

Perception of Elementary Teacher Educators towards Distributed Pedagogical Leadership: Evidence from Katak, Odisha

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Abstract

Instead of viewing school and institutional leadership as a task assigned to a single formal authority, distributed pedagogical leadership (DPL) rethinks it as a shared, collaborative activity. There is a dearth of empirical data about primary teacher educators' perceptions of DPL, especially in pre-service teacher education institutions in India, despite the construct being well-established in early childhood and in-service teacher-leadership literature. The current study investigated how elementary teacher educators saw dispersed pedagogical leadership and investigated if this impression differed by study stream (science vs. arts) and place (rural vs. urban). A sample of sixty elementary teacher educators from coastal Odisha was selected by simple random selection using a descriptive survey methodology (30 rural, 30 urban; 30 arts, 30 science). A 20-item, five-point self-structured questionnaire based on Heikka's (2014) dimensions of dispersed pedagogical leadership was used to collect the data, which were then analyzed using independent-samples t-tests and descriptive statistics. Overall, teacher educators had a favorable opinion of DPL ($M = 90.5$, $SD = 6.33$, on a potential range of 20-100). Although both comparisons approached traditional significance thresholds, independent-samples t-tests revealed no statistically significant difference in perception by stream of study ($t(58) = 1.83$, $p = .073$) or by locality ($t(58) = 1.94$, $p = .057$), with slightly higher mean scores for rural and arts educators. The results point to the influence of shared professional training and institutional culture over demographic variation, suggesting that distributed pedagogical leadership is a widely acknowledged and consistently valued practice among elementary teacher educators regardless of institutional location or disciplinary background. Limitations pertaining to sample size and design are examined, as well as implications for bolstering collaborative leadership structures in teacher education institutions.

Keywords: distributed pedagogical leadership, teacher educators, elementary teacher education, shared leadership, perception

1. Introduction

Research on educational leadership has shifted significantly over the last 20 years from models that place authority in a single formal head to frameworks that view leadership as a distributed, socially constructed practice carried out by numerous actors throughout an organization (Spillane, 2006; Harris, 2013). This

logic is specifically extended to an institution's instructional core by distributed pedagogical leadership (DPL), which maintains that responsibility for enhancing teaching and learning is best carried out when it is distributed among teachers, coordinators, mentors, and administrators who collaborate with one another rather than being concentrated in a principal or head of institution (Heikka, 2014). In this context, leadership is viewed as an interactional activity that spans individuals, objects, and circumstances rather than as a set role.

Pedagogical leadership is especially important in primary teacher education because these institutions mold future teachers' leadership dispositions, collaborative practices, and professional identities. In theory, teacher educators are better positioned to model and foster comparable behaviors among the pre-service teachers they educate if they engage in dispersed leadership inside their own institutions. However, as a number of studies point out, empirical research on DPL has focused mostly on early childhood settings and in-service school contexts (Heikka & Suhonen, 2019; Okiri & Hercz, 2023), leaving elementary teacher educators' perspectives relatively understudied. This disparity is significant since leadership dispositions are initially developed in teacher education institutions, long before instructors begin their in-service careers. In order to close this gap, the current study looks at how elementary teacher educators in coastal Odisha view distributed pedagogical leadership and investigates whether this perception varies systematically across two frequently researched demographic dimensions: academic stream (science/arts) and institutional location (rural/urban).

1.1 Rationale and Statement of the Problem

Studies on dispersed leadership indicate that sharing vision, strategy, and instructional tasks strengthens staff interdependence and institutional capacity for change (Sims et al., 2015, as cited in the original dissertation). How pre-service students understand the shift from hierarchical to participatory leadership models in 21st-century educational institutions has a significant influence on policies regarding teacher preparation, internship design, and institutional leadership development. The fact that elementary teacher education institutions in India still often operate with centralised decision-making structures where pedagogical authority is primarily held by senior staff limits the extent to which teacher educators actively participate in shared instructional leadership. It has not yet been experimentally determined whether teacher educators believe their organisations engage in dispersed leadership, and if this belief is consistent across rural and urban environments as well as across arts and science streams. This was the issue that the study attempted to solve.

Objectives of the Study

The study was guided by two objectives:

1. To study the perception of elementary teacher educators towards distributed pedagogical leadership.
2. To study the perception of elementary teacher educators towards distributed pedagogical leadership with regard to locality (rural/urban) and stream of study (arts/science).

Research Question and Hypotheses

Research Question: What is the perception of elementary teacher educators towards distributed pedagogical leadership?

H01: There is no significant difference between arts and science elementary teacher educators in their perception of distributed pedagogical leadership.

H02: There is no significant difference between urban and rural elementary teacher educators in their perception of distributed pedagogical leadership.

