CHAPTER 3
RESEARCH METHODOLOGY

This chapter elaborates on the study's methodological framework. It comprises six primary components of the research procedure: the research design, research variables, population and sample, data collection techniques, data analysis procedures, and the research schedule.

A. Research Design

This study used quantitative methods with a correlational design. It aimed to explore the relationship between the independent variable (Involvement in the *Kampus Mengajar* program) and the dependent variable (Understanding of PCK). Correlation research identifies and measures the relationship between independent and dependent variables, helping researchers understand how one variable may affect another (Creswell, 2018).

B. Research Variables

Understanding variables is essential in designing a practical and meaningful quantitative study. According to Ary et al. (2019), variables in quantitative research are generally divided into two main types: independent variables and dependent variables. These classifications are based on their role in the causal or relational framework of the study.

The independent variable is the variable that is presumed to influence, affect, or predict the outcome of another variable. It is the variable that researchers manipulate or observe as the potential cause. In contrast, the dependent variable is the variable that represents the outcome or the effect. It is expected to change as a result of the influence exerted by the independent variable (Sugiyono, 2019).

1. Independent Variable (X): Participation in the *Kampus Mengajar* Program

This variable refers to the extent of student-teachers' involvement in the *Kampus Mengajar* program, which includes their direct engagement in teaching activities, lesson planning, classroom management, and educational

contributions at partner schools. This variable is considered independent because it is assumed to have an influence on the development of student-teachers' pedagogical skills and knowledge.

2. Dependent Variable (Y): Understanding of Pedagogical Content Knowledge (PCK)

This variable refers to English student-teachers' ability to integrate content knowledge with effective teaching strategies, curriculum application, and awareness of student characteristics. It is classified as the dependent variable because its development or level of understanding is hypothesized to be affected by the level of participation in the *Kampus Mengajar* program.

Therefore, this study aims to examine whether the independent variable (participation in the *Kampus Mengajar* program) has a significant correlation with the dependent variable (understanding of PCK) among English student-teachers at one of the universities in Tasikmalaya.

C. Population and Samples

The population of this study was 273 students from the Faculty of Teacher Training and Education at one of the universities in Tasikmalaya, who had participated in the *Kampus Mengajar* program batches 6 and 7, with the following data:

Table 1 Data on Students Who Participated in The Kampus Mengajar Program Batches 6 and 7

No.	Department	Total
1.	Pendidikan Bahasa dan Sastra Indonesia	37
2.	Pendidikan Bahasa Inggris	60
3.	Pendidikan Matematika	36
4.	Pendidikan Fisika	14
5.	Pendidikan Biologi	39
6	Pendidikan Geografi	16
7.	Pedidikan Jasmani	2
8.	Pendidikan Ekonomi	23
9.	Pendidikan Sejarah	28
10.	Pendidikan Masyarakat	18

Sources: *Surat tugas peserta Kampus Mengajar Angkatan 6* (Kemendikbudristek, 2023) and *Angkatan 7* (Kemendikbudristek, 2024).

Using a purposive sampling technique, the sample of this research is English Education Department students at one of the universities in Tasikmalaya who have participated in the *Kampus Mengajar* program batches 6 and 7. The number of samples is 34 students. According to Sugiyono (2019), Purposive sampling is a sampling technique used in research, where subjects are selected deliberately based on specific characteristics considered relevant to achieving the research objectives. In this study, students from the English Education Department were selected because the researcher wanted to focus on the context of English education.

This study upholds the principles of voluntary participation, consent, confidentiality, and respect for respondents to ensure ethical standards in research. To protect their privacy, all respondents were informed of the purpose of the study and the measures that would be used to collect data, and they gave their consent before any data collection took place. By following these ethical guidelines, this study aims to maintain ethical integrity and soundness in the research process.

D. Data Collection

To collect data, researchers used online questionnaires. The type of questionnaire used was closed-ended, meaning the respondents only chose the best answer for the items and made a checklist of the answers given. Participation in the *Kampus Mengajar* program indicator is adapted from the Merdeka Belajar - Kampus Merdeka (MBKM) policy, which consists of 4 aspects: Direct Involvement in Innovative Learning, Development of 21st Century Skills, Real Contribution to Educational Improvement, and Application and Reinforcement of Knowledge. Indicators for understanding of PCK are adapted from Shulman's (1987) theory: Knowledge of Content, Knowledge of Pedagogy, Knowledge of Curriculum, and Knowledge of Student Characteristics. The questionnaire in this study consisted of 24 items divided into two categories: 12 items for variable X and 12 items for variable Y. The questionnaire utilized a Likert-type scale with six response options to allow

respondents to rate each item based on their experiences and perceptions. The rating scale has 6 options: Sangat *Tidak Setuju*, *Tidak Setuju*, *Kurang Setuju*, *Cukup Setuju*, *Setuju*, and *Sangat Setuju*.

