



# Parental Involvement and Its Relationship with High School Students' Learning Achievement: A Comparative Study of Urban and Rural Schools

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## Abstract

This study aims to analyze the relationship between parental involvement and academic achievement of high school students by comparing schools in urban and rural areas. A comparative quantitative approach with correlational survey method was employed, involving 100 eleventh-grade students (50 from urban schools and 50 from rural schools). Data were collected through questionnaires measuring parental involvement based on Epstein's theory and documentation of report card scores for academic achievement. Results revealed a significant positive correlation ( $r = 0.621$ ;  $p < 0.05$ ) between parental involvement and student academic achievement. Independent Samples T-Test showed a significant difference ( $p = 0.002$ ) in academic achievement between urban school students ( $M = 86.20$ ) and rural school students ( $M = 82.45$ ). Similarly, parental involvement in urban schools demonstrated higher average scores ( $M = 82.14$ ;  $SD = 6.43$ ) compared to rural schools ( $M = 74.88$ ;  $SD = 7.12$ ). These findings confirm that geographical context influences patterns of parental involvement in education and its impact on academic achievement. This study contributes to educational policy formulation, particularly in developing effective parental involvement strategies tailored to specific school environments, and highlights the importance of collaborative programs between schools and families to address the urban-rural achievement gap.

*Keywords:* Parental involvement, academic achievement, high school education, urban-rural gap, geographical factors

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## 1. Introduction

Education is one of the main pillars in developing quality human resources. In the national education system, the success of the learning process is not only determined by internal factors of students, but also by environmental support, including family. One form of family support that plays a significant role in students' academic success is parental involvement (Kusnanto et al., 2023).

Parental involvement includes various forms of active participation in the child's education process, such as helping to study at home, attending school meetings, and providing motivation and supervision of learning activities (Đukić et al., 2022). Many studies have shown that high parental involvement can increase students' learning motivation, discipline, and academic achievement. Therefore, parental involvement is an important factor that needs to be considered in managing education, especially at the high school level (Koutsouveli and Geraki, 2022).

High school is a crucial level of education in determining students' academic and career futures. In their late teens, students are faced with increasingly complex learning demands, as well as pressure to determine the direction of their further education. In this situation, parental support is very important to maintain consistency, enthusiasm, and direction of students' learning (Zhang et al., 2023).

However, the level of parental involvement in children's education is not always evenly distributed across regions. Geographical and socio-economic factors often influence how parents can participate in their children's education (Adeleke and Alabede, 2022). The differences between urban and rural areas, for example, are not only related to access to educational facilities, but also to patterns of parental involvement.

In urban areas, parents generally have wider access to information, higher levels of education, and more flexible time to be involved in school activities. In contrast, in rural areas, economic and educational limitations often become obstacles to parental involvement, even though emotionally they have the same concern for their children's education (Lynch, 2021; Edwards-Fapohunda and Adediji, 2024).

These contextual differences between urban and rural schools are interesting to study further, especially in relation to student learning achievement. Does parental involvement in the city have a greater impact on learning achievement than in the village? Or is there a unique form of involvement in the village that has its own influence on academic success?

This study aims to analyze the relationship between parental involvement and learning achievement of high school students by comparing two different environments, namely schools in urban areas and in rural areas. The focus of this study is to describe the extent to which parental involvement affects student learning achievement and whether there are significant differences between areas.

The results of this study are expected to contribute to the formulation of educational policies, especially in encouraging effective parental involvement strategies in accordance with the context of the school environment. In addition, this study can also be a reference for schools and local governments in developing collaborative programs between schools and families.

## 2. Methods

This study uses a comparative quantitative approach with a correlational survey method. The selection of this approach aims to test the relationship between parental involvement and student learning achievement, and to compare the relationship based on school location, namely between schools in urban and rural areas. The complete stages in this study can be seen in Figure 1 which illustrates the systematic flow of the data collection process, data processing, to statistical analysis.