Review of Related Literature

Activity-theoretic and distributed-cognition perspectives, which reject the idea that leadership is only found in the characteristics or behaviors of a single leader and instead locate it in the interaction between leaders, followers, and their circumstances, are the theoretical foundations of distributed leadership (Spillane, 2006). Building on this foundation, Heikka (2014) proposed a set of dimensions unique to early childhood and pre-service settings, such as joint enactment of pedagogical improvement, clarification of power relationships, shared vision-building, and distribution of pedagogical responsibility. These dimensions influenced the instrument used in this study. This approach has been expanded and tested in other contexts in later work. According to Harris (2013), distributed leadership is fundamentally two-edged: depending on how truly accountability and authority are shared, it may either democratize decision-making or merely rename current structures without changing practice. Distributed pedagogical leadership operates through generative discourse among stakeholders in educational "nodes," according to Jäppinen and Sarja (2012, 2025), highlighting the construct's communicative and relational nature rather than its solely structural nature. According to Bøe and Hognestad (2015), organizing shared responsibility in early childhood settings requires more than just formal delegation; it also largely relies on the interpersonal skills of those in charge.

Though it is still unevenly dispersed throughout settings, more recent assessments indicate that the field has expanded. According to Okiri and Hercz's comprehensive assessments of distributed pedagogical leadership research (2023, 2025), the concepts of dispersed pedagogical leadership are better documented in early childhood and school environments than in teacher education. Furthermore, principals and officially appointed leaders still have a significant influence on how much leadership is really shared with other professional staff members. While Philp-Clark and Grieshaber (2025) contend that distributed pedagogical leadership can be a vehicle for transformative institutional change when leadership responsibility is actually, rather than just redistributed, Heikka, Hirvonen, and Muteweri (2025) directly link distributed pedagogical leadership to quantifiable improvements in program quality in early-childhood education.

There is conflicting comparative demographic data about how people view leadership in general. The current study's conclusion that structural or demographic factors do not always translate into differences in leadership perception is broadly consistent with Patel's (2022) study on teachers' perceptions of principals' leadership behavior in Varanasi, which found that male and female teachers differed in their perceptions of certain leadership dimensions but that age, teaching experience, and management type of school did not produce significant differences. When taken as a whole, the literature indicates that: (a) distributed pedagogical leadership is becoming more widely acknowledged as essential to institutional quality; (b) its implementation depends more on relational and cultural factors within an institution than on external demographic markers; and (c) teacher educators' perceptions in pre-service, elementary-level institutions—as opposed to in-service or early-childhood settings—remain relatively unexplored, which is what inspired this study.

Methodology

Design of Research: In order to examine group differences using inferential statistics and to capture the

current state of teacher educators' perspectives, the study used a quantitative, descriptive survey approach.

Sample and Population: The population consisted of primary teacher educators employed by coastal Odisha's teacher education institutes. As shown in Table 1, a sample of sixty teacher educators was selected by simple random selection and stratified to produce equal representation across the two comparative variables of interest.

Variable	Category	n
Locality	Rural	30
	Urban	30
Stream of study	Arts	30
	Science	30

Instrument

A self-structured questionnaire was created by the researchers based on Heikka's (2014) distributed pedagogical leadership aspects. Twenty statements covering shared vision, distributed responsibility, collaborative problem-solving, professional growth, and participative decision-making were included. Each statement was rated on a five-point Likert scale (Strongly Agree to Strongly Disagree), and it was administered in both paper and Google Forms format. Higher scores indicate a more favourable opinion of distributed pedagogical leadership. Respondents' overall ratings may vary from 20 to 100.

Procedure and Ethical Considerations

Prior to data collection, institutional approval was acquired. The goal of the study was explained to the respondents, and their participation was voluntary, anonymous, and guaranteed to be private. Before being included for analysis, completed questionnaires were checked for completeness.

Data Analysis

To address Objective 1, the data were analyzed using descriptive statistics (mean, median, standard deviation); to address Objective 2 and the two null hypotheses, independent-samples t-tests were used at the .05 level of significance.

Results

Overall Perception of Distributed Pedagogical Leadership

The descriptive statistics for the entire sample ($N = 60$) are shown in Table 2. With a mean impression score of 90.5 ($Mdn = 92.0$, $SD = 6.33$) out of a possible maximum of 100, primary teacher educators generally had a very favorable opinion of distributed pedagogical leadership. Rather than broad polarization of opinions, the moderate standard deviation suggests a rather uniform response pattern throughout the sample.

N	M	Mdn	SD
60	90.5	92.0	6.33

Perception by Stream of Study (Arts vs. Science)

Table 3 presents descriptive statistics separately for the arts ($n = 30$) and science ($n = 30$) groups. Arts teacher educators recorded a slightly higher mean score ($M = 92.0$, $Mdn = 91.0$, $SD = 6.12$) than science teacher educators ($M = 89.0$, $Mdn = 92.0$, $SD = 6.30$).

