

# The Influence of Equitable Instructional Practices and Teachers' Pedagogical Competence on Student Learning Engagement in Inclusive Schools in Indonesia

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## ABSTRACT

This study investigates the effect of equitable teaching practices and teachers' pedagogical competence on student engagement in inclusive schools in Indonesia. A quantitative approach was adopted, with data collected from 225 respondents using a Likert-scale survey. The study examines the relationships between equitable teaching practices, pedagogical competence, and student engagement in inclusive classrooms. Data analysis was conducted using SPSS version 25, including descriptive statistics, correlation analysis, and regression analysis. The findings indicate that both equitable teaching practices and teachers' pedagogical competence significantly predict student engagement, with equitable teaching practices having a stronger influence. The study suggests that inclusive teaching strategies and enhancing teachers' pedagogical competence are essential for fostering student engagement in inclusive classrooms. These findings provide valuable insights for educators and policymakers working to improve inclusive education practices in Indonesia.

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## 1. INTRODUCTION

In recent years, inclusive education has become a central focus in educational policies worldwide, including in Indonesia. Inclusive education is a teaching approach that seeks to ensure that all students, regardless of their abilities or disabilities, have access to quality education within the same learning environment [1], [2]. The importance of inclusive education lies in its ability to provide equitable opportunities for all

students to learn and grow, fostering a sense of belonging and improving social integration [3]. In this context, the role of teachers is crucial, as their pedagogical practices and competencies directly affect the quality of student engagement and the overall success of inclusive education.

Teacher competence, specifically pedagogical competence, refers to the knowledge and skills teachers need to effectively design and implement teaching

strategies that accommodate the diverse needs of students [4], [5]. Pedagogical competence encompasses various aspects, such as planning, assessment, communication, and classroom management. For inclusive education to be effective, teachers must be equipped with the skills necessary to address the individual needs of students with different learning styles and abilities.

Equitable teaching practices, on the other hand, refer to the teaching strategies and methods that ensure all students, regardless of their background or learning needs, are given equal opportunities to succeed [6]. These practices aim to eliminate barriers to learning and provide support to students who may face challenges due to socio-economic factors, disabilities, or other personal circumstances. In inclusive classrooms, equitable teaching practices are essential to promote active participation and engagement among all students, ensuring that no one is left behind.

Student engagement is a critical factor in the educational process, as it influences learning outcomes, motivation, and overall academic success. Engagement refers to the level of interest, effort, and enthusiasm students invest in their learning activities [7], [8]. In inclusive education, fostering student engagement is particularly important because it ensures that students with diverse needs remain active participants in the learning process. High levels of student engagement have been linked to improved academic performance, better social skills, and increased self-esteem.

Despite the growing importance of inclusive education in Indonesia, there is limited research on how equitable teaching practices and teachers' pedagogical competence influence student engagement in inclusive schools. This study aims to fill this gap by examining the relationships between these factors in the context of Indonesian inclusive schools. Specifically, it seeks to explore how teachers' ability to implement equitable teaching practices and their pedagogical competence affect the level of student engagement in inclusive classrooms.

This research is important for several reasons. First, it contributes to the growing body of knowledge on inclusive education, particularly in the Indonesian context. Second, it provides insights into how teachers' professional development in pedagogical competence can be leveraged to enhance student engagement in diverse classrooms. Finally, the findings of this study may inform policy decisions and teacher training programs aimed at improving the quality of education for all students, particularly those in inclusive educational settings.

The study utilizes a quantitative approach, with data collected from 225 respondents through a Likert scale survey. Data analysis was conducted using SPSS version 25 to assess the impact of equitable teaching practices and pedagogical competence on student engagement. The results of this study will provide valuable information for educators, policymakers, and researchers seeking to enhance inclusive education practices in Indonesia and beyond.