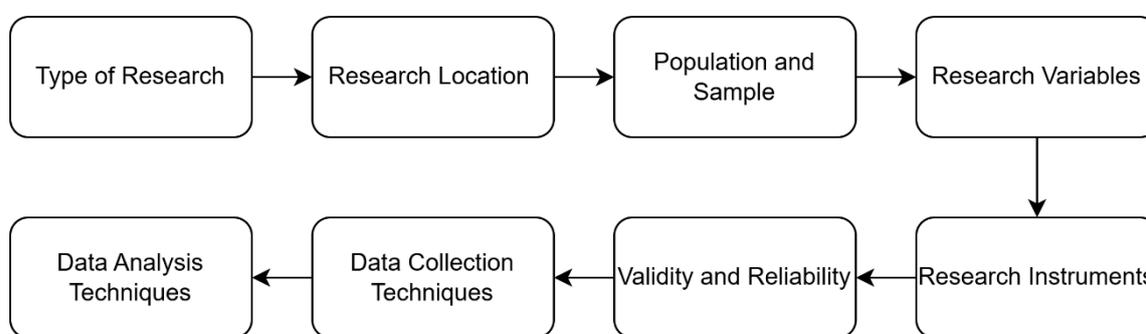


Figure 1: research flow

### 2.1. Type and Research Approach

This study uses a comparative quantitative approach with a correlational survey method. This approach was chosen because the study aims to examine the relationship between parental involvement and student learning achievement, and to compare the relationship based on school location (city and village). With this approach, researchers can describe the level of relationship between two variables without direct manipulation of the variables studied (Ghanad, 2023). In addition, a comparative approach allows for analysis of differences that arise based on geographic factors and educational environment.

### 2.2. Research Location and Time

This study was conducted in two Senior High Schools that represent the characteristics of urban and rural areas in the same district or province. The selection of locations was carried out purposively by considering ease of access, school administrative readiness, and the diversity of regional characteristics. This study is scheduled to last for three months, starting from the instrument preparation stage, data collection in the field, to the data processing and analysis stage.

### 2.3. Population and Sample

The population in this study were all grade XI Senior High School students in two selected schools and their parents. The researcher used a purposive sampling technique to select schools based on location, and proportional stratified random sampling to select student respondents from each school proportionally. The number of samples in this study was 100 students, consisting of 50 students from urban schools and 50 students from rural schools. The sample was selected randomly from the list of available students to maintain data representativeness.

## 2.4. Research Variables

This study consists of several variables. The independent variable is parental involvement in children's education (X), which is measured based on the level of participation, support, communication, and supervision of learning activities. The dependent variable is student learning achievement (Y), which is measured from student report card scores in core subjects. The moderator variable in this study is the location of the school, namely urban and rural, which is used to see the difference in the influence of parental involvement on learning achievement based on region.

## 2.5. Research Instruments

Data collection used two main instruments, namely questionnaires and documentation of grades. The questionnaire was designed based on indicators of parental involvement according to Epstein's theory (1995), which includes five main aspects: home learning support, communication with schools, involvement in school activities, supervision of children's learning, and academic expectations. The questionnaire uses a Likert scale of 1–5 which reflects the frequency of involvement. Meanwhile, learning achievement data was obtained from documentation of student report card scores covering the subjects of Indonesian, English, Mathematics, and major subjects (Science or Social Sciences).

## 2.6. Instrument Validity and Reliability

To ensure the validity of the instrument, a content validity test was conducted involving education experts to assess the suitability of the questions. Furthermore, an empirical validity test was conducted using the item-total correlation technique using trial data on students outside the main sample. The reliability of the instrument was tested using the Cronbach Alpha formula, with a criterion of  $\geq 0.70$  as the minimum acceptable reliability limit. The trial results showed that the instrument used had met the validity and reliability standards.

## 2.7. Data Collection Techniques

Data collection techniques were carried out through two approaches, namely distributing questionnaires and collecting documentation data. Questionnaires were given to students to determine the extent of their perception of parental involvement in the learning process. Meanwhile, learning achievement data was obtained directly from the school in the form of official documents of the last semester's report card scores. This approach was chosen to obtain objective and verifiable data.

