

Principal Leadership and Student Personality: A Comparison **Between JNV and GHSS in Chhattisgarh**

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Abstract

The Leadership practices in school system occupies a central role in school development. The present study is a cross-school investigation that aims to examine the principal leadership (PL) and student personality (SP) in higher secondary schools of Chhattisgarh, India. The study also aims to compare two different school administrations, namely Jawahar Navodaya Vidyalaya (JNV) and Government Higher Secondary Schools (GHSS). This study is quantitative in nature and uses descriptive survey method by combining comparative correlational research design. The sample data is collected from both school types which comprises of 598 students and 10 principals, one from each school. T-test and correlation techniques are used to analyse the data. The findings of the study showcase that in both PL as well as SP, JNV performed comparatively better than GHSS. A positive correlation is found between PL and SP, indicating that an effective leadership contributes meaningfully to improved student personality. The study affirms the need to strengthen leadership practices across different school settings so as to create a holistic environment for students.

Keywords: Principal Leadership (PL), Student Personality (SP), Jawahar Navodaya Vidyalaya (JNV), Government Higher Secondary Schools (GHSS)

Introduction

Indian school education system operates through various administrative structures that influence student learning experiences in various ways. Among these, JNVs established across the country aims to provide quality education to talented students, mainly from rural areas, through a residential system. On the other hand, GHSS cater to a wider and more diverse group of students from both rural and urban backgrounds and are non-residential. This difference in these school system and resources create variations in knowing about student development.

In Chhattisgarh, JNVs are known for their well-structured routines and their disciplined environment. They have strong academic focus. The climate within the school helps in building a supportive learning atmosphere with the help of close teacher-student relationships. On the other hand, GHSS often is observed in variety of infrastructure and resources which can influence the level of interaction and overall student outcome.

Schools are the centre where a student get opportunity of intellectual, social, and emotional growth. There are many factors in a school that creates atmosphere for the student growth, among them, PL is one of the most important one. Effective PL helps in creating a positive school climate that influence student outcomes and personality development. Even though principals usually may not interact directly with students daily, yet their decisions and leadership practices shape the overall environment for the students to learn and grow (**Marzano, Waters, & McNulty, 2005**).

As different school system follow different plan of action for their students, it becomes important to look into how PL operates in different school settings and how it effects SP. Therefore, this study aims to investigate the comparison between JNV and GHSS in Chhattisgarh and explore relationship between PL and SP. The goal of the study is to provide a better understanding of how leadership practices can contribute to improving student development and the overall quality of school education.

Review of Literature

Abas (2019) and **Musriadi et al. (2022)** studied that principal leadership has a strong impact on school outcomes, including learning effectiveness and teacher performance. **He et al. (2024)** further highlights that instructional leadership supports teachers' professional development. However, **Day (2022)** and **Leithwood et al. (2020)** emphasized in their study that effective leadership goes beyond academic outcomes, focusing also on inclusion, well-being, and positive school relationships.

Kamal et al. (2020) and **Dekawati (2020)** confirmed that effective school leadership plays a key role in enhancing students' personality and found that students' character development is significantly impacted particularly through effective communication and collaboration of principals. Similarly, **Matiala et al. (2023)** affirms the role of principals in planning and monitoring character education. They view leadership as a continuous process in school system.

Principals are at the centre of the school environment that influences personality development directly or indirectly. Further PL in turn influences student overall outcome. **Opoku et al. (2023)** and **Miyamoto et al. (2024)** also highlighted that personality traits influence learning, leadership, and teamwork. They also added that different traits contribute differently to skill development. **Shdaifat (2024)** linked personality with emotional well-being. The author emphasized the role of traits like extraversion and emotional regulation.

The development of students across schools can be affected by variations in teaching-learning process. **Kumar and Shukla (2014)** studied on migrated and non-migrated students and found that migrated students in JNVs receive higher motivational support. **Goswami (2023)** observed that teachers in JNV play multiple roles beyond academics. They found to be involved in promoting social and national integration. Studies by **Subramanian (2015) and Dash (2018)** show that structured routines and effective teaching practices in JNVs enhance learning outcomes. In contrast, research indicates that GHSS often face inconsistencies in learning outcomes and resource use (**Singh, 2015; Hussain et al., 2022**).

