

Antecedents and Consequences of Distributed Leadership in Indian Higher Education

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ABSTRACT

Purpose

The concept of distributed leadership (DL) has been widely advocated within higher education (HE). Yet, there have been few empirical investigations and little theory development outside Western contexts to date. This study presents a unique conceptualization of DL and tests it empirically in India.

Design/methodology/approach

This study tests a moderated-mediation model by exploring the antecedents and consequences of DL in HE. Standardized questionnaires were drawn from literature and completed by a sample of 269 respondents from six top-ranked (elite) Indian HE institutions. Structural equation modelling (SEM) and multi-group analysis techniques were used to analyse the data.

Findings

Results demonstrated that empowering power structure (EPS) is positively related to DL, whilst participation in decision-making (PDM) strengthened this relationship. Further, it is also noted that DL mediates the relationship between EPS and behavioural outcomes of employee voice and silence.

Originality

By exploring antecedents (EPS and PDM) and consequences (voice and silence) this paper presents a novel approach to studying DL. The focus on Indian HE offers a more nuanced empirical understanding of DL in a non-Western context.

Practical implications

The findings suggest that a DL approach can be effective at enhancing employee voice and reducing employee silence within HEIs in (and perhaps beyond) India. The research also suggests that where institutions implement EPS, alongside opportunities for PDM, this can help foster and sustain DL.

KEYWORDS:

Distributed leadership, empowerment, participative decision-making, silence, voice, universities, India

ARTICLE CLASSIFICATION:

Research paper

Antecedents and Consequences of Distributed Leadership in Indian Higher Education

Introduction

Scholarly interest in the study of leadership has gone through many transitions, with new paradigms emerging in response to societal and organizational changes as well as shifting contextual challenges. The past century has seen a general trend away from directive towards more inclusive and collective forms of leadership (*c.f.* Western, 2019, Ospina et al., 2020). With this has been a shift in focus from individual ‘leaders’ to relational processes of ‘leadership’, which takes into consideration the combined effect of leaders, supervisors, peers, followers, culture, context and work-setting (Crevani et al., 2010, Drath et al., 2008). The current paper develops insights into such forms of leadership in the higher education (HE) context in India.

The HE sector is undergoing significant change globally (Abdrasheva et al., 2022; Mowles et al., 2019; Watermeyer et al., 2022). In response to changes in government funding, alongside external pressures of increased international and national competition, HE institutions (HEIs) are required to navigate turbulence and complexity in order to deliver education, research, enterprise and innovation (Cunningham and Menter, 2021; Jain et al., 2022a; Kok and McDonald, 2017). As a context characterised by diverse interests, identities and agendas; building inclusive organizations where all stakeholders are actively engaged is now seen as a strategic priority (Banker and Bhal, 2020). Researchers opine that a distributed leadership (DL) approach can enhance organisational effectiveness by giving autonomy and responsibility to those who are closest to frontline services (Gunzel-Jensen, Jain, and Kjeldsen, 2018).

In recent years, DL (including shared and collective leadership) has become the preferred model for the governance of education systems around the World (Bush and Glover, 2014; Bush, 2019; Jones et al., 2014). This approach differs from traditional perspectives in that it views leadership as a collective process that goes well beyond the attributes and behaviours of formal ‘leaders’ and that occurs throughout the organization. Many studies take a normative stance (Nguyen, Harris, and Ng, 2020) although DL can also be used as a powerful ‘lens’ through which to observe and explore leadership practice (Ospina et al., 2020).

While literature on educational leadership is dominated by Western scholars; HE systems in emerging economies have unique contextual opportunities and challenges (Banker and Bhal, 2020; Chattopadhyay et al., 2022; Mogaji and Jain, 2020; Or and Berkovich, 2023) that may influence the desirability and/or impact of different leadership approaches. With the World’s third-largest population of students in HE (IITs et al., 2021) and an extensive growth agenda (Gupta and Gupta, 2012) India provides a particularly important setting to understand the conceptualization and implementation of DL.

The current paper attempts to understand the relevance of the construct of DL in the context of HEIs in India and proposes a moderated-mediation model to explore the antecedents and consequences of DL. This study has three main objectives: (1) to explore the relationship between empowering organization structures (EPS) and DL; (2) to investigate the moderating role of participation in decision-making (PDM) in the relationship between EPS and DL; and (3) to examine the mediating effect of DL on the relationship of EPS with voice and silence based on theoretical and empirical evidence.

