



Study of Managerial Skills of the Principals of Teacher Education Institutions in Telangana State

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ABSTRACT

This study investigated the extent to which principals of teacher education institutions (TEIs) in Telangana State have internalized managerial skills and examined differences across gender, nature of institution (government vs. private), locality (rural vs. urban), and institutional status (minority vs. non-minority). Adopting a descriptive survey design within a quantitative framework, data were collected from a cluster random sample of 100 principals selected from three districts (Hyderabad, Rangareddy, and Mehboobnagar). A self-developed Managerial Skills Scale (five-point Likert format) with high internal consistency (Cronbach's $\alpha = .907$) was used. Descriptive statistics and independent samples t-tests were employed to analyze the data and test the four null hypotheses. Results indicated moderate-to-high levels of managerial skill internalization across the sample

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(subgroup means ranging from 120.22 to 127.67). Independent samples t-tests revealed no statistically significant differences in managerial skills by gender, institution type, locality, or minority status, leading to the retention of all null hypotheses. Findings suggest that regulatory frameworks and professional preparation contribute to comparable managerial competence among TEI principals irrespective of demographic and institutional variables. Implications for NCTE policy, principal professional development, and NEP 2020 implementation are discussed, along with recommendations for future research addressing identified limitations.

1.0 Introduction

Teacher education institutions play a vital role in preparing quality teachers who shape the future of any nation (National Council for Teacher Education [NCTE], 2014). Educational management is the process of planning, organizing, staffing, directing, and controlling available resources to achieve the stated goals of an educational institution effectively and efficiently (Bush & Bell, 2021). In the context of teacher education institutions, effective educational management ensures quality teacher preparation, adherence to regulatory norms, continuous faculty development, and overall institutional excellence (Mishra & Koehler, 2020; NCTE, 2014).

The principal, as the chief executive and academic leader of a teacher education institution, is primarily responsible for exercising sound educational management. The success of any teacher training college (B.Ed.) largely depends on the managerial skills demonstrated by its principal (Pandey & Sharma, 2022). According to the classical management theory of Henri Fayol (1841–1925), a French mining engineer and management thinker, is regarded as the father of modern management. While Frederick Taylor focused on shop-floor efficiency (Scientific Management), Fayol developed a comprehensive theory of management from the top-level (administrative) perspective and later adapted to educational settings, managerial skills can be categorized into five core functions: **planning skills, organizing skills, staffing skills, directing skills, and controlling skills** (Prasad, 2007; Bush, 2019; Gupta & Sharma, 2021).

- ❖ **Planning skills** enable the principal to set clear institutional objectives, develop academic calendars, prepare budget estimates, and formulate policies in alignment with NCTE and university guidelines.



- ❖ **Organizing skills** help in allocating resources, creating functional committees, establishing coordination among departments, and designing an effective organizational structure.
- ❖ **Staffing skills** involve recruitment, selection, orientation, professional development, and performance appraisal of faculty and non-teaching staff.
- ❖ **Directing skills** include motivating faculty, providing instructional leadership, communicating vision, and fostering a positive academic culture.
- ❖ **Controlling skills** ensure monitoring of academic and administrative activities, quality assurance, compliance with norms, and timely corrective measures (Koontz & Weihrich, 2015; Leithwood et al., 2020).

1.1 Variables

The dependent variable of the study is **Managerial Skills**. The independent variables include the gender of principals (male and female), the nature of institutions (government and private), the locality of institutions (rural and urban), and the status of institutions (minority and non-minority).

1.2 Research question

To what extent the Principals of Teacher Education Institutions have internalized the **Managerial Skills** necessary for effective performance?

1.3 Objectives of the Study

1. To estimate the significant difference in the **managerial** skills of Male and Female principals of teacher education institutions in Telangana State.
2. To examine the significant difference in the **managerial** skills of Principals of Government and Private teacher education institutions in Telangana State.
3. To determine the significant difference in the **managerial** skills of Principals of Rural and Urban teacher education institutions in Telangana State.
4. To test the significant difference in the **managerial** skills of Principals of Minority and Non-minority teacher education institutions in Telangana State.



1.4 Hypotheses of the Study

H₀₁: There is no significant difference in the **managerial** skills of Male and Female principals of teacher education institutions in Telangana State.