Stream	n	M	Mdn	SD
Arts	30	92.0	91.0	6.12
Science	30	89.0	92.0	6.30

An independent-samples t-test (Table 4) was conducted to test H_{01} . The difference between arts and science teacher educators was not statistically significant, $t(58) = 1.83$, $p = .073$, and H_{01} was therefore retained. Academic stream did not significantly influence perception of distributed pedagogical leadership.

Comparison	t	Df	P
Arts vs. Science	1.83	58	.073

Perception by Locality (Rural vs. Urban)

Table 5 presents descriptive statistics separately for rural ($n = 30$) and urban ($n = 30$) teacher educators. Rural teacher educators recorded a slightly higher mean score ($M = 92.0$, $Mdn = 91.0$, $SD = 5.88$) than urban teacher educators ($M = 89.0$, $Mdn = 89.0$, $SD = 5.80$).

Locality	n	M	Mdn	SD
Rural	30	92.0	91.0	5.88
Urban	30	89.0	89.0	5.80

An independent-samples t-test (Table 6) was conducted to test H_{02} . The difference between rural and urban teacher educators approached, but did not reach, statistical significance, $t(58) = 1.94$, $p = .057$, and H_{02} was therefore retained. Locality did not significantly influence perception of distributed pedagogical leadership, although the near-threshold p value suggests this comparison may warrant re-examination with a larger sample.

Comparison	t	df	P
Rural vs. Urban	1.94	58	.057

Discussion

This study's main conclusion is that primary teacher educators in coastal Odisha consistently have a good and high opinion of dispersed pedagogical leadership, and that this opinion is not substantially different by academic stream or location. This trend is consistent with the more general assertion in the literature

on dispersed leadership that DPL is not a practice limited to certain institutional circumstances but rather a widely acknowledged, shared professional approach (Harris, 2013; Jäppinen & Sarja, 2025). Additionally, it is consistent with Patel's (2022) finding that teachers' perceptions of principals' leadership behavior were not significantly differentiated by age, teaching experience, or school management type. This suggests that perceptions of leadership, whether distributed or positional, may be more influenced by shared professional socialization and institutional culture than by the structural variables usually used to segment survey samples.

It is interesting that both comparisons in this study came close to, but fell short of, the traditional .05 criterion ($p = .073$ for stream; $p = .057$ for locale). It is more appropriate to interpret these data as demonstrating a consistent, small-magnitude trend—rural and arts instructors scoring somewhat higher—that a bigger sample may resolve more conclusively rather than dismissing them as straightforward non-findings. Closer, more frequent informal interactions among staff in smaller rural institutions may promote a stronger sense of shared responsibility than is typical in larger, more hierarchically differentiated urban institutions, which is one plausible explanation for the slightly higher scores among rural teacher educators.

Similarly, educational cultures that prioritize discussion- and dialogue-based instruction may be reflected in the arts stream's somewhat better ratings. This might drive arts educators to favor collaborative, diffused forms of leadership.

The lack of significant group differences just shows that teacher educators' perceptions of dispersed pedagogical leadership are consistent across the two variables tested, not that it is being practiced properly. Positive perception scores may coexist with institutional limitations on real shared decision-making, according to Okiri and Hercz's (2023, 2025) evaluations, because legally designated leaders continue to influence how much leadership is really transferred to other workers. Therefore, direct observation or documented proof of leadership practice should be included to perception measurements in future research.

Educational Implications

The results point elementary teacher education institutes in a number of useful ways. First, institutions are in a good position to strengthen rather than create collaborative leadership structures, such as by formalizing teacher educators' involvement in academic decision-making committees and curriculum planning, since perceptions of distributed pedagogical leadership are already high and consistent across groups. Second, in order to maintain and expand shared leadership practices, professional development programs could specifically enhance abilities in cooperative decision-making, communication, and dispute resolution.

Third, organizations in urban and science-stream environments in particular could consider if structural or workload issues are restricting prospects for shared leadership, even in cases where general sentiments remain positive, given the marginal rural-urban and arts-science trends seen. Lastly, future teachers would be able to experience dispersed leadership techniques as an essential component of their professional preparation rather than as an in-service add-on if these principles were clearly incorporated into teacher education curriculum.

Conclusion

The purpose of this study was to investigate if geography and academic stream had an impact on primary

teacher educators' perceptions of dispersed pedagogical leadership. Overall, teacher educators in coastal Odisha reported a high and favorable perception of distributed pedagogical leadership. This perception did not differ significantly between educators in rural and urban areas or between educators in the arts and sciences, although both comparisons revealed a consistent trend that approached statistical significance in favor of rural and arts groups.

These results provide credence to the idea that dispersed pedagogical leadership is a widely accepted professional attitude among primary teacher educators, influenced more by shared professional training and institutional culture than by geography or disciplinary background. These positive perceptions could be translated into more fully realized distributed leadership practice by strengthening collaborative decision-making structures, integrating leadership development into teacher education curricula, and expanding this line of inquiry to larger and more diverse samples, including qualitative and mixed-method designs.

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