## 2. LITERATURE REVIEW

### 2.1 *Equitable Teaching Practices in Inclusive Education*

Equitable teaching practices refer to strategies that aim to meet the diverse needs of students by ensuring equal access to learning opportunities. These practices are particularly crucial in inclusive education settings, where students with varying academic abilities, learning styles, and disabilities are placed together in the same classroom [9], [10]. The core belief behind these practices is that all students, regardless of their differences, deserve a high-quality education. To achieve this, teachers are encouraged to create an environment where every student, irrespective of their background, has the opportunity to succeed academically [3], [11]. This

approach emphasizes inclusivity and fairness in providing opportunities for learning, fostering an environment where all students can engage and thrive.

Research on equitable teaching practices highlights key strategies such as differentiated instruction, which involves modifying teaching methods, materials, and assessments to cater to the varied needs of students. This may include using a range of instructional strategies, such as visual, auditory, and kinesthetic approaches, to reach all learners. Additionally, equitable teaching practices support collaborative learning, where students work together in groups, sharing ideas and benefiting from diverse perspectives. A positive and inclusive classroom culture is another essential component, ensuring that every student feels valued and supported. Scholars argue that such practices not only improve academic outcomes but also enhance social integration and emotional well-being, particularly for students from diverse socio-economic backgrounds or those with disabilities, as is crucial in the Indonesian educational context [3], [11].

## 2.2 *Pedagogical Competence of Teachers*

Pedagogical competence refers to the knowledge, skills, and attitudes that teachers require to effectively deliver instruction, manage classrooms, assess student progress, and adapt their teaching methods to meet the diverse needs of their students [12], [13]. In inclusive education settings, teachers' pedagogical competence is

especially crucial, as it dictates their ability to address the varying needs of students with different abilities, including those with special needs, while fostering an inclusive learning environment. Teachers who possess strong pedagogical competence can ensure that all students, regardless of their learning differences, feel included, engaged, and supported throughout the learning process.

Pedagogical competence encompasses several dimensions, including subject knowledge, instructional strategies, classroom management, and assessment skills. Teachers with high levels of pedagogical competence are able to create effective and engaging lessons, manage diverse classrooms, and assess student learning in ways that accommodate individual differences [14], [15]. Moreover, teachers' ability to use formative assessments to monitor student progress and adjust teaching strategies accordingly is a critical aspect of pedagogical competence [16], [17]. In the context of inclusive education, teachers also need specialized competencies, such as understanding disabilities, employing differentiated instruction techniques, and collaborating with other professionals like special education teachers and counselors. Research has shown that teachers who receive targeted professional development in these areas are more successful in implementing inclusive practices, ultimately enhancing student engagement and academic outcomes [16],

[17]. However, in Indonesia, many teachers face challenges in developing these competencies, particularly in rural areas where access to professional development opportunities and resources is limited (Lestari & Arifin, 2019).

### 2.3 *Student Engagement in Inclusive Education*

Student engagement is a multifaceted concept that refers to the level of attention, interest, participation, and effort that students invest in their learning. It has been widely recognized as a key predictor of academic success and personal development [7], [8]. In the context of inclusive education, student engagement becomes even more critical, as it ensures that students, including those with disabilities or learning difficulties, remain actively involved in the learning process. When students are engaged, they are more likely to persist in the face of challenges, which is particularly important in inclusive classrooms where diverse needs must be met.

Engagement can be conceptualized in three main dimensions: behavioral, emotional, and cognitive engagement. Behavioral engagement refers to the extent to which students participate in academic tasks, such as attending class, completing assignments, and engaging in classroom activities. Emotional engagement involves students' feelings of connection to the school, their peers, and their emotional investment in learning. Cognitive engagement refers to the mental effort students dedicate to their learning, such as deep thinking,

problem-solving, and goal-setting [18], [19]. Research has shown that equitable teaching practices and teachers' pedagogical competence significantly influence all three dimensions of student engagement. For example, differentiated instruction and collaborative learning opportunities can enhance students' behavioral engagement by making learning more accessible and enjoyable. Furthermore, teachers who provide positive reinforcement, timely feedback, and a supportive environment foster emotional engagement and motivation [20]. In inclusive settings, fostering engagement is vital for promoting academic success, social integration, and personal development, particularly for students with disabilities or learning challenges [21].

