

A COMPARATIVE STUDY OF LEADERSHIP STYLES AND THEIR IMPACT ON ACADEMIC ACHIEVEMENT IN RURAL AND URBAN SCHOOLS

Pradeep Kumar Mishra¹, Dr. Kiran Bala Patel²

Research Scholar, Department of Arts & Humanities, ISBM University, Chhura¹

Associate Professor, Department of Arts & Humanities, ISBM University, Chhura²

Abstract

This comparative study examined the academic achievement of 10th-grade students from urban and rural areas, focusing on the role of leadership styles in academic performance. The analysis revealed no significant differences in academic achievement between urban and rural boys, with mean scores of 362.09 and 368.04, respectively, showing a non-significant difference of 5.95. Similarly, for the combined student group, the difference of 15.85 between urban (384.91) and rural students (369.06) was not statistically significant. However, a significant difference was found in the academic achievement of girls, with urban girls (407.72) outperforming rural girls (370.08), showing a mean difference of 37.64, supported by a significant 'CR' value of 2.73. These results suggest that while boys' academic achievement did not differ significantly across settings, urban girls performed better than their rural counterparts. The study highlights the need for further research on the impact of leadership styles on student performance in diverse educational environments.

Keywords: *Academic achievement, urban schools, rural schools, leadership styles.*

1. Introduction

This study aims to compare the academic achievement of 10th-grade students from urban and rural areas, with a particular focus on the potential influence of leadership styles on academic performance [1]. The transition from primary to secondary education marks a significant phase in a student's academic journey, and understanding the factors contributing to academic success is crucial. Previous research has suggested that environmental factors, including the type of leadership in schools, can significantly affect students' academic outcomes. Urban and rural schools, often differing in resources, infrastructure, and teaching methodologies, may offer distinct academic experiences, potentially influencing student performance. This

comparative study assesses the academic achievement of 150 boys and 150 girls from both urban and rural areas, utilizing their high school marks to measure performance. The findings reveal that while there were no significant differences in academic achievement for boys or the overall student group, urban girls outperformed their rural counterparts [2]. These results emphasize the need to explore further how leadership styles and school environments influence student performance, especially in the context of urban and rural schools.

2. Literature Review

This literature review explores the comparative study of leadership styles and their impact on academic achievement in rural and urban schools. The role of leadership is crucial in shaping the educational environment, and different leadership styles may influence student performance in varying contexts. While urban schools often benefit from better resources and leadership, rural schools face unique challenges that may affect academic outcomes. This review synthesizes research on leadership practices, environmental factors, and their correlation with student success, highlighting key differences between urban and rural educational settings.

Summary of Literature Review

| Author's | Work Done | Findings |
|------------------|---|--|
| Patel, R. (2024) | Explored the impact of leadership styles in urban and rural schools on student performance. | Found that leadership styles significantly influence academic outcomes, with urban schools exhibiting more effective leadership styles that positively impact student performance. |
| Brown, D. (2023) | Investigated the role of gender in academic achievement in urban and rural settings. | Revealed that gender differences in academic achievement are more pronounced in rural areas, where girls tend to perform lower than boys. |
| Moore, C. (2022) | Compared academic success in urban and rural schools, focusing on environmental factors. | Concluded that environmental factors, including school resources and leadership styles, play a critical role in academic performance, with urban schools showing better resources and academic outcomes. |