## 2.8. Data Analysis Techniques

After the data was collected, the processing and analysis process was carried out using SPSS statistical software. Data analysis was carried out in two main stages. First, to determine the relationship between parental involvement and student learning achievement, the Pearson correlation test was used. Second, to see the difference in the relationship based on school location, a difference test (independent sample t-test) was used. The results of this analysis were interpreted based on the significance value (p-value) to determine whether there was a statistically significant relationship and difference.

## 3. Results and Discussion

### 3.1. Data Description of Parental Involvement and Learning Achievement

This subsection presents descriptive statistics on parental involvement and learning achievement of high school students from schools in urban and rural areas. Data were collected from a total of 100 students, each consisting of 50 students from urban schools and 50 students from rural schools. The mean and standard deviation (SD) of each variable are used to provide an overview of the tendencies and variations in values in the two groups.

#### 3.1.1. Parental Involvement

The average score of parental involvement in urban schools is 82.14 with a standard deviation of 6.43. This shows that parental involvement in urban schools is relatively high and tends to be consistent across respondents. Meanwhile, rural schools have an average score of 74.88 with a standard deviation of 7.12, which means that parental involvement in rural areas is slightly lower and has a greater level of variation than urban schools.

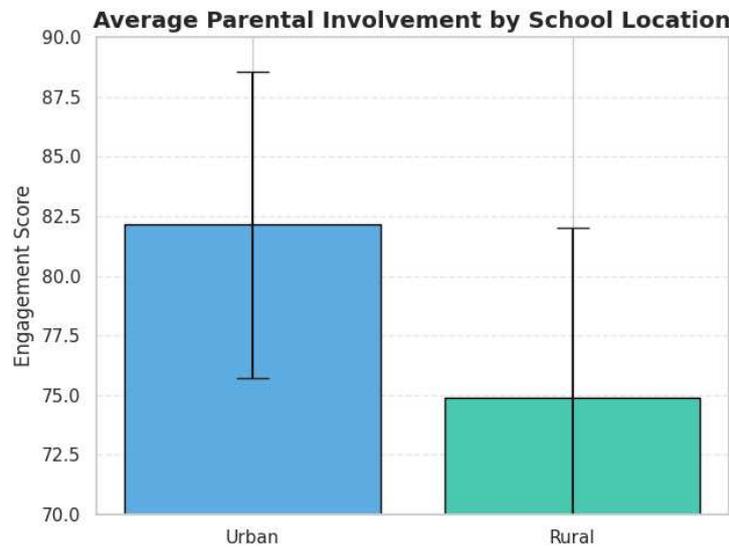
#### 3.1.2. Student Learning Achievement

For learning achievement, students from urban schools have an average score of 86.20 with a standard deviation of 5.76. Meanwhile, students from rural schools obtained an average score of 82.45 with a standard deviation of 6.10.

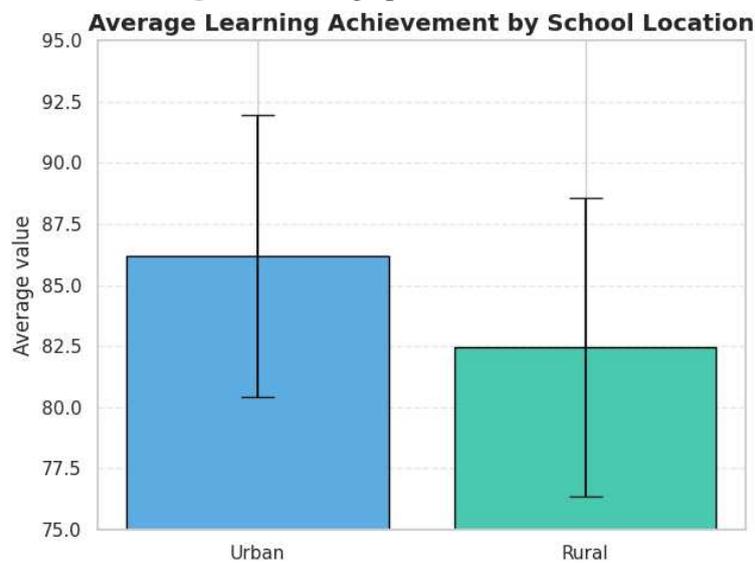
This indicates that students from urban schools tend to have slightly higher and more even academic achievement than students from rural schools.