Table 2 The Likert Scale Rating

	Score	
Option	**Favorable**	**Un favorable**
Sangat Setuju	6	1
Setuju	5	2
Cukup Setuju	4	3
Kurang Setuju	3	4
Tidak Setuju	2	5
Sangat Tidak Setuju	1	6

A six-point Likert-type scale was employed to eliminate neutral responses, improve data reliability, and obtain more detailed insights into students' perceptions and attitudes toward the teaching skills acquired through the *Kampus Mengajar* program. This scale allowed researchers to understand better how respondents perceived the program's impact on their understanding of Pedagogical Content Knowledge (PCK) (Sugiyono, 2019; Ary et al., 2019). To avoid misunderstandings during completion, the questionnaire was written in Indonesian to ensure respondents clearly understood each item.

The instrument must be tested for validity and reliability to ensure it measures what it is supposed to measure and gives consistent results. Validity ensures the instrument accurately reflects the studied concept, preventing bias and misinterpretation. Reliability ensures the instrument provides stable and consistent results every time it is used, which is important for obtaining reliable data (Sugiyono, 2019).

3. Validity Test

The validity test on the questionnaire is critical to ensure that the measuring instrument can accurately measure the intended variable. Validity guarantees that each item in the questionnaire measures what should be measured. Sugiyono (2019) states that validity shows how valid an instrument is in measuring the data to be obtained. In addition, an invalid questionnaire can produce data irrelevant to the research objectives, and the quality of research is

highly dependent on the reliability and validity of measuring instruments. Without validity, the research methodology will be questioned (Taherdoost, 2016). In this study, the validity of the instrument was tested using the Pearson Product-Moment, analyzed through SPSS version 24. Knowing whether the instrument used is valid can be seen from the results of sig. Value. If the sig. Value is less than 0.05 (Supriadi, 2021), then the instrument is valid. The validity test was conducted before distributing the questionnaires to the sample. The respondents for this validity test consisted of students from the Faculty of Teacher Training and Education, excluding those majoring in English Education, at one of the universities in Tasikmalaya.

Table 3 Validity Test of Student-Teachers' Participation in the Kampus Mengajar Program

Item	Sig. Value	Level of Significance	Criteria
1	0.000	0.05	Valid
2	0.000	0.05	Valid
3	0.000	0.05	Valid
4	0.172	0.05	Invalid
5	0.000	0.05	Valid
6	0.000	0.05	Valid
7	0.196	0.05	Invalid
8	0.000	0.05	Valid
9	0.000	0.05	Valid
10	0.000	0.05	Valid
11	0.000	0.05	Valid
12	0.000	0.05	Valid
13	0.000	0.05	Valid
14	0.000	0.05	Valid

Based on the table above, 12 out of 14 items have a significance value less than 0.05, indicating that they are statistically valid. Therefore, it can be concluded that 12 items are valid, while the remaining 2 items are considered invalid.

Table 4 Validity Test of Student-Teachers' Understanding of PCK

Item	Sig. Value	Level of Significance	Criteria
1	0.233	0.05	Invalid
2	0.000	0.05	Valid
3	0.000	0.05	Valid
4	0.000	0.05	Valid
5	0.076	0.05	Invalid
6	0.000	0.05	Valid
7	0.000	0.05	Valid
8	0.000	0.05	Valid
9	0.000	0.05	Valid
10	0.000	0.05	Valid
11	0.000	0.05	Valid
12	0.000	0.05	Valid
13	0.000	0.05	Valid
14	0.000	0.05	Valid

Based on the table above, 12 out of 14 items have a significance value less than 0.05, indicating that they are statistically valid. Therefore, it can be concluded that 12 items are valid, while the remaining 2 items are considered invalid.

4. Reliability Test

The reliability test on the questionnaire is very important to ensure that the measuring instrument provides consistent and reliable results. Reliability guarantees that the questionnaire produces the same results when used repeatedly under the same conditions, as Sugiyono (2019) stated, who emphasized the importance of consistent results in repeated measurements. If the questionnaire is unreliable, the results may vary significantly, potentially misleading the data analysis. Taherdoost (2016) also emphasizes that high reliability increases the researcher's confidence in the data collected, and inconsistent data can lead to incorrect conclusions. Therefore, reliability testing is a crucial step in questionnaire development, ensuring that the instrument has

a good level of reliability to produce consistent and valid data and improve the overall quality of the research. Knowing whether an instrument is reliable can be done by looking at Cronbach's Alpha. If the Cronbach's Alpha instrument higher than 0.6 (Supriadi, 2021), then the instrument is declared reliable. The reliability test was conducted before distributing the questionnaires to the sample. The respondents for this validity test consisted of students from the Faculty of Teacher Training and Education, excluding those majoring in English Education, at one of the universities in Tasikmalaya.

Table 5 Reliability Test of Questionnaire Student-Teachers' Participation in the Kampus Mengajar Program

Cronbach's Alpha	N of Items
0.965	12

The calculation showed that the reliability of student-teacher instruments was 0.965. If the reliability coefficient value is higher than 0.6, then the questionnaire is reliable.

Table 6 Reliability Test of Questionnaire Student-Teachers' Understanding of PCK

Cronbach's Alpha	N of Items
0.966	12

The calculation showed that the reliability of student-teacher instruments was 0.966. If the reliability coefficient value is higher than 0.6, then the questionnaire is reliable.

E. Data Analysis

Before conducting the correlation analysis, it was important to verify whether the data for both variables met the assumption of normal distribution. Assessing normality is a crucial step to ensure that the use of parametric statistical procedures is both appropriate and valid. In this study, the normality test was conducted using SPSS version 24, applying the Shapiro-Wilk method to evaluate the distribution of the sample data. A significance level of 0.05 was

used to interpret the results. If the p-value was higher than 0.05, the data were considered normally distributed (Setiaman, 2021).

Table 7 The Result of Normality Test

Variable	P-Value	Level of Significance	Criteria
X	0.292	0.05	Normal
Y	0.132	0.05	Normal

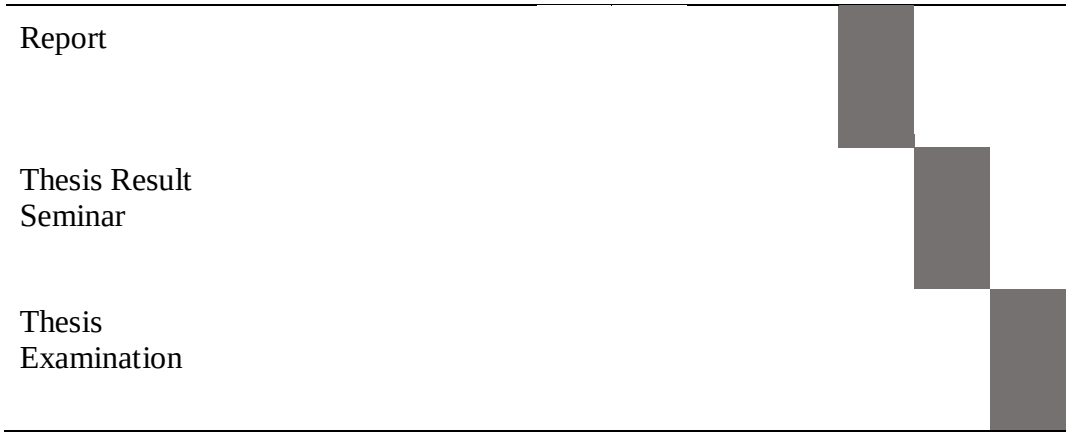
Based on the table above, the p-value of variable X was 0.292, and the p-value of variable Y was 0.132. The data were considered normally distributed since both values were higher than 0.05 (Setiaman, 2021). Therefore, since the data met the normality assumption, the Pearson Product-Moment Correlation technique was used, as it is commonly employed to find a correlation between two variables.

F. Research Schedule

This research was conducted at one of the Universities in Tasikmalaya with a period from September 2024 – July 2025, with the following conditions:

Table 8 Research Schedule

Description	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025
Research Proposal Writing											
Research Proposal Examination											
Data Collection											
Data Analysis											


Report
Thesis Result Seminar
Thesis Examination