The paper starts by examining relevant literature to identify a number of hypotheses around the antecedents and consequences of DL. An empirical study is then

presented, which uses survey data from high performing HEIs in India to test the hypotheses. Structural Equation Modelling (SEM) is used to analyse the relationships and underpinning conceptual framework. Findings demonstrate a positive relationship between EPS and DL, which is moderated by PDM. DL also has a mediating effect on the relationship between EPS and behavioural outcomes of employee voice and silence. The study thus presents a novel way of understanding how DL practices work in high performing institutions in a non-Western context. The paper concludes by outlining implications for research and practice in HE leadership, which may have wider relevance to other contexts/sectors.

Literature Review and Theoretical Framework

Leadership in Indian Higher Education

Research on leadership in Indian HEIs typically applies Western theories and frameworks, such as ‘transformational’ (Jyoti and Bhau, 2016; Baba, 2022) and ‘authentic’ (Srivastava et al., 2022) leadership that emphasise the skills and qualities of ‘leaders’ in formal positions of authority. Sinha (2020) notes the risks of such an approach perpetuating inequalities and silencing dissent.

Salmi (2009) and Banker and Bhal (2020) identify three key features of the Indian HE context (resources, talent and governance) that make it particularly challenging to sustain ‘world class universities’ (WCUs). Based on a study of high performing Indian HEIs Banker and Bhal (2020) conclude that in order to address the problems caused by political interference ‘in a context such as India, a combination of visionary and distributed styles of academic leadership is desired in order to build WCUs’ (p. 585).

Whilst Indiresan (2007) and others note significant political intervention in the running of Indian HEIs, Carnoy and Dossani (2013) and Pandit and Paul (2023) suggest that devolved governance structures provide an environment in which power and influence have the potential to be widely distributed. Incumbents in leadership positions are thus encouraged to distribute authority across boundaries and levels to effectively accomplish institutional goals (Pilbeam and Jamieson, 2010; Prysor and Henley, 2018). A ‘distributed’ approach to leadership is widely endorsed in such systems as a way of engaging a diverse community of stakeholders in decision making processes (Vuori, 2019) and embedding a clear sense of purpose that drives organisational success (Hong et al., 2021).

Distributed leadership (DL)

As the current discourse on leadership moves from an individualistic stance to a collective one; the ontology of leadership theory has been evolving (Drath et al., 2008). With grounding in Gibb’s (1958) notion that leadership is a function of ‘structure-in-interaction’; this perspective describes leadership in terms of activities and interactions that are *distributed* across multiple people and situations (Spillane et al., 2004) and involve role complementarities and network patterns of control (Barrero-Fernandez et al., 2023; Heller and Firestone, 1995). Thus, leadership is being redefined ‘in terms of processes and practices organized by people in interaction and the study of that interaction without becoming preoccupied with what formal leaders do and think’ (Crevani et al., 2010, p. 78).

A distributed leadership approach acknowledges the work of all individuals who contribute to leadership practice, whether or not they are formally designated or defined as ‘leaders’ (Harris and Spillane, 2008). Distributed leadership essentially means that

those best equipped, skilled or positioned to lead do so, in order to fulfil a goal or organizational requirement (Harris and DeFlaminis, 2016).

Spillane et al. (2004) refer to DL as being ‘stretched over’ people in different roles. Gronn (2002) describes it as *concertive action* where the total is significantly more than the sum of its parts. DL is thus represented as dynamic, relational, inclusive, collaborative, and contextually situated (Bolden et al., 2009). Such interactions are a product of the past and open possibilities for future action (Alvehus, 2019), framing leadership as a phenomenon that is co-constructed by leaders and followers using communicative connections and social influence (Ruben and Gigliotti, 2021).

Empowering Power Structures (EPS)

Whilst the relationship between leadership, empowerment and organizational outcomes has been extensively documented there exists a paucity of empirical studies that explore this relationship in the context of DL (Jain and Jeppesen, 2014; Lumby, 2013; Woods, 2016). Researchers highlight that DL is not a replacement for individual leadership and does not imply that formal leaders and structures are dispensable. Instead, leadership is conceived of as ‘distributed’ across the organization (within systems, activities, practices, and relationships) and based on social processes that are collective, interactive, and based on lateral (alongside vertical) influence (Bolden, 2011).