H₀₂: There is no significant difference in the **managerial** skills of Principals of Government and Private teacher education institutions in Telangana State.

H₀₃: There is no significant difference in the **managerial** skills of Principals of Rural and Urban teacher education institutions in Telangana State.

H₀₄: There is no significant difference in the **managerial** skills of Principals of Minority and Non-Minority teacher education institutions in Telangana State.

1.5 Delimitations of the study:

- ❖ *The scope of this research is confined exclusively to the principals of teacher education institutions.*
- ❖ *The study is delimited to teacher education institutions located in Telangana State.*

2.0 Review of Literature

Managerial skills are fundamental to effective educational leadership, enabling principals to coordinate resources, motivate staff, and achieve institutional goals. Robert Katz's (1955) seminal framework identifies three core skill categories—technical (task-specific knowledge and procedures), human (interpersonal relations and team motivation), and conceptual (strategic vision and systemic thinking)—as essential for administrators at varying organizational levels. In educational contexts, these skills extend beyond general management to encompass instructional leadership, stakeholder engagement, and policy implementation, directly influencing teacher performance, institutional culture, and student outcomes (Karim, 2023).

Empirical studies consistently demonstrate that principals' managerial skills correlate positively with teacher effectiveness and organizational performance. For instance, Akporehe (2023) found significant relationships between principals' communication, human relations, and technical skills and teachers' job performance in Nigerian secondary schools, with principals exhibiting high levels of these competencies fostering moderate-to-high teacher output. Similarly, Taun et al. (2022) reported that Israeli school principals rated their decision-making, planning, and team-management skills as very high during the COVID-19 pandemic, enabling effective adaptation and maintenance of school operations. A systematic review by Karim (2023) synthesized evidence showing that managerial leadership practices—planning, [Md. Akhlaqur Rahman, et al.](#)



organizing, and evaluating—enhance teacher professional competence and institutional effectiveness across diverse educational settings. In teacher education institutions specifically, principals' managerial competencies influence the quality of pre-service teacher training and institutional accreditation standards (e.g., studies on middle managers in teacher education; see related findings in managerial competency assessments).

International research has examined demographic and contextual factors influencing principals' managerial skills, aligning with the present study's focus on gender, institution type (government vs. private), locality (rural vs. urban), and minority status. Regarding gender, meta-analytic evidence indicates small but meaningful differences in leadership enactment. Eagly et al. (1992) analyzed 50 studies of public school principals and found female principals scored higher on task-oriented behaviors and adopted more democratic, participative styles than their male counterparts, though interpersonal orientation showed no significant differences. More recent meta-analyses confirm that female principals tend to emphasize instructional leadership and collaborative cultures more strongly than males (Hallinger et al., 2016, as synthesized in gender-leadership reviews). These patterns suggest potential differences in skill internalization, with female principals often demonstrating higher relational and instructional competencies.

Comparisons between government (public) and private institutions reveal structural influences on managerial practices. Staples (2005) compared leadership roles and found private elementary principals exercised greater autonomy in curriculum, staffing, and decision-making than public counterparts, who operated under stricter regulatory constraints. Gao et al. (2025) extended this by showing private school leaders employed more encouraging, relationship-focused strategies and flexible resource allocation, whereas public school principals relied on hierarchical, transactional approaches. Such differences imply that private institution principals may internalize adaptive and innovative managerial skills more readily due to operational flexibility.

Locality (rural vs. urban) also moderates principals' leadership behaviors. Erwin (2011) compared urban, suburban, and rural principals in high-achieving schools and identified distinct leadership skill profiles shaped by contextual demands, with rural principals often excelling in resource-scarce environments through community-focused strategies. Huang et al. (2024) demonstrated that principal instructional leadership significantly mediates rural-urban gaps in teaching quality, primarily through teacher professional learning, underscoring how rural principals' skills can address instructional disparities. Rural settings frequently demand heightened conceptual and adaptive skills due to limited resources and isolation, while urban principals navigate complex stakeholder networks.



Literature on minority versus non-minority principals (often framed in terms of racial/ethnic or institutional minority status) highlights equity and cultural competence dimensions. Studies in the U.S. context reveal that minority principals frequently encounter unique barriers in the leadership pipeline yet bring valuable cultural insights to diverse student populations (Williams & Loeb, as cited in principal pipeline research). However, research specific to religious or linguistic minority institutions—prevalent in the Indian context—remains sparse internationally, with calls for greater attention to how minority status influences managerial autonomy and skill application amid regulatory and cultural dynamics.