Many researchers have studied that principal leadership improves school outcomes, teacher performance, and student development. However, most of these factors are looked at separately. There is limited research that clearly explains how principal leadership directly influences student personality. In the Indian context, very few studies have compared JNV and GHSS systems together to understand how leadership works in each and how it affects students' personality.

Therefore, there is a need to study the relationship between PL and SP and compare it across JNV and GHSS particularly in the geographical context.

More precisely speaking, based on the gap found in research during review of literature, this study seeks to answer some research questions to address the key objectives of the study. The research questions formulated are as: **(1) Is there a significant difference in PL between JNV and GHSS? (2) Is there a significant difference in SP between both school types? (3) Does a significant relationship exist between PL and SP?**

Methods

This study is quantitative in nature and employs a descriptive survey approach using questionnaires. This method helps in collecting data on the existing conditions of PL and SP without any manipulation of variables. A descriptive survey is useful for studying the current status of a phenomenon as it exists in a natural setting (**Creswell and Clark 2007**).

Design of the Study

Quantitative analysis is used to showcase the difference among the schools as well as the influence of PL on the SP in both type of schools. A descriptive by comparative correlational research design is adopted in this study to investigate the relationship (see Fig. 1)

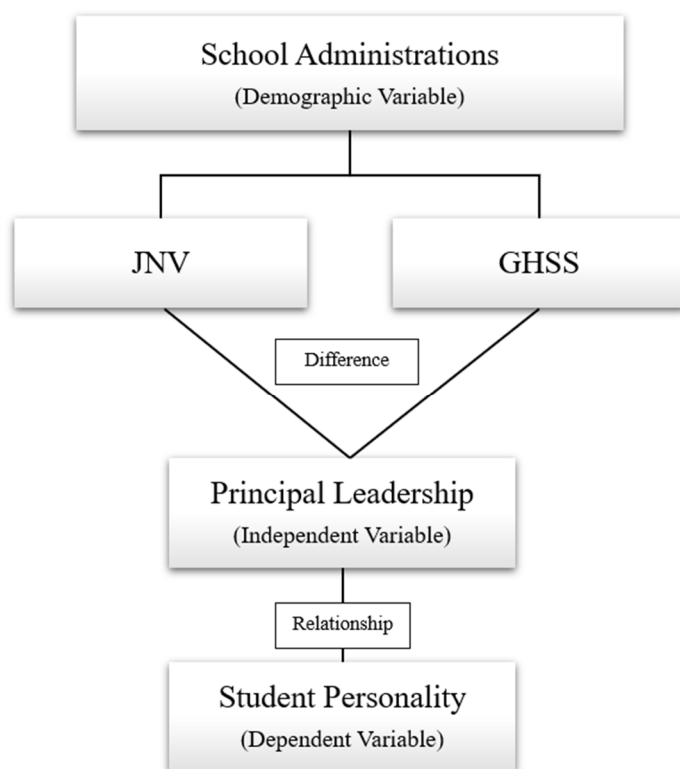


Fig 1: Design of the study

Research Location and Population

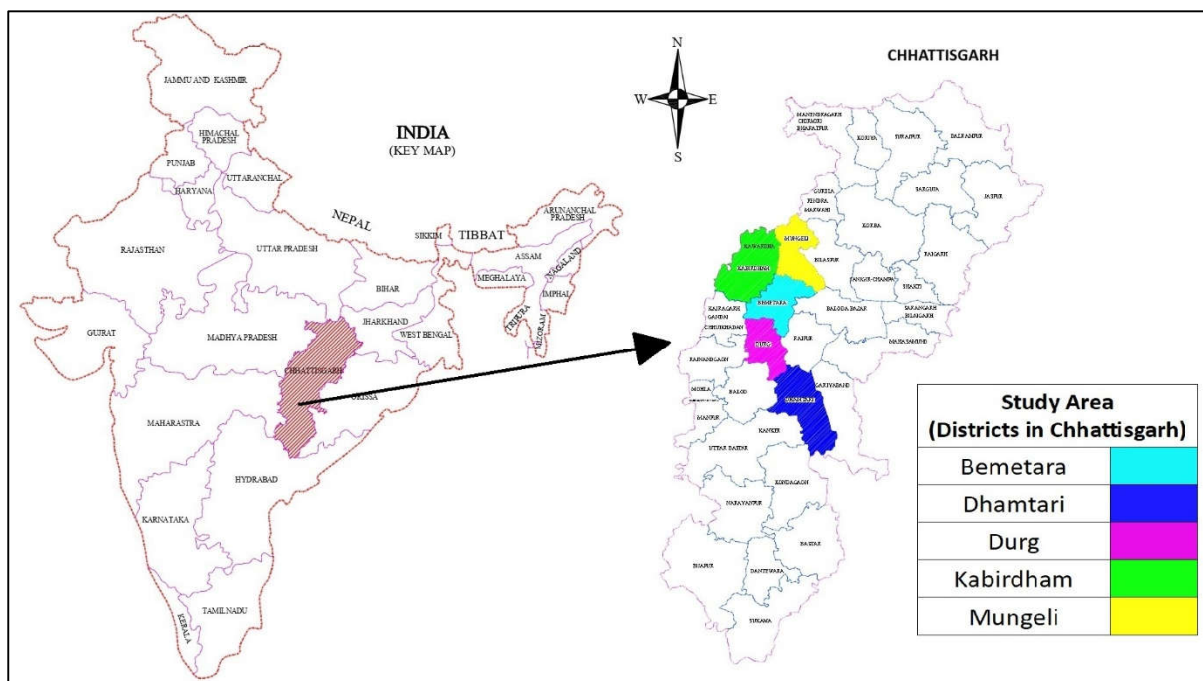


Fig. 2: Research location

This research is conducted in 5 districts of the state of Chhattisgarh, India (see fig. 2). There are 33 districts under five administrative divisions in the state of Chhattisgarh, out of which 15 % of districts from three divisions are selected for the study. The chosen districts among them are Bemetara, Dhamtari, Durg, Kabirdham and Mungeli.

The study population (see table 1) comprises of students from higher secondary schools enrolled in JNV and GHSS, along with their principals, of Chhattisgarh.

Table 1: Total number of schools, principals and students in JNV and GHSS in Chhattisgarh