Power is a dynamic that is created through formal and informal systems within the organization. In ‘loosely coupled’ (Meyer and Rowan, 1977) systems like HEIs though parts may be connected and responsive to each other, each entity also preserves its own identity and evidence of physical separateness. Flatter hierarchies coupled with peer-based structures lead to DL being a preferred mode of functioning in such systems, where governance structures are flexible and organic rather than rigid and hierarchical (Gronn, 2002).

The central tenet of DL is based on the quality of shared activity and interaction (Floyd and Fung, 2017; Leithwood and Harris, 2009). The leader's role becomes, therefore, to realize the organization's goals by empowering others to act interdependently (Kok and McDonald, 2017). Assigning power and strengthening autonomy thus reduces the need for a supervisory role by forming a non-hierarchical network of equitable cooperation (Panagiotopoulos, Panagiotis, and Karanikola, 2019). The HE context is based on principles of collegiality and cultures of collaboration (Paletta et al., 2021). Power in such systems is not concentrated with an individual or a group but is exercised in complex ways and is shared amongst various actors across the organization (Lumby, 2013, 2019).

Kanter's (1977, 2008) *Structural Theory of Organizational Empowerment* brings into focus both the formal and informal sources of power in organizational structures. This theory asserts that access to information, resources, support and learning opportunities at work help create empowering environments. This framework was used to operationalise the construct of EPS. Further, DL has been shown to have a positive relationship to structural and psychological empowerment and organisational excellence in schools (Majooni et al., 2022). Thus, EPS should help foster DL. Hence this has been taken as an antecedent to DL in the proposed model. Consequently, the following hypothesis is proposed:

H1: EPS is positively related to DL.

Participation in Decision Making (PDM)

DL is depicted as a more inclusive form of leadership (Lumby, 2019; Woods, 2016), founded on participative decision-making (PDM). Evidence from schools suggests that by increasing the span of influence, DL can help promote employee participation (Gronn, 2008) and enhanced effectiveness (Somech, 2010). Within HE this is facilitated

by the use of a committee structure, which offers a formalized mechanism for bottom-up influence and decision-making (Bolden et al., 2009).

Since significant value is attributed to collegiality, collaboration and consultation in HE (Barrero-Fernandez et al., 2023; Bryman, 2007; Chattopadhyay et al., 2022; Hungund et al., 2021; Jain et al., 2022b), it is theorized that systems that foster PDM would also facilitate DL (Floyd and Fung, 2017; Kok and McDonald, 2017). Hence, the following hypothesis is proposed:

H2: PDM is positively related to DL.

The moderating role of PDM

DL develops ‘where leadership is distributed among all members of the leadership team and where teachers can participate in school decision-making practices and processes’ (Devos et al., 2014, p. 205). Empowering power structures help cultivate a culture of participation in decision-making (Hardy and Leiba-O’Sullivan, 1998). Further, research has demonstrated the moderating role of PDM between organisational politics (*power relations*) and employee outcomes (Witt et al., 2003). Hence, the following hypothesis is framed:

H3: PDM moderates the relationship between EPS and DL.

Mediating role of DL

Research confirms that at the core of participation is an underlying notion of ‘influence or power sharing’ and ‘joint decision-making’ (Jain, 2016, p. 727). Leadership based on collegiality, autonomy, and the opportunity to participate in decisions creates a sense of fairness that is proactive and likely to ensure the commitment of academics (Bryman, 2007). Further, the mediating role of DL between antecedents and employee outcomes

has been demonstrated empirically (e.g. Canterino et al., 2020; Devos et al., 2014; Jain, 2016, Unterrainer et al., 2017). Therefore, the following hypothesis is framed:

H4: DL mediates the relationship between antecedents (EPS moderated by PDM) and outcomes (Voice and Silence).

Employee Voice

Voice is a concept found in marketing literature which refers to consumers feeling secure enough to articulate feedback on deteriorating quality. It was first coined by Albert O. Hirschman (1970) in his exit-voice-loyalty framework. In organizational psychology and organization studies, it refers to the concept of employees feeling secure and empowered enough to voice their concerns to management. Voice has been theorized to be based on pro-social motivation and to bring about positive change (Morrison, 2014). Further, DL promotes voice (Gronn, 2008) and creates an environment that gives employees agency such that their voice and viewpoint is relevant in decision making (Koiv et al., 2019) but this relationship needs to be validated empirically.