In the Indian context, emerging studies on teacher education institutions echo global patterns while highlighting localized gaps. Research on principals in West Bengal teacher education colleges indicated age-related variations in leadership skills, with mid-career principals (40–50 years) demonstrating superior competencies. Related investigations into Telangana principals' staffing and organizing skills suggest contextual influences of gender and locality but underscore the need for comprehensive analysis across all managerial domains (e.g., planning, directing, controlling) and demographic variables.

Collectively, prior literature affirms that managerial skills are internalized to varying degrees and significantly affect institutional performance. However, gaps persist: few studies focus exclusively on principals of teacher education institutions (as opposed to general schools), and systematic examinations of gender, government/private, rural/urban, and minority/non-minority differences within a single regional context like Telangana State remain limited. The present study addresses this void by testing the research question—"To what extent have the Principals of Teacher Education Institutions internalized the Managerial Skills necessary for effective performance?"—and the associated hypotheses on demographic differences, thereby contributing to both theoretical understanding and policy development in Indian teacher education.

2.1 Identified Research Gaps and Justification for the Study

Although international and national literature highlights the significance of principals' managerial skills for institutional effectiveness, critical gaps remain in the context of teacher education institutions (TEIs) in India.

Most studies focus on general school principals rather than TEI principals and examine isolated managerial dimensions instead of providing a holistic assessment of skill internalization. In India, research on TEIs is fragmented, with limited analysis of comprehensive managerial competencies. Few studies simultaneously examine differences across gender, government vs. private institutions, rural vs. urban localities, and



minority vs. non-minority status within a single regional context. Existing Telangana-based research explores only specific skills and does not test all four variables together.

The present study addresses these gaps by systematically assessing the internalization of core managerial skills among TEI principals in Telangana State and testing significant differences across gender, institution type, locality, and minority status.

This investigation is justified as it extends Katz's (1955), Prasad L M (2008) managerial skills framework to teacher education in a diverse regional setting. The findings can inform NCTE policies, leadership development programs, and NEP 2020 implementation, ultimately enhancing principal competencies and teacher preparation quality in Telangana and similar contexts.

3.0 Research Design

This study adopted a **descriptive cum survey research design** within the framework of **quantitative research**. The descriptive survey method was chosen because it is appropriate for collecting factual information and understanding existing conditions related to the **managerial** skills of principals. By employing quantitative techniques, the study facilitated objective measurement and statistical testing of differences across institutional and demographic variables.

3.1 Population and Sample

The population of the study was comprised of all principals working in teacher education institutions in Telangana State. Since the exact population size was not known, a **one-stage cluster random sampling method** was adopted to ensure representation. Out of the ten districts of Telangana (as per the 2014 division), three districts were randomly selected: **Hyderabad with 31 teacher education institutions, Rangareddy with 37 teacher education institutions, and Mehboobnagar with 32 teacher education institutions**. From these clusters, a **sample of 100 principals** was selected for the study. This sampling process ensured that data were collected from a representative and diverse group of institutions and principals.

3.2 Tools of the Study

To measure the directing skills of principals, a **self-constructed instrument** titled *Managerial Skills Scale* was developed. The tool was designed in **attitudinal form** using items based on a **five-point Likert scale**, ranging from "strongly disagree" to "strongly agree." According to Kelly (1939), "For item analysis, the test to be determined is ranked by selecting 27 percent of the highest scores and 27 percent of the lowest

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scores from the total test scores to find the difference in the item scores”. The tool’s **content validity** was established by subject experts in education and psychology, who reviewed the items for relevance and appropriateness. The **reliability** of the instrument was tested using Cronbach’s Alpha, which yielded a coefficient of 0.907, indicating a satisfactory level of internal consistency. In addition, **item analysis** was carried out using psychological testing approaches with the help of **MS Excel and SPSS**, which confirmed the suitability of the tool for measuring **managerial** skills.

3.3 Data Collection Procedure

The data were collected from the selected sample of principals after obtaining necessary permissions from the institutions concerned. The questionnaires were administered directly to the respondents, ensuring that instructions were clear and responses were authentic. The collected responses were systematically coded and tabulated for further statistical analysis.