Type of School	Total Schools	Total Principals	Total Students (Higher secondary)
JNV (CG)	28	28	~ 4000*
GHSS (CG)	2353	2353	5,58,893

Source: UDISE Report 2023-24

*Calculated approximately from available enrolment information in each JNV official websites

Sample

A representative sample of students are selected using multistage stratified sampling method with combination of purposive and random sampling technique, ensuring representation from both types of schools. All students enrolled in 5 JNVs in class XI i.e. 299 are chosen as sample and equivalent GHSS students are taken out of population to balance the sample size. Therefore, the total sample consists of 598 students and 10 school Principals, one from each school (see table 2).

Table 2: Sample of the study

Name of District	JNV		GHSS	
	Number of Principals	Number of Students (XI)	Number of Principals	Number of Students (XI)
Bemetara	01	36	01	36
Dhamtari	01	74	01	74
Durg	01	84	01	84
Kabirdham	01	67	01	67
Mungeli	01	38	01	38
Total	05	299	05	299
Grand Total	JNV (5) + GHSS (5) Total Principals = 10 Total Students = 598			

Research tools

Respective questionnaires are distributed and collected from the sampled principals and students (see table 3). The PL score is acquired through a standardised leadership effectiveness scale, while students' personality data is collected by Dimensional personality Inventory.

Table 3: Research tools used

Name of the Tool	Construct Measured & Target group	Developers	Type & Format	Factors	Reliability
Leadership Effectiveness Scale	Principal Leadership Effectiveness (Principals)	Dr. Upinder Dhar & Sanjyot Pethe	41 items, 5-point Likert Scale	11	0.82 reliability coefficient (significant)
Dimensional Personality Inventory (DPI)	Student Personality Traits (Class XI Students)	Dr. Mahesh Bhargava	60 items, Yes / No / undecided format	06	Significant at 0.01 level (High)

Data Collection

After obtaining prior permission, the schools are visited personally for data collection. The questionnaires are distributed to the respondents with proper instructions to attempt all items in the test papers. The respondents are also assured that the information provided by them would be kept confidential and used only for research purposes. Data is collected through standardized questionnaires, as mentioned, from the selected schools. Since there are two questionnaires for the students, they are administered sequentially, and each questionnaire is provided only after the completion of the previous one.

Data Analysis and Results

IBM SPSS Statistics is used to process and analyse the collected data. For descriptive statistics mean and SD is derived to understand the general level of PL and SP. Independent t-Test is used to compare JNV and GHSS. Pearson's correlation test is used to examine the correlation between PL and SP.

Table 4: Descriptive statistics of the collected Data

Variables	School Type	Students (N)	Mean Scores	Std. Deviation	Minimum	Maximum
Principal Leadership Score	JNV	299	186.90	10.32	167	199
	GHSS	299	171.60	14.15	161	196
	JNV	299	69.16	13.62	42	103

Student	GHSS	299	64.10	10.26	36	95
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Personality Score

The descriptive analysis in Table 4 shows certain broad differences between the two categories of schools. JNV students and principals recorded higher mean scores in leadership effectiveness and student personality than their counterparts in GHSS. These trends provide a general overview and form the basis for the inferential analysis.

Research Question 1: Is there a significant difference in PL between JNV and GHSS?

To find the difference in PL between JNV and GHSS independent sample t-test analysis is applied.

Table 5: Independent Samples Test of PL

		t-test for Equality of Means						95% Confidence	
		t	df	Significance		Mean Difference	Std. Error Difference	Interval of the Difference	
				One-Sided p	Two-Sided p			Lower	Upper
Principal Leadership Score	Equal variances assumed	15.117	596	<.001	<.001	15.318	1.013	13.328	17.308
	Equal variances not assumed	15.117	545.157	<.001	<.001	15.318	1.013	13.327	17.308

The analysis confirms that there is a difference in PL between the two school types and it is statistically significant, indicating that the level of PL is not the same in JNV and GHSS (see table 5).

The mean difference between the two schools is 15.318, and the difference is significant at the 0.001 level.

Table 6: Independent Samples Effect Sizes of PL

		Standardizer*a	Point Estimate	95% Confidence Interval	
				Lower	Upper
Principal Leadership Score	Cohen's d	12.390	1.236	1.061	1.411

a. Cohen's d uses the pooled standard deviation as denominator

The effect size analysis also indicates a large magnitude of difference, as reflected in Cohen’s d=1.236 (see table 6). This suggests that the difference is statistically significant. The

bar graph also supports this finding. The graph shows that the average leadership score is markedly higher in JNV than in GHSS (see fig. 3).

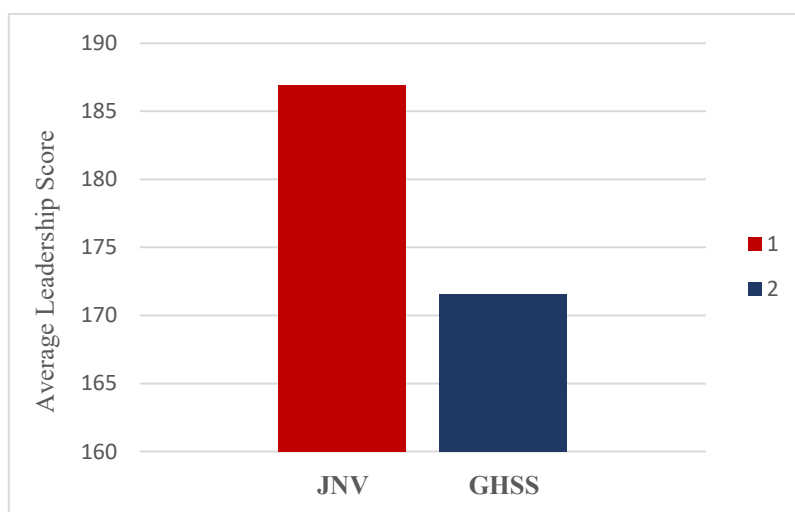


Figure 3: Bar graph showing average PL score of JNV and GHSS

Therefore, the analysis clearly states that PL effectiveness in JNV is significantly higher than GHSS.

Research Question 2: Is there a significant difference in SP between both school types?

An independent samples t-test is performed in order to study the difference of SP between JNV and GHSS.

Table 7: Independent Samples Test of SP

		t-test for Equality of Means							
		t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
				One-Sided p	Two-Sided p			Lower	Upper
Student Personality Scores	Equal variances assumed	5.133	596	<.001	<.001	5.060	.986	3.124	6.996
	Equal variances not assumed	5.133	553.802	<.001	<.001	5.060	.986	3.124	6.997

The analysis reveals a difference in SP between the two school types which is also statistically significant (see table 7). It indicates the substantial difference in their personality scores of students in JNV and GHSS. The difference between the two groups averaged at 5.060, and the obtained difference is significant at the 0.001 level.

Table 8: Independent Samples Effect Sizes of SP

		Standardizer ^a	Point Estimate	95% Confidence Interval	
				Lower	Upper
Student Personality Scores	Cohen's d	12.053	.420	.258	.582

a. Cohen's d uses the pooled standard deviation as denominator

The effect size analysis in table 8 shows a moderate magnitude of difference, as indicated by Cohen’s d=0.420. This suggests that the difference is not only statistically significant but also meaningful to a moderate extent. The bar graph in fig. 4 also supports this result by showing that the SP score is higher in JNV than GHSS.

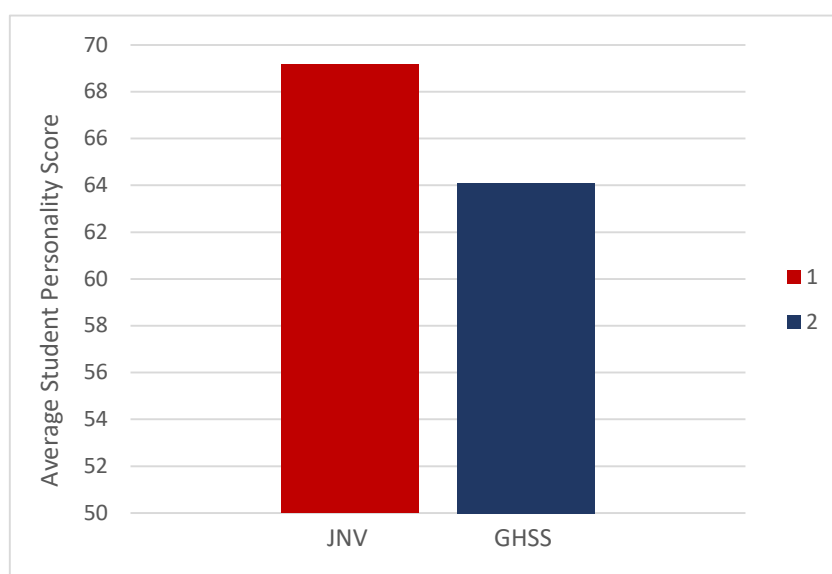


Figure 4: Bar graph showing average SP scores of JNV and GHSS

Therefore, the analysis concludes that a significant difference exists in student personality between the two school types, with students of JNV demonstrating higher personality scores.

Research Question: Does a significant relationship exist between PL and SP?

To examine whether a significant relationship exists between PL and SP, Pearson’s product-moment correlation is computed.

Table 9: Pearson's Correlations between PL and SP

		n	Pearson's r	p
Leadership Effectiveness Score	- Student Personality Scores	598	0.275	< .001

The analysis revealed a positive and statistically significant relationship between PL score and SP score, indicating that higher levels of PL are associated with higher levels of SP (see table 9).

The obtained correlation coefficient is $r = 0.275$, which suggests a low but a positive relationship between the two variables.