‘Voice’ of all stakeholders in the education system has been identified as a key dimension in the development of learning communities (Frost, 2008) and as critical to being good ‘citizens of the academic community’ (Bolden, Gosling and O’Brien, 2014). Employees who perceive that their leaders enhance the meaningfulness of work, foster participation in decision making, express confidence in high performance, and provide autonomy from bureaucratic constraints are more likely to engage in voice behaviour (Yoon, 2012). We thus hypothesize that:

H5: DL is positively related to voice behaviour.

Employee Silence

Silence in organizations refers to a state in which employees refrain from calling attention to issues at work. Conceptually, silence is failure to voice, and voice is a choice (deliberate or otherwise) to not remain silent (Morrison, 2014). Since silence is more than the absence of voice and the two are distinct constructs (Sherf et al., 2021) findings from research on voice behaviour cannot be transferred to the problem of employee silence easily and silence has to be studied as a separate construct.

Silence is a result of unequal inclusion in leadership. Fear of transgressing current boundaries of what is acceptable or rewarded leads to silence about things that individuals might otherwise wish to raise (Lumby, 2013). Research suggests that transformational leadership can help reduce silence by building feelings of trust (Zhu et al., 2019) and an empirical study in the Indian context highlighted the need to study the potential influence of DL on silence in Indian organizations while exploring the impact of empowering organizational structure on promoting voice or preventing silence behaviour (Srivastava, Jain and Sullivan, 2019). We thus hypothesize that:

H6: DL is negatively related to silence behaviour.

Control Variable

DL has been theorized to promote performance (e.g.: Gronn, 2002, 2008; Jain, 2016; Spillane et al, 2004). Since the study is based on top ranked (elite) HEIs in India, this has been taken as a control variable in this study.

From the above discussion a theoretical framework for antecedents and consequences of DL can be depicted (see Figure 1) which can be used to support empirical testing of the hypotheses (H1-H6).

[INSERT FIGURE 1 ABOUT HERE]

Methodology

This was a descriptive-correlational study. It followed a confirmatory approach to test the theoretical framework proposed in Figure 1. The study followed a non-experimental research design.

Data Sources

The study used quantitative data from a survey instrument using adapted versions of standard scales for each variable. It is based on a sample of academic and non-academic staff from the top six ranked institutions in India (assumed to be high-performing systems) as determined in the QS World University Rankings (2019) and Government of India's National Institutional Ranking Framework (NIRF) (2019). These were used as organizational performance indicators to select the institutions to be included in the study. Interestingly, the top six institutions continue to remain in the top six in NIRF (2022) and QS World University Rankings (2023, 2024) for India as well, showing consistency on performance evaluation parameters over time. All these institutions are public institutions imparting STEM education. Most are also Institutes of National Importance and have the tag of Institution of Eminence (IoE). Being recognized as such gives them enhanced access to funding sources, being granted more autonomy both academically and administratively as well as being propelled to collaborate and excel at the international level. Further, the institutions in the sample represent a broad cross-section of locations across India.

Sampling

The survey instrument was sent out to all senior staff in each of the sample institutions.

Senior staff included teaching and non-teaching staff involved in strategic decision-making or heading operations of a unit or research groups. 269 completed responses (N) were received from around 2500 questionnaires across all the six sample institutions.

Of the 269 completed responses (N); 25 respondents were in professional service (non-academic) roles, possessing a Bachelor's degree or above; 244 respondents were in primarily academic roles with all possessing a Doctoral (PhD) Degree – many of them were involved in additional administrative duties as well.

Further, 15 respondents were in Senior Leadership roles (Deans / Deputy Director / Director / Vice Chancellor) with all possessing a Doctoral (PhD) Degree; and 22 were female respondents possessing a Bachelor's degree or above across both academic and non-academic roles. For purposes of this study, these have been analysed as a homogeneous set.

The sample size is adequate for testing this model based on rules of thumb of sample size requirements for Structural Equation Modelling (SEM) which recommends a sample size of $N > 200$ (Boomsma, 1983) or 5 to 10 observations per estimated parameter (Bentler and Chou, 1987).