3.4 Statistical Techniques

For analysis, both descriptive and inferential statistical methods were applied. Descriptive measures, such as the **mean** (Richard, 2015) and **standard deviation** (Howitt & Cramer, 2014), were calculated to describe the central tendency and variability of the principals’ responses. To test the hypotheses, an independent **t-test** was employed (Johnson & Christensen, 2014), Levene’s test Field (2018), This justified using the standard independent samples t-test without adjustments, which helped determine whether statistically significant differences existed in the **managerial** skills of principals across variables such as gender, type of institution, locality, and minority status.

4.0 Data Analysis

H₀₁: There is no significant difference in the **managerial** skills of Male and Female principals of teacher education institutions in Telangana State.

Table 1: Levene’s Test for Comparison of Male and Female Principals of Teacher Education Institutions with respect to their Managerial Skills

<i>F</i> -value	Significance (<i>p</i> value)
0.65	0.42*

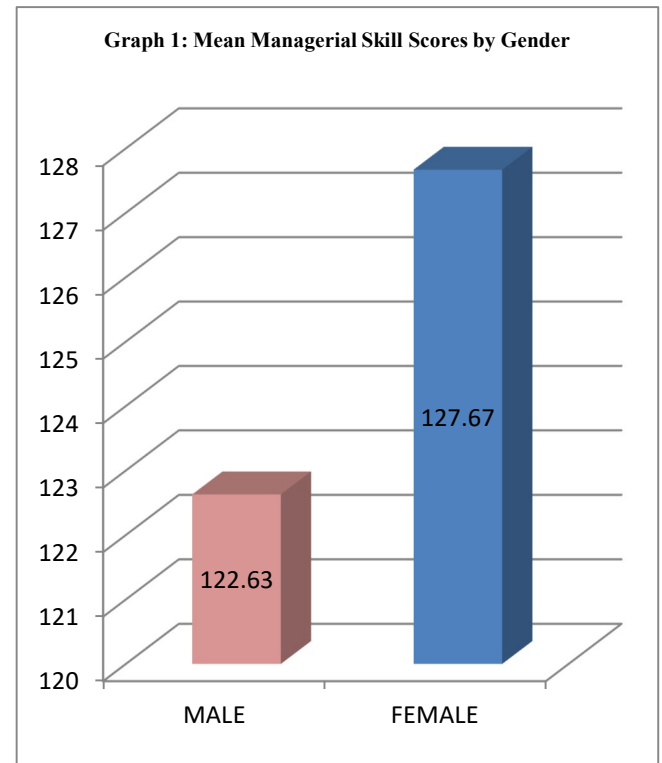
* $p > 0.05$, variance are equal

Table 2: *t*-test for Comparison of Male and Female Principals of Teacher Education Institutions with respect to their Managerial Skills

Gender	N	Mean	SD	<i>t</i> -value	<i>P</i> Value (df-98)
Female	34	127.67	14.92	1.77	0.80*
Male	66	122.63	10.10		

* $p > 0.05$, not significant at 0.05 level

An independent samples *t*-test was conducted to examine differences in managerial skills between male and female principals of teacher education institutions in Telangana State. Levene's test for equality of variances was not significant, $F(1, 98) = 0.65$, $p = .42$, indicating that the assumption of homogeneity of variances was met. Descriptive statistics showed that female principals ($n = 34$, $M = 127.67$, $SD = 14.92$) had slightly higher mean scores compared to male principals ($n = 66$, $M = 122.63$, $SD = 10.10$). However, the independent samples *t*-test revealed that this difference was not statistically significant, $t(98) = 1.77$, $p = .80$. These findings suggest that managerial skills do not differ significantly by gender, supporting the null hypothesis that male and female principals demonstrate comparable managerial competence in this context.



H_{02} : There is no significant difference in the **managerial** skills of Principals of Government and Private teacher education institutions in Telangana State.

Table 3: Levene's Test for Comparison of Principals of Government and Private Institutions Teacher Education with respect to their Managerial Skills

F-value	Significance (<i>p</i> value)
0.25	0.61*

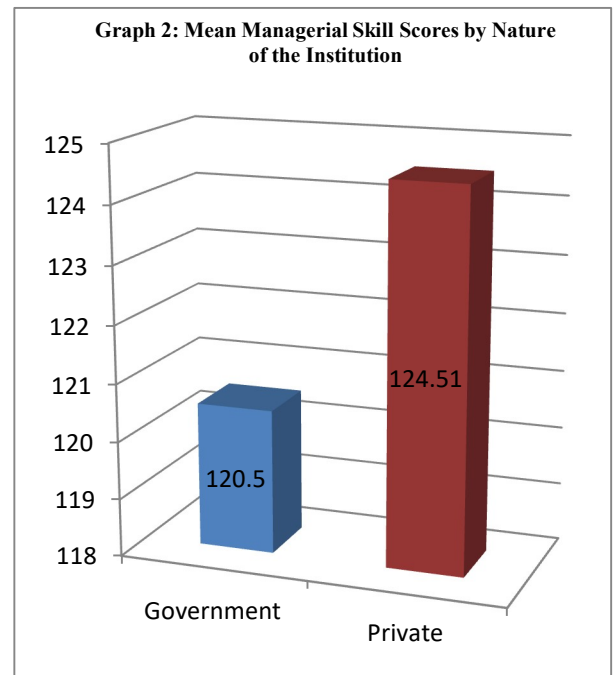
* $p > 0.05$, variance are equal

Table 4: *t*-test for Comparison of Principals of Government and Private Institutions Teacher Education with respect to their Managerial Skills

Nature of the Institution	N	Mean	SD	<i>t</i> -value	<i>P</i> Value (df-98)
Government	4	120.50	9.43	0.57	0.56*
Private	96	124.51	13.79		

* $p > 0.05$, not significant at 0.05 level

An independent samples *t*-test was conducted to examine differences in managerial skills between principals of government and private teacher education institutions in Telangana State. Levene's test for equality of variances was not significant, $F(1, 98) = 0.25, p = .61$, indicating that the assumption of homogeneity of variances was met. Descriptive statistics showed that government principals ($n = 4, M = 120.50, SD = 9.43$) had slightly lower mean scores compared to private principals ($n = 96, M = 124.51, SD = 13.79$). However, the independent samples *t*-test revealed that this difference was not statistically significant, $t(98) = 0.57, p = .56$. These findings suggest that managerial skills do not differ significantly by institutional type, supporting the null hypothesis that principals of government and private teacher education institutions demonstrate comparable managerial competence in this context.



H_{03} : There is no significant difference in the **managerial** skills of Principals of Rural and Urban teacher education institutions in Telangana State.

Table 5: *Levene's Test* for Comparison of Principals of Rural and Urban Teacher Education Institutions with respect to their Managerial Skills

F-value	Significance (<i>p</i> value)
1.96	0.16*

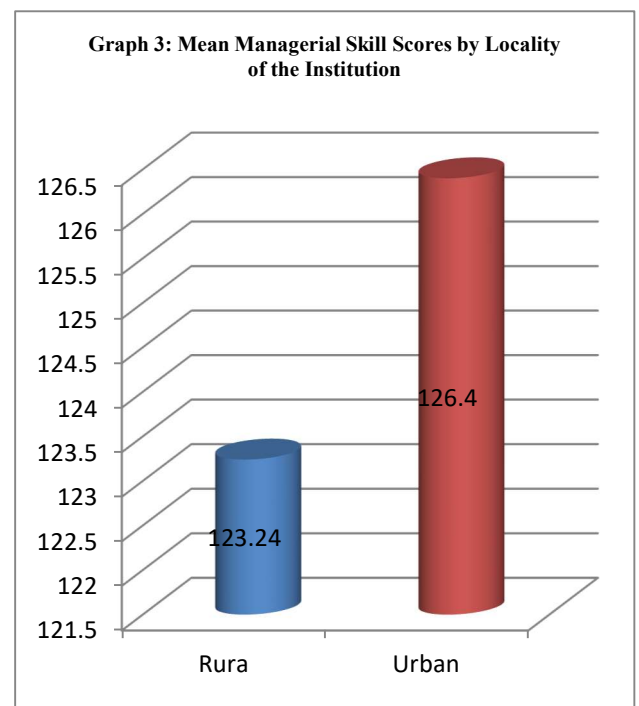
* $p > 0.05$, variance are equal

Table 6: *t*-test for Comparison of Principals of Rural and Urban Teacher Education Institutions with respect to their Managerial Skills

locality of Institution	N	Mean	SD	<i>t</i> -value	<i>p</i> Value (df-98)
Rural	65	123.24	15.26	1.10	0.27*
Urban	35	126.40	9.80		