### 2.4 *Theoretical Framework*

This study is guided by two main theoretical frameworks: Vygotsky's Social Constructivism and the Theory of Pedagogical Content Knowledge (PCK). Vygotsky's Social Constructivism emphasizes the importance of social interaction and collaborative learning in the development of cognitive skills (Vygotsky, 1978). This theory suggests that students learn best when they engage with others in meaningful, context-rich activities, which aligns with the principles of equitable teaching practices and student engagement. PCK, on the other hand, highlights the integration of content knowledge and pedagogical skills, emphasizing that effective teaching requires

teachers to not only understand their subject matter but also know how to teach it in ways that are accessible and engaging for all students (Shulman, 1987). These frameworks provide a foundation for understanding the relationships between equitable teaching practices, teachers' pedagogical competence, and student engagement in inclusive classrooms.

### 3. METHODS

#### 2.1 Research Design

The research follows a quantitative correlational design, which is commonly used to examine the relationships between two or more variables. In this study, the independent variables are equitable teaching practices and teachers' pedagogical competence, and the dependent variable is student engagement. A correlational design is appropriate for understanding the strength and direction of the relationships between these variables without manipulating them, as the goal is to assess how naturally occurring teaching practices and teacher competence influence student engagement in inclusive classrooms.

#### 3.2 Population and Sample

The population for this study consists of teachers and students from inclusive schools in Indonesia, selected from various regions to ensure a diverse representation of educational settings. These schools, both primary and secondary, were specifically chosen for their active implementation of inclusive education practices. According to the Indonesian Ministry of Education and Culture, numerous schools across the country follow inclusive education policies, making them suitable candidates for the study. The goal is to capture a broad spectrum of experiences in inclusive classrooms to better understand the factors influencing student engagement.

The study sample includes 225 respondents, comprising both teachers and

students. The sample size was determined using convenience sampling, drawing from schools identified as implementing inclusive education. Teachers in the sample have direct experience teaching in inclusive classrooms, and students are those who actively engage in these environments. The inclusion criteria for the sample were: teachers must have at least one year of experience in inclusive classrooms, and students must be enrolled in such classrooms and actively participate in academic activities. This method of sampling ensures that the respondents represent the diverse range of experiences found in inclusive schools across Indonesia.

#### 3.3 Data Collection Instruments

Data were collected using a Likert-scale survey designed to measure three key variables: equitable teaching practices, teachers' pedagogical competence, and student engagement. The survey was adapted and developed based on existing literature and previous studies on inclusive education (Tomlinson, 2001; Shulman, 1987; Fredricks et al., 2004). The first section, Equitable Teaching Practices (independent variable), assesses the extent to which teachers implement strategies that accommodate the diverse learning needs of students, including differentiated instruction, classroom collaboration, and creating an inclusive environment. The second section, Teachers' Pedagogical Competence (independent variable), measures teachers' knowledge and skills in areas such as instructional planning, classroom management, and assessment practices, aimed at supporting student learning in inclusive classrooms. The third section, Student Engagement (dependent variable), gauges the level of student involvement in learning activities, addressing behavioral, emotional, and cognitive engagement. Each item on the Likert scale ranges from 1 (Strongly Disagree) to 5 (Strongly Agree), enabling respondents to express their level of agreement with each statement. The survey was reviewed by experts in inclusive education to ensure its validity and clarity before distribution.

### 3.4 Data Collection Procedures

The data collection process was carried out in two phases. Phase 1: Teacher Survey involved administering the survey to 225 teachers who teach in inclusive classrooms. The teachers were given the survey either in person or through an online platform, depending on the school's resources and accessibility. They were asked to complete the survey in a quiet environment and were assured that their responses would remain confidential and used solely for research purposes. Phase 2: Student Survey involved distributing a separate survey to 225 students enrolled in the inclusive education system. The survey was administered through teachers, who acted as intermediaries to ensure that students understood the purpose of the study and the questions. Student responses were collected in a controlled classroom setting, with assistance provided when necessary. In both phases, participants were informed about the purpose of the study, and their consent was obtained before the survey was administered.

### 3.5 Data Analysis

The data collected from the surveys were analyzed using SPSS version 25, a widely used statistical software package in social science research. Several analysis techniques were employed to process the data. First, Descriptive Statistics were calculated, including means, standard deviations, and frequencies, to provide an overview of the respondents' characteristics and the distribution of responses across the survey variables. This step helped summarize the general trends in the data and establish a foundation for further analysis.

Second, Reliability Analysis was conducted to assess the internal consistency of the survey items. Cronbach's alpha was calculated for each scale, with a value of 0.7 or higher considered acceptable for ensuring the reliability of the survey. Additionally, Correlation Analysis using Pearson's correlation coefficient was performed to examine the relationships between the independent variables (equitable teaching practices and teachers' pedagogical

competence) and the dependent variable (student engagement). This analysis revealed the strength and direction of these relationships. A Multiple Regression Analysis was then conducted to test the predictive power of the independent variables on student engagement, helping to determine how much each variable contributes to variations in engagement. Finally, Significance Testing, including T-tests and ANOVA, was conducted to explore whether there were significant differences in student engagement based on varying levels of teachers' pedagogical competence and the implementation of equitable teaching practices.

## 4. RESULTS AND DISCUSSION

### 4.1 Demographic Sample Results

The demographic variables collected for this study include gender, age, educational level, teaching experience, and the type of school, which are crucial for understanding the composition of the sample and how these factors might influence the study's results. For gender distribution, the sample consists of 120 female respondents (53.3%) and 105 male respondents (46.7%), reflecting the common trend of higher female participation in education-related professions. In terms of age distribution, the largest group of respondents falls within the 31-40 years range (35.6%), followed by 41-50 years (26.7%), with 20-30 years at 22.2%, and 51 years and above at 15.6%. This shows a diverse age range, with the majority of respondents being mid-career professionals.

Regarding educational level, most respondents hold a Bachelor's Degree (66.7%), followed by those with a Master's Degree (28.9%), and a smaller proportion possessing a Doctorate Degree (4.4%), which is typical for the teacher population in Indonesia. The teaching experience of respondents is also varied, with 31.1% having 6-10 years of experience, followed by 24.4% with 11-15 years. The sample includes a diverse range of teaching experience levels, ensuring a well-rounded perspective from both early and mid-career teachers. In terms of type of

school, the majority of respondents work in public schools (71.1%), with a smaller proportion in private schools (26.7%), and only 2.2% in international schools. For student demographics, the gender distribution among the 225 student respondents is almost equal, with 51.1% male and 48.9% female. The age distribution shows that most students are in the 11-15 years age group (44.4%), followed by 37.8% in the 6-10 years range. These demographic characteristics help provide context to the study's findings and ensure a

diverse representation of experiences from both teachers and students in inclusive education settings.

#### 4.2 Descriptive Statistics

The descriptive statistics provide an overview of the responses to the survey items related to equitable teaching practices, teachers' pedagogical competence, and student engagement.

Table 1. Descriptive Statistics

Variable	Mean	Standard Deviation
Equitable Teaching Practices	4.12	0.45
Teachers' Pedagogical Competence	4.18	0.38
Student Engagement	4.05	0.49

The results revealed that Equitable Teaching Practices had a mean score of 4.12 (SD = 0.45), indicating that teachers generally feel they implement equitable teaching practices effectively. Teachers' Pedagogical Competence had a mean score of 4.18 (SD = 0.38), suggesting that teachers report high levels of pedagogical competence in their teaching practices. Student Engagement scored a mean of 4.05 (SD = 0.49), indicating that students are generally engaged in classroom activities, although there is some variability in engagement levels across the sample.

#### 4.3 Reliability Analysis

To assess the internal consistency of the survey, Cronbach's alpha values were calculated for each of the three scales, with a

value of 0.70 or higher indicating good reliability. The results showed that Equitable Teaching Practices had a Cronbach's alpha of 0.856 (acceptable), Teachers' Pedagogical Competence had a Cronbach's alpha of 0.833 (acceptable), and Student Engagement had a Cronbach's alpha of 0.882 (good). All scales demonstrated acceptable to good internal consistency, indicating that the survey items reliably measure the intended constructs.

#### 4.4 Correlation Analysis

The Pearson correlation analysis was conducted to examine the relationships between the independent variables (equitable teaching practices and teachers' pedagogical competence) and the dependent variable (student engagement).

Table 2. Correlation

Variable	Equitable Teaching Practices	Teachers' Pedagogical Competence	Student Engagement
Equitable Teaching Practices	1.00	0.656**	0.722**
Teachers' Pedagogical Competence	0.656**	1.00	0.605**
Student Engagement	0.722**	0.605**	1.00

The correlation analysis, as shown in Table 2, reveals significant relationships between the three variables. Equitable Teaching Practices is strongly positively correlated with Student Engagement ( $r =$

0.722,  $p < 0.01$ ), indicating that teachers who implement more equitable teaching practices tend to have students who are more engaged in the learning process. Additionally, there is a moderate positive correlation between

Equitable Teaching Practices and Teachers' Pedagogical Competence ( $r = 0.656$ ,  $p < 0.01$ ), suggesting that teachers with higher pedagogical competence are more likely to adopt equitable teaching practices. Teachers' Pedagogical Competence also has a moderate positive correlation with Student Engagement ( $r = 0.605$ ,  $p < 0.01$ ), indicating that teachers' pedagogical skills contribute positively to fostering student engagement, although the strength of this relationship is somewhat lower compared to the connection between

equitable teaching practices and student engagement. These findings emphasize the importance of both teaching practices and teacher competence in enhancing student engagement in inclusive classrooms.

#### 4.5 Regression Analysis

To determine the predictive power of the independent variables on student engagement, a multiple regression analysis was conducted.

Table 3. Regression Analysis

Predictor Variable	B	Standard Error	Beta	t-Value	p-Value
Equitable Teaching Practices	0.456	0.083	0.382	5.633	< 0.01
Teachers' Pedagogical Competence	0.323	0.095	0.276	3.556	< 0.01
Constant	1.155	0.112	-	10.452	< 0.01

The regression analysis results in Table 3 show that both Equitable Teaching Practices and Teachers' Pedagogical Competence are significant predictors of Student Engagement. Equitable Teaching Practices ( $\beta = 0.382$ ,  $p < 0.01$ ) has a stronger effect on student engagement compared to Teachers' Pedagogical Competence ( $\beta = 0.276$ ,  $p < 0.01$ ), suggesting that the implementation of equitable teaching practices has a more substantial impact on fostering student engagement. The t-values for both predictor variables are significant (5.633 for equitable teaching practices and 3.556 for pedagogical competence), indicating that these variables reliably predict student engagement. The constant value of 1.155 ( $p < 0.01$ ) further reinforces the statistical significance of the model, with the overall regression model explaining a substantial portion of the variation in student engagement. These findings emphasize the critical role of both teaching practices and teacher competence in promoting student engagement in inclusive classrooms.

The regression model was significant ( $F(2, 222) = 56.122$ ,  $p < 0.01$ ), indicating that the independent variables, equitable teaching practices and teachers' pedagogical competence, together explain a substantial portion of the variance in student engagement. The predictors collectively

accounted for 58.2% of the variance in student engagement, as reflected by the  $R^2$  value of 0.582. This suggests that the model is a strong fit for explaining how teaching practices and teacher competence influence student engagement, highlighting the importance of both factors in promoting active participation and involvement in inclusive classrooms.

#### Discussion

The findings of this study underscore the critical role of both equitable teaching practices and teachers' pedagogical competence in fostering student engagement in inclusive classrooms in Indonesia. Specifically, the results indicate that teachers who implement equitable teaching practices and possess higher levels of pedagogical competence are more likely to achieve higher levels of student engagement. This suggests that inclusive teaching methods and the teacher's ability to adapt and personalize instruction to meet the diverse needs of students directly contribute to creating a classroom environment where all students, including those with disabilities and varying academic abilities, can actively participate in the learning process. These findings provide empirical support for the growing emphasis on teacher competence and inclusive teaching strategies in educational policies and practices [6], [22].

The strong correlation between equitable teaching practices and student engagement highlights the importance of teaching strategies that address the diverse needs of students. Teachers who incorporate differentiated instruction, collaborative learning, and other inclusive teaching strategies create a classroom environment that encourages active participation and motivation among students. This is consistent with previous research by [6], [11], which has shown that inclusive teaching practices, such as adapting content and teaching methods to cater to diverse learners, enhance student engagement and foster greater student participation. The results suggest that when students see that their individual needs are met through varied and inclusive teaching approaches, they are more likely to remain engaged and motivated throughout the learning process.

Although teachers' pedagogical competence was found to have a slightly lower correlation with student engagement, it still plays a significant role in promoting engagement. Teachers who are skilled in instructional practices, including assessment, communication, and classroom management, are better equipped to engage students effectively. This finding supports the work of [4], [23], [24], who emphasize the importance of teachers' professional knowledge and pedagogical skills in fostering an inclusive and engaging learning environment. Competence in areas such as effective lesson planning, clear communication, and the ability to manage classroom dynamics is essential for creating a space where students feel confident and motivated to participate, which is crucial in inclusive education settings.

The multiple regression analysis further solidifies these findings, revealing that both equitable teaching practices and teachers' pedagogical competence are significant predictors of student engagement. The stronger predictive power of equitable teaching practices suggests that inclusive teaching strategies have a more immediate and substantial effect on student engagement than the overall pedagogical competence of

the teacher. This may be due to the fact that equitable practices, such as differentiation and collaboration, create an environment where students with different learning needs feel supported and valued from the outset, thereby increasing their engagement in the learning process. Teachers who emphasize inclusivity in their teaching approach may be more successful in drawing students into the classroom activities, leading to better engagement.

Finally, these findings highlight the importance of creating an inclusive and supportive learning environment in which all students feel valued and engaged. The results suggest that when teachers prioritize equitable teaching practices, they provide students with the necessary support to succeed in the classroom, regardless of their background or ability. In light of these findings, it is recommended that teacher training programs focus on developing teachers' competencies in both pedagogical skills and inclusive teaching strategies. By equipping teachers with the tools and knowledge to implement inclusive practices and enhance their pedagogical competence, schools can foster environments that support the active engagement of all students, improving both their academic performance and social integration.

### **Implications**

The results of this study have several important implications for educational practice and policy. First, the findings emphasize the critical role of equitable teaching practices in enhancing student engagement in inclusive classrooms. Schools and teachers should prioritize training in differentiated instruction, collaborative learning, and other inclusive teaching strategies to ensure that all students, regardless of their abilities, are actively engaged in the learning process. Second, teachers' pedagogical competence is essential for fostering an engaging classroom environment. Professional development programs should focus on improving teachers' skills in classroom management, formative assessment, and adapting

instruction to meet the diverse needs of students. By enhancing teachers' pedagogical competence, schools can create a more inclusive and engaging learning environment for all students. Finally, the findings suggest that policy makers and educators in Indonesia should continue to support and promote inclusive education practices, as these not only benefit students with disabilities but also improve overall student engagement and academic success, fostering a more equitable education system for all learners.

## 5. CONCLUSION

The study has shown that both equitable teaching practices and teachers' pedagogical competence are essential factors influencing student engagement in inclusive education settings in Indonesia. The results demonstrate that teachers who implement inclusive teaching strategies and possess strong pedagogical competencies are more likely to engage students effectively, regardless of their diverse needs and abilities. Among the two factors, equitable teaching

practices were found to have a more significant impact on student engagement, highlighting the importance of creating an inclusive and supportive classroom environment. These findings suggest that teacher training programs should focus on equipping educators with skills for differentiated instruction and classroom management tailored to diverse learning needs. Additionally, the study emphasizes the need for continuous professional development to enhance teachers' competencies in inclusive education. For policymakers, this research underscores the importance of fostering an inclusive education culture that supports both teacher competence and equitable teaching strategies to maximize student engagement and learning outcomes in inclusive classrooms. The insights from this study contribute to the growing body of knowledge on inclusive education and offer practical recommendations for improving teaching practices in diverse educational environments.

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