Measures

This research uses a quantitative survey instrument built using standardized scales available in literature and followed a confirmatory approach. EPS was measured using *Conditions for Workplace Effectiveness Questionnaire (CWEQ) – II* (Laschinger et al., 2001), which is based on the *Structural Theory of Organizational Empowerment* (Kanter, 1977, 2008) and has 21 items. PDM was measured using Vroom's scale as adapted by Ruh et al. (1975) and has 5 items. DL was measured using Jonsson et al.'s (2016) distributed leadership agency scale and has 7 items. Voice was measured using

the scale available in LePine and Van Dyne (1998) and has 6 items. Silence was measured using Jain's (2015) scale and has 14 items. Demographic and institutional details were also collected. Each of these scales was developed outside the HE sector and hence reflects a novel application of the framework. Further, no scales for these constructs have been developed specifically for the HE sector to the best of the authors' knowledge and hence this study extends literature by confirming whether these scales can be used in HE contexts as well.

Analysis

Multivariate data analyses tools were used to analyse the data obtained. Confirmatory factor analysis (CFA) was carried out on the scale. SEM was used to test the proposed model.

Quantitative Data Analysis was done using IBM SPSS Version 23 and IBM SPSS AMOS version 20. The resulting structural model helped explain the moderated-mediation model proposed and test the hypotheses developed in this study. The proposed model in the current study corresponds to Type I of Langfred's (2004) conceptualization of a moderated-mediation model in which the moderator operates on the relationship between the independent variable and the mediator. This model was tested statistically using the steps outlined by Preacher, Rucker and Hayes (2007).

Results

Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis is a special statistical analysis procedure used to test how well the measured variables are consistent with the researcher's understanding of the observed variables. The fundamental feature of CFA is that it is hypothesis-driven

(Brown, 2015). CFA was done as a first step in the testing of the model being studied.

Scales for EPS and Silence consisted of sub-scales which formed second-order factors. First-order CFA was done on the data set in AMOS using all sub-scales as first-order factors. The initial CFA of the model was acceptable. On running the convergent validity and convergent reliability tests in AMOS on the data set, convergent reliability was above 0.8 for all scales which is good. Convergent Validity for a sub-scale of EPS and PDM was achieved by removing items with low regression weights.

CFA was done using second-order factors. The model gave a Comparative Fit Index (CFI) of 0.883, Tucker-Lewis Index (TLI) of 0.876 which is permissible; Root Mean Square Error of Approximation (RMSEA) was 0.056 at a PClose of 0.003 which is moderate. The Standard Root Mean Square Residual (SRMR) was $0.0748 < 0.08$ which is good. The Chi-square/df value comes to $1.847 < 3$ which is good. Since all these values meet the cut-off criteria for fit indices (Hooper et al., 2008; Hu and Bentler, 1999); this model has a good fit and is acceptable.

Statistics and Correlations

Statistics calculated using SPSS for the scales used in the model are presented in Table I.

[INSERT TABLE I ABOUT HERE]

Table-I gives a snapshot of the data. The mean values depict that the sample is spread evenly around the line of central tendency for most of the variables under study. Voice tends to be high while Silence is low as seen in Table-I, which is in line with the theoretical base of the study.

From Table-I, we also see that the convergent reliability value for all constructs was above 0.8. Cronbach's Alpha value for all scales was also above 0.8. These are above the prescribed threshold limit of 0.7 (Nunnally and Bernstein, 1978). This was the case for most individual sub-scales as well (in first-order CFA). Thus, the scales passed the test for internal consistency/reliability in the measures. Internal consistency estimates depict the degree to which items on a test jointly measure the same construct (Henson, 2001).

Average Variance Explained (AVE) values are greater than 0.5 for all sub-scales individually (in first-order CFA) and most scales in second-order CFA (Table-I) thus showing convergent validity. Additionally, Maximum Shared Variance (MSV) values passed the test for discriminant validity for all sub-scales individually (in first-order CFA). Thus, the scales meet expected standards for validity (Fornell and Larcker, 1981). This means that multiple items of a construct are more related to each other than to items of another construct (Campbell and Fiske, 1959).