* $p > 0.05$, not significant at 0.05 level

An independent samples *t*-test was conducted to examine differences in managerial skills between principals of rural and urban teacher education institutions in Telangana State. Levene's test for equality of variances was not significant, $F(1, 98) = 1.96$, $p = .16$, indicating that the assumption of homogeneity of variances was met. Descriptive statistics showed that rural principals ($n = 65$, $M = 123.24$, $SD = 15.26$) had slightly lower mean scores compared to urban principals ($n = 35$, $M = 126.40$, $SD = 9.80$). However, the independent samples *t*-test revealed that this difference was not statistically significant, $t(98) = 1.10$, $p = .27$. These findings suggest that managerial skills do not differ significantly by institutional locality, supporting the null hypothesis that rural and urban principals demonstrate comparable managerial competence in this context.



H_{04} : There is no significant difference in the **managerial** skills of Principals of Minority and Non-Minority teacher education institutions in Telangana State.

Table 7: Levene's Test for Comparison of Principals of Minority and Non Minority Teacher Education Institutions with respect to their Managerial Skills

F-value	Significance (<i>p</i> value)
0.21	0.64*

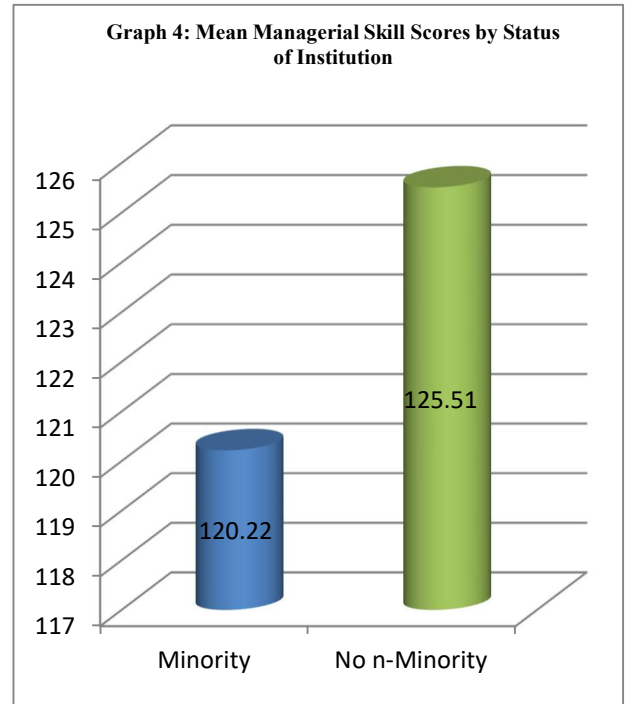
* $p > 0.05$, variance are equal

Table 8: *t*-test for Comparison of Principals of Minority and Non-Minority Teacher Education Institutions with respect to their Managerial Skills

Status Institution	N	Mean	SD	<i>t</i> -value	<i>p</i> Value (df-98)
Minority	22	120.22	16.92	1.61	0.11*
Non-Minority	78	125.51	12.43		

* $p > 0.05$, not significant at 0.05 level

An independent samples *t*-test was conducted to examine differences in managerial skills between principals of minority and non-minority teacher education institutions in Telangana State. Levene's test for equality of variances was not significant, $F(1, 98) = 0.21$, $p = .64$, indicating that the assumption of homogeneity of variances was met. Descriptive statistics showed that minority principals ($n = 22$, $M = 120.22$, $SD = 16.92$) had slightly lower mean scores compared to non-minority principals ($n = 78$, $M = 125.51$, $SD = 12.43$). However, the independent samples *t*-test revealed that this difference was not statistically significant, $t(98) = 1.61$, $p = .11$. These findings suggest that managerial skills do not differ significantly by institutional status, supporting the null hypothesis that minority and non-minority principals demonstrate comparable managerial competence in this context.



5.0 Interpretation of Findings

5.1 Discussion

This study examined the extent to which principals of teacher education institutions (TEIs) in Telangana State have internalized managerial skills and tested for differences across gender, institution type (government vs. private), locality (rural vs. urban), and minority status.

Gender. Female principals ($M = 127.67$, $SD = 14.92$) scored higher than male principals ($M = 122.63$, $SD = 10.10$), but the difference was not significant, $t(98) = 1.77$, $p = .80$. Thus H_{01} was retained. This finding contrasts with meta-analytic evidence (Eagly et al., 1992) of small gender differences but aligns with the

notion that professional preparation and regulatory standardization in India may minimize gender-based variation.

Government vs. Private. Government principals ($n = 4$, $M = 120.50$, $SD = 9.43$) had slightly lower scores than private principals ($n = 96$, $M = 124.51$, $SD = 13.79$), yet the difference was non-significant, $t(98) = 0.57$, $p = .56$. H_{02} was retained. Although prior research (Staples, 2005; Gao et al., 2025) suggests greater autonomy for private school leaders, the common regulatory framework of the National Council for Teacher Education (NCTE) may produce convergence in managerial competencies. The very small government subsample limits statistical power.

Rural vs. Urban. Urban principals ($M = 126.40$, $SD = 9.80$) outperformed rural principals ($M = 123.24$, $SD = 15.26$), but not significantly, $t(98) = 1.10$, $p = .27$, supporting H_{03} . While earlier work (Erwin, 2011; Huang et al., 2024) identified rural-urban differences, the present results suggest that digital access and standardized training have narrowed the gap. Greater variability among rural principals ($SD = 15.26$) indicates some perform very well while others struggle.

Minority vs. Non-Minority. Non-minority principals ($M = 125.51$, $SD = 12.43$) scored higher than minority principals ($M = 120.22$, $SD = 16.92$), but the difference was not significant at $p = .05$, $t(98) = 1.61$, $p = .11$. H_{04} was retained. The p -value of .11 approaches significance and, combined with the 5.3-point mean gap, suggests a trend warranting further investigation. Minority principals may face additional compliance or resource constraints that affect skill internalization.

Overall, all null hypotheses were retained. Principals of TEIs in Telangana have internalized managerial skills to a moderate-to-high degree (subgroup means 120–128), and no demographic or institutional variable produced a statistically significant difference. The findings answer the primary research question affirmatively: principals possess the necessary managerial competencies for effective performance.

5.2 Implications for Practice and Policy

Practice. Faculty and staff can expect consistent managerial quality regardless of principal demographics. Principals should engage in continuous self-assessment and peer learning. Institutions should establish mentoring programs, especially for rural and minority principals where variability is higher.

Policy. For the NCTE and state government, the results validate existing regulatory frameworks but suggest targeted improvements: (a) mandatory continuing professional development (CPD) in managerial skills; (b) a competency framework specific to TEI principals; (c) differentiated support for minority and rural



institutions. Under NEP 2020, leadership academies and skill audits should be implemented. Accreditation bodies (NAAC, NCTE) should include principal competency assessment in institutional evaluation.

5.3 Limitations and Future Research

Limitations. The study is limited by: (a) cluster sampling from three districts of Telangana (generalizability restricted); (b) small subsamples for government ($n = 4$) and minority ($n = 22$) principals, reducing statistical power; (c) cross-sectional design precluding causal inference; (d) self-reported data potentially affected by social desirability bias; (e) no sub-dimensional analysis of technical, human, and conceptual skills separately.

Future Research. Recommendations include: (a) larger, balanced samples across all districts and states; (b) longitudinal designs tracking skill development; (c) mixed-methods studies incorporating observation and document analysis; (d) sub-dimensional analysis to detect possible differences masked by aggregate scores; (e) dedicated studies on minority TEIs given the near-significant trend ($p = .11$); (f) intervention research evaluating CPD programs; (g) refinement of the Managerial Skills Scale through factor analysis and cross-validation.

5.4 Conclusion

This study concludes that principals of teacher education institutions in Telangana State have internalized the managerial skills necessary for effective performance to a substantial degree. No statistically significant differences were found based on gender, institution type (government vs. private), locality (rural vs. urban), or minority status. The findings support the effectiveness of current principal preparation and regulatory frameworks while highlighting opportunities for targeted professional development, particularly for minority and rural principals where mean scores were slightly lower and variability higher. As India implements the National Education Policy 2020, systematic attention to principal managerial competencies remains essential for enhancing teacher education quality. The validated Managerial Skills Scale offers a reliable tool for ongoing assessment and future research.

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