### 3.1.3. Visual Representation

Figure 2 and Figure 3 below illustrate the comparison between urban and rural school groups in terms of parental involvement and student learning achievement. Each bar chart is equipped with error bars that represent standard deviations, to show the range of data variation in each group.



**Figure 2:** average parental involvement



**Figure 3:** average learning achievement

## 3.2. Correlation between Parental Involvement and Student Achievement

Correlation analysis was used to determine whether there was a significant relationship between the level of parental involvement and the learning achievement of high school students, both in urban and rural schools. In this study, the Pearson Product Moment Correlation test was used because the data was interval scaled and normally distributed.

### 3.2.1. Pearson Correlation Test Results

Based on the results of data processing using SPSS, a correlation value ( $r$ ) of 0.621 was obtained with a significance value ( $p$ -value) of 0.000. This value is above the significance threshold of 0.05, so it can be concluded that there is a significant positive relationship between parental involvement and student achievement. This means that the higher the parental involvement in children's education, the higher the student's academic achievement tends to be. The visualization can be seen in Figure 3.

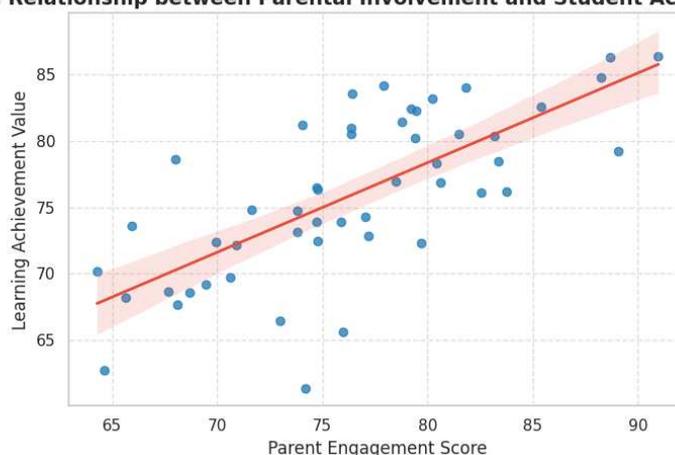
**The Relationship between Parental Involvement and Student Achievement****Figure 4:** scatter plot visualization of the relationship

Figure 4 displays a scatter plot representing the relationship between Parent Engagement Score and Student Learning Achievement Value. Each point on the graph represents one student, with the horizontal position indicating the level of parental involvement and the vertical position indicating the student's academic achievement.

From this visualization, a data distribution pattern is seen that forms an upward trend. This pattern is reinforced by a positive linear regression line that shows a tendency that students with parents who have a high level of involvement tend to have higher academic scores.

The results of the statistical analysis support this visual interpretation. A Pearson correlation value of  $r = 0.621$  was obtained with a  $p$ -value = 0.000. This correlation value is quite strong and positive, indicating that the higher the parental involvement in education, the higher the student's learning achievement. The significance value ( $p < 0.05$ ) indicates that this relationship is statistically significant, not just a coincidence.

In addition, there is also a fairly even distribution of data along the regression line, indicating that the relationship that occurs is consistent at various levels of involvement. However, there are some outliers or data points that deviate from the general pattern for example, students with low academic scores despite high parental involvement, or vice versa. This indicates that in addition to parental involvement, there are other factors that also affect student achievement, such as internal motivation, learning environment, teacher quality, or socioeconomic conditions. The pink shaded line around the regression line (confidence interval) indicates the level of uncertainty in the regression estimate. The narrower the shaded area, the higher the confidence in the regression line prediction. In this graph, the intervals tend to be narrow, especially in the middle of the data distribution, indicating that this relationship model is quite reliable in explaining the relationship between the two variables.

### 3.3. Test of Differences in Learning Achievement between City Schools and Village Schools (t-Test)

To find out whether there is a significant difference in student learning achievement between schools in urban and rural areas, an independent t-test (Independent Samples T-Test) is used. This test is used because the samples come from two different groups and are not paired. The results of the Independent Samples T-Test (SPSS Output) can be seen in table 1.

**Table 1:** Results of the Independent Samples T-Test

Variable	Mean City	Mean Village	t-value	df	Sig. (2-tailed)
Student Learning Achievement	86.20	82.45	3.112	98	0.002

The results in Table 1 show that the significance value ( $p$ -value) = 0.002, which is smaller than 0.05. This means that there is a significant difference between student learning achievement in urban schools and rural schools. In other words, students in urban schools have academic achievement that is statistically higher than students in rural schools.

### 3.4. Discussion

The results of this study indicate that parental involvement has a significant positive relationship with high school students' learning achievement. This positive correlation indicates that the higher the level of parental involvement in children's education, the higher the students' academic achievement. This finding is in line with previous studies that emphasize the importance of the family's role in supporting children's academic success (Sengonul,2022; Ma et al., 2022; Quílez-Robres et al., 2021).

The role of parents in education can be reflected through various forms of support, such as helping children study at home, attending school activities, and building communication with teachers. In urban environments, this support tends to be more optimal because of wider access to information, relatively higher parental educational backgrounds, and awareness of the importance of active involvement in children's educational processes.

Meanwhile, the results of the difference test showed that there was a significant difference in student learning achievement between schools in urban and rural areas. Students in urban schools showed higher average scores than students in rural schools. This factor is most likely influenced by the more adequate educational infrastructure conditions in the city, the availability of learning resources, the quality of teaching, and a more supportive learning environment.

In addition, parental involvement in urban schools also showed a higher average score compared to rural schools. This strengthens the finding that the geographical context also influences the level of family participation in education. In rural areas, economic constraints, low levels of parental education, and limited access to information can be the main obstacles to active involvement.

The findings from the t-test and correlation in this study provide an illustration that interventions to improve student learning achievement can not only be carried out through an institutional approach (schools), but also through family empowerment. Efforts to increase parental participation in education, especially in rural areas, are very important to reduce academic disparities between regions.

However, it is important to note that the relationship between parental involvement and learning achievement is not a direct cause-and-effect relationship. Other factors such as students' intrinsic motivation, teaching quality, and social environment can also play a significant role.

Thus, education policymakers need to consider a more holistic approach. Parental involvement programs, parenting skills training, and facilitation of communication between schools and families should be an integral part of the strategy to improve the quality of education, especially to bridge the gap between urban and rural schools.

#### 4. Conclusion

The results of the study showed a significant positive relationship ( $r = 0.621$ ;  $p < 0.05$ ) between parental involvement and student achievement. The higher the parental involvement in children's education, the higher the academic achievement achieved by students.

In accordance with the aim of analyzing whether there are significant differences between regions, it was found that student achievement in urban schools ( $M = 86.20$ ) was statistically higher than that of students in rural schools ( $M = 82.45$ ) with a significance value of  $p = 0.002$ . Likewise with the level of parental involvement, where urban schools showed a higher average score ( $M = 82.14$ ;  $SD = 6.43$ ) than rural schools ( $M = 74.88$ ;  $SD = 7.12$ ).

This significant difference confirms that the geographical context influences the pattern of parental involvement in education and its impact on academic achievement. Factors such as wider access to information, relatively higher parental educational background, and awareness of the importance of active involvement in the child's educational process play a role in creating this gap.

This research provides an important contribution to the formulation of education policy, especially in encouraging effective parental involvement strategies in accordance with the context of the school environment. Efforts to increase parental participation in education, especially in rural areas, need to be prioritized to reduce the gap in learning achievement between regions. Collaborative programs between schools and families that consider the unique characteristics of each region can be the right solution to improve the quality of education as a whole.

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