The correlation coefficient provides information on closeness of constructs/variables. The Correlation Matrix presented in Table-I shows that the variables are correlated in the direction hypothesised. Additionally, PDM and EPS are highly correlated with DL while DL and voice show a moderately high degree of correlation. Silence is negatively correlated with all variables as theorised. It shows low correlation with DL and voice but shows non-significant negative correlation with EPS and PDM.

Structural Equation Modelling (SEM)

SEM is a multivariate technique used to evaluate the direct and indirect effects on pre-assumed causal relationships (Fan et al, 2016). The Structural/Causal Model based on the hypotheses (with the regression weights) has been depicted in Figure 2 and

illustrates a network of relationships among variables. The values on the arrows depict the regression weights while those on the variables are the variances. Values with a double star (**) on them are significant at a 0.01 level i.e. highly statistically significant, hence the observed relationship is unlikely to be due to chance.

[INSERT FIGURE 2 ABOUT HERE]

The fit indices for this model are CFI of 0.937, Goodness of Fit Index (GFI) of 0.961, Adjusted Goodness of Fit Index (AGFI) of 0.883, TLI of 0.875, and SRMR of 0.0686. All these parameters are excellent, so this model is accepted (Hair et al., 2006; Hooper et al., 2008; Hu and Bentler, 1999). Coefficient of Determination (R^2) values provide an estimate of the strength of the relationship between variables. These are also significant for all parameters and, in the direction hypothesized as can be seen from Table-II.

[INSERT TABLE II ABOUT HERE]

From Table-II, we also see that the Critical Ratio is above an absolute value of 2 for all the parameters. We can thus infer that all relationships are significant at a 99% confidence level. This further validates that the hypotheses as articulated would be accepted.

Mediation

A mediator variable is an intermediate variable which explains how an independent variable influences a dependant one. It is a link in a causal chain (Woody, 2011). To test

if DL mediates the relationship between EPS and Voice, and EPS and Silence an A*B mediation test was done using the structural model of Figure 2. These tests were run in AMOS using a user-defined estimand with bootstrapping (Gaskin, 2016a; Woody, 2011).

To test if DL mediates the relationship between EPS and Voice, an A*B mediation test was carried out. The value for this comes to 0.223 at a P value of 0.001 which is significant. To test if DL mediates the relationship between EPS and Silence, the A*B mediation test was carried out. The value for this comes to -0.122 at a P value of 0.001 which is significant.

Thus, DL mediates the relationship between EPS and Voice and Silence in the hypothesized directions as articulated in Hypothesis 4 (H4).

Moderation

A moderator variable affects the relationship between any two variables (Dawson, 2014). The interaction effect of EPS was plotted on DL to test the moderating effect of PDM in AMOS by introducing an EPS*PDM interaction term to the Causal Structural Model. The model fit indices for the model gave a CFI of 0.913, GFI of 0.947, AGFI of 0.841, TLI of 0.815, and SRMR was 0.0719. All these parameters are good so the model passes Goodness of Fit (GoF). The regressions were then plotted (as discussed in Gaskin, 2016b) and is depicted in Figure 3.

[INSERT FIGURE 3 ABOUT HERE]

The graph shows that PDM strengthens the positive relationship between EPS and DL, thereby confirming Hypothesis 3 (H3).

Multi-group Analysis

Additionally, on doing a multi-group analysis for the model in AMOS based on Institution, Gender, and Staff-Group status of the respondents; no difference was found between any of these three groupings. This confirms that the entire sample and hence the population under study may be treated as homogeneous.

Thus, the moderated-mediation model in Figure 1 and the theoretical framework for this study is accepted; supporting all six hypotheses (as confirmed in Figures 2 and 3).

Discussion

Whilst DL is widely advocated as a normative approach to leadership in HE there remains a paucity of empirical studies, particularly in non-Westernized countries like India (Hoang, 2023). Research findings suggest that context (Johns, 2024), organizational structure, and culture have a significant impact on the successful implementation of DL in HE (Jain and Madan, 2022; Or and Berkovich, 2023). With India catering to the third-largest student population globally (IITs et al., 2021), this paper adds to the global pool of knowledge on this subject by developing and testing a framework of antecedents and consequences of DL in high-performing Indian HEIs.

Findings show a clear positive relationship between Empowering Power Structures (EPS) and Distributed Leadership (DL), with Participation in Decision Making (PDM) as an important moderator. Further, the findings demonstrate that an environment in which leadership is widely distributed significantly increases employee Voice and reