 23 pre-service teachers often apply information technology in learning, while the remaining ten pre-service teachers

sometimes apply it in learning. The discovery of 10 pre-service teachers who still rarely use information technology needs serious attention because currently, the learning process does not escape information technology. At least pre-service teachers must have the ability to use good computers and smartphones to implement the learning process in the industrial era 4.0 [12].

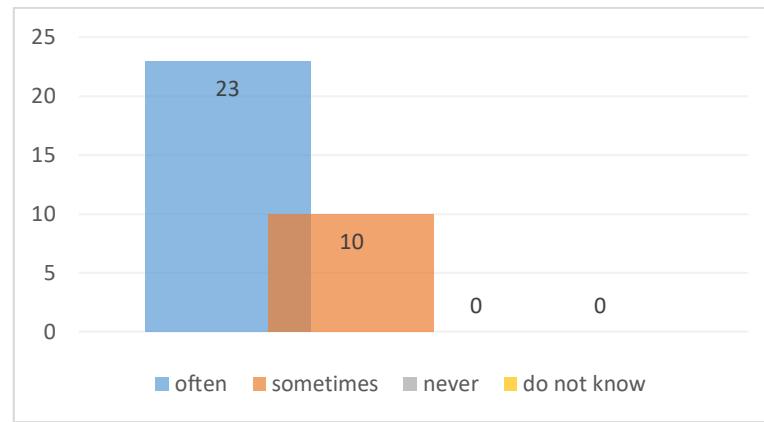


Fig 4. Preservice teachers' responses about the use of technology

The next aspect that is studied is the flexibility of pre-service teachers in implementing learning outside the classroom. Currently, good learning is not only done in the classroom. Learning also needs to be done outside the classroom, such as in a schoolyard, garden, or

school laboratory. The results of filling out the questionnaire showed that the highest number of students was 17 students who admitted that they sometimes do learning outside the classroom. There are many causes, especially related to inadequate school facilities and infrastructure.

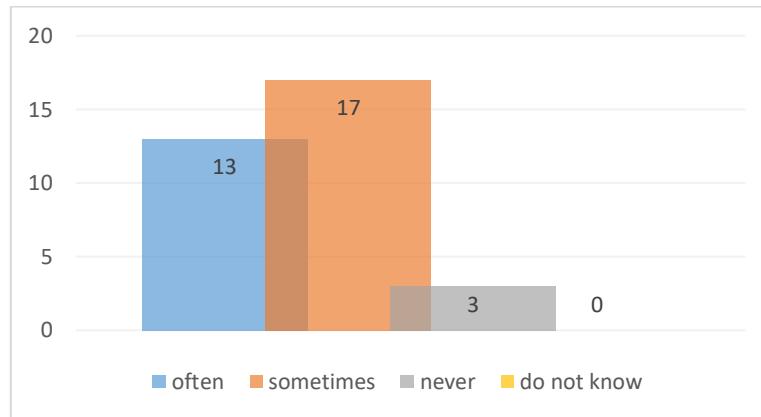


Fig 5. Preservice teachers' responses about learning outside the classroom

The last aspect in pedagogic competence is the implementation of assessment and evaluation. The questionnaire results stated that the pre-service teachers who frequently conducted assessments and evaluations had the same results, namely 16 people. Meanwhile, the remaining one admitted that he did not know how the assessment

and evaluation were conducted. This aspect is considered still lacking because the evaluation process should be carried out continuously in the classroom by the teacher. The implementation of rare evaluations is a weakness that impacts the non-objective assessment of students in the class [13].

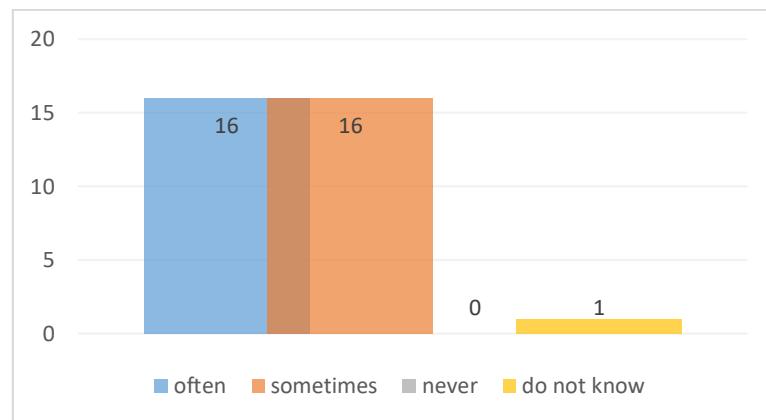


Fig 6. Preservice teachers' responses about assessment design and evaluation

#### 4. CONCLUSION

Of the six aspects of pedagogic competence, at least three aspects need attention because many pre-service teachers rarely do it. Among the three aspects are knowledge and skills in implementing learning theory, managing learning outside the classroom, and evaluation design. These three abilities are fundamental abilities for teachers today in teaching the younger generation. The differences in character in each generation certainly require teachers to be adaptive in implementing learning theories following students' characteristics. Besides, the management of learning outside the classroom also needs to be done to improve students' abilities, especially related to psychomotor and observational knowledge. The evaluation design is also an aspect that needs to be done continuously so that learning outcomes can be maximally measured.

This research indeed becomes the basis for further research, whether to guide pre-service teachers in increasing pedagogic competence. This study also helps other researchers to conduct comparative studies between pre-service teachers in tertiary institutions to analyze problems related to pedagogic potential will get more detailed results.

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