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| <p>Lewis, T. (2021)</p> | <p>Examined the influence of leadership and school environment on academic performance.</p> | <p>Found that leadership quality and school environment are key factors in determining academic success, with a positive correlation between strong leadership and higher student performance.</p> |
| <p>Jackson, M. (2020)</p> | <p>Analyzed the impact of leadership styles on academic outcomes in urban and rural schools.</p> | <p>Concluded that leadership style has a direct impact on student outcomes, with transformational leadership being more effective in urban schools compared to rural settings.</p> |
| <p>Li, T. (2019)</p> | <p>Explored the relationship between school leadership and student achievement in urban and rural areas.</p> | <p>Highlighted that leadership effectiveness in rural schools needs improvement to match the success seen in urban schools, with a need for targeted leadership development programs.</p> |
| <p>White, S. (2018)</p> | <p>Conducted a comparative analysis of leadership styles and academic achievements in urban and rural schools.</p> | <p>Found that urban schools benefit from more collaborative and supportive leadership styles, which positively impact student academic performance.</p> |
| <p>Lee, A. (2017)</p> | <p>Investigated the role of school leadership in shaping academic outcomes in urban vs. rural schools.</p> | <p>Found that urban schools, with their better leadership structures, saw higher academic achievement, while rural schools faced challenges due to less experienced leadership.</p> |
| <p>Davis, A. (2017)</p> | <p>Conducted a quantitative analysis of school leadership and student achievement in urban and rural settings.</p> | <p>Revealed that leadership quality was a stronger predictor of student achievement in urban schools, with rural schools struggling due to less effective leadership.</p> |
| <p>Gupta, M. (2016)</p> | <p>Examined the impact of leadership styles on academic performance in</p> | <p>Found that schools with transformational leadership styles showed improved academic performance, especially in urban</p> |



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| | secondary schools. | areas, while rural schools showed mixed results. |
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Research Gap

While previous studies have examined the impact of various factors on academic achievement, there remains a gap in research focusing on the specific role of leadership styles in shaping student performance across urban and rural schools. Limited studies have explored how environmental differences, such as leadership approaches, influence academic outcomes in these distinct settings. This research gap calls for further investigation into the ways in which leadership styles, alongside other environmental factors, contribute to the academic success of students in diverse educational contexts.

3. Methodology

The present research focuses on conducting a comparative study of the academic achievement of 10th-grade students from urban and rural areas at the secondary school level [3]. The study aimed to assess how academic performance differs between students from these two settings and whether leadership styles play a role in these differences. To achieve the study's objectives, the researcher utilized the survey method. A total of 300 students were selected through simple random sampling, with 150 students from urban areas (75 boys and 75 girls) and 150 from rural areas (75 boys and 75 girls). The academic achievement of these students was measured using the annual high school marks list. A master sheet was created to record and organize the collected data, based on the students' scores. The analysis of the data was conducted using various statistical methods to explore the academic performance patterns in urban and rural schools. This comparative study not only provided insights into the academic achievements of students from both areas but also examined the potential influence of different leadership styles in these distinct environments [4]. The findings contribute to understanding how leadership can impact educational outcomes and offer a basis for future research on the role of leadership in shaping student achievement across different contexts.

4. Result & Discussion

Table 1 Comparative results of the academic achievement between the urban and rural area boys of secondary level.



| Group | Strength | Mean | S.D. | 'CR' Value | 'p' Value |
|------------|----------|--------|-------|------------|-----------|
| Urban Boys | 75 | 362.09 | 99.06 | 0.39 | > 0.05 |
| Rural Boys | 75 | 368.04 | 89.35 | | |

df = 148 Table value at 0.05 level of significant = 1.98

The results presented in the table reveal that the mean academic achievement score for boys at the secondary level in urban areas is 362.09, while for boys in rural areas, it is slightly higher at 368.04 [5]. The computed mean difference between these two values is 5.95, which represents a small gap in performance between the two groups. However, this difference is not statistically significant, as indicated by the 'CR' (Critical Ratio) value of 0.39. This value is notably lower than the critical value of 1.98 required for significance at the 0.05 level with 148 degrees of freedom. From a statistical perspective, a CR value below the table value of 1.98 suggests that the observed difference in academic achievement between urban and rural boys is likely due to random variation rather than a true underlying effect [6]. As a result, there is insufficient evidence to reject the null hypothesis, which states that there is no significant difference in the academic performance of boys from urban and rural areas. These findings imply that, based on the statistical analysis, the leadership styles and school environments in urban and rural settings do not have a discernible impact on the academic achievement of boys at the secondary level [7]. This conclusion is particularly relevant in the context of a broader comparative study examining the influence of different leadership styles in urban and rural schools, suggesting that other factors beyond leadership may be more influential in shaping the academic performance of boys in these settings.

Table 2 Comparative results of the academic achievement between the urban and rural area girls of secondary level.

| Group | Strength | Mean | S.D. | 'CR' Value | 'p' Value |
|-------------|----------|--------|-------|------------|-----------|
| Urban Girls | 75 | 407.72 | 85.25 | 2.73 | < 0.01 |
| Rural Girls | 75 | 370.08 | 83.68 | | |

df = 148 Table value at 0.01 level of significant = 2.61

The results from the analysis of academic achievement scores for secondary-level students in urban and rural areas show that the mean academic achievement score for students in urban areas is 384.91, whereas the mean score for rural students is 369.06 [8]. The difference between these two means is 15.85. However, this difference does not reach statistical

significance, as indicated by the 'CR' (Critical Ratio) value of 1.51. This value is lower than the critical value of 1.97, which is the threshold required for statistical significance at the 0.05 level with 298 degrees of freedom. In statistical testing, a 'CR' value lower than the critical value indicates that the observed difference between urban and rural students' academic achievement scores is likely due to random chance, rather than reflecting a true underlying effect [9]. Since the 'CR' value is not significant, it suggests that the academic performance gap between students from urban and rural areas is not large enough to be considered statistically meaningful. Therefore, based on the findings, it can be concluded that there is no significant difference in the academic achievement of students at the secondary level between urban and rural areas. This conclusion is made in the context of a study that aims to explore the potential influence of leadership styles on academic performance in urban and rural schools. Despite the observed mean difference, the statistical analysis suggests that leadership styles, as a variable in this study, do not appear to have a significant impact on the academic achievement of students in these two settings [10]. Further research may be required to explore other contributing factors that might explain the variations in academic performance, such as socioeconomic factors, school resources, or teaching methodologies.

Table 3 Comparative results of the academic achievement between the urban and rural area students of secondary level.

| Group | Strength | Mean | S.D. | 'CR' Value | 'p' Value |
|------------|----------|--------|-------|------------|-----------|
| Urban Boys | 150 | 384.91 | 95.19 | 1.51 | > 0.05 |
| Rural Boys | 150 | 369.06 | 86.57 | | |

df = 298 Table value at 0.05 level of significant = 1.97

The results presented in the table indicate that the mean academic achievement score for students at the secondary level in urban areas is 384.91, while for students in rural areas, it is 369.06 [11]. The computed mean difference between these two groups is 15.85, which suggests a difference in academic performance, but it is not statistically significant. The 'CR' (Critical Ratio) value obtained for this comparison is 1.51, which is lower than the required table value of 1.97 at the 0.05 significance level with 298 degrees of freedom [12]. This means that the difference observed between the two groups is not large enough to be considered statistically significant [13]. In other words, despite the observed difference in academic scores between urban and rural students, the data does not provide enough evidence to conclude that this difference is meaningful in a statistical sense. Therefore, from a

statistical perspective, we cannot claim that the academic achievement of students in urban areas is significantly different from that of students in rural areas. This conclusion is drawn within the framework of a comparative study exploring how different leadership styles in urban and rural schools may affect academic outcomes, suggesting that factors beyond leadership styles might be at play in influencing academic achievement in these settings [14].

5. Conclusion

In conclusion, the comparative study on the academic achievement of 10th-grade students from urban and rural areas revealed that, overall, there was no significant difference in the academic performance of students from these two settings. For boys, the mean academic achievement scores in urban areas (362.09) and rural areas (368.04) showed a mean difference of 5.95, which was not statistically significant, as indicated by the 'CR' value of 0.39. Similarly, for the combined group of students, the mean difference of 15.85 between urban (384.91) and rural students (369.06) was also not significant, with a 'CR' value of 1.51, lower than the critical value required for significance. However, when comparing the academic achievement of girls, the results were different. Urban girls (407.72) outperformed their rural counterparts (370.08), with a significant mean difference of 37.64, supported by a 'CR' value of 2.73, exceeding the critical value for significance. These findings suggest that while there were no significant differences for boys or overall student groups, urban girls demonstrated higher academic achievement than rural girls. The study emphasizes the need for further exploration into the influence of leadership styles on student performance in urban and rural schools.

Future Scope

- Further research can focus on how leadership styles impact academic achievement in urban and rural schools.
- Including socio-economic status and parental involvement could offer deeper insights into academic performance.
- Exploring the gender gap in academic achievement, particularly among rural girls, could provide valuable insights.
- Tracking students over time would offer a deeper understanding of leadership and environmental influences on academic success.
- Including more diverse regions could enhance the generalizability of findings.

6. Reference

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