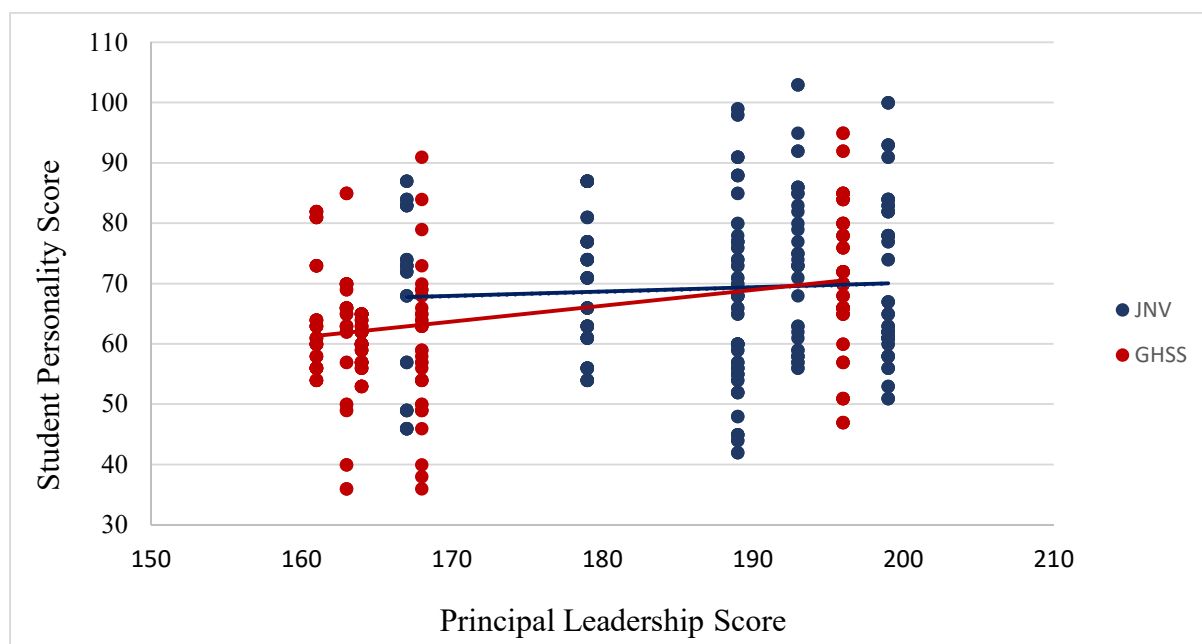


Figure 5: Scatter Plots showing PL Score vs. SP Scores

The scatter plot in fig. 5 also supports this finding by showing an overall upward trend between PL score and SP score across both school types. The relationship is not very strong, even though the direction of the plotted points and fitted lines clearly indicates that improvement in PL tends to improvement in SP.

Therefore, the analysis of the study concludes that a significant positive relationship exists between PL and SP of higher secondary students. This finding suggests that PL is an important school-level factor which is associated with the development of student personality.

Findings

The finding about the differences between JNV and GHSS, suggest a link that exists between the school atmosphere and PL. Both the school functioning and student development are seeming to be shaped by variations in school environment, culture and PL practices.

The findings further indicate that student personality traits cannot be isolated from the institutional context. Students studying in better organized school environments may get more opportunities for exposure in participation, motivation, guidance, and confidence building experiences. These conditions may simultaneously influence the way students develop socially, emotionally, and academically.

The results also point out towards the interconnection between the nature of PL and SP. Leadership cannot act in isolation, rather, it is influenced through school conditions, resources, expectations, and the opportunities available to students.

JNV's better performance in comparison may be understood as the outcome of a more structured and supportive educational setting. Stronger PL practices are able to ensure a supportive environment for SP development.

On the other hand, comparatively weaker performance of GHSS may reflect school's constraints. The effectiveness of PL is limited by the range of opportunities available to students. This suggests that improvement in SP requires attention to the wider institutional framework within which they learn.

Overall, the findings emphasised on the need to view leadership as a contextual factor rather than a purely administrative one. Strengthening PL, particularly in GHSS, may help promote a more supportive academic climate and more balanced student development.

Conclusions

The study concludes that the educational climate associated with JNV and GHSS differs in meaningful ways. This difference suggests that the structure, academic environment, support systems, and administrative functioning of an organization play an important role in shaping these variations. The study further concludes that PL is an important educational factor in understanding SP development.

The study affirms that differences in school context are closely linked with differences in PL effectiveness and SP development. Therefore, strengthening institutional conditions and leadership practices, particularly in GHSS may contribute to more balanced and effective student development.

Educational Implications

The study implies that policy interventions should pay special attention to GHSS in Chhattisgarh. There is a need to strengthen the organisational and leadership capacities in order to reduce institutional disparities. Improvement in academic monitoring, administrative support and school climate, may help bridge the gap between the two systems.

PL occupies a central place in the educational process. When leadership is strong, the school is likely to function in a more coherent and purposeful manner, and such a climate may encourage students not only in their studies but also in their personal development.

The findings of the study also implies that leadership training programmes should focus not merely on routine administration but also on the creation of supportive and development-oriented school environments. Therefore, the relationship between PL and SP needs to be understood within a specific socio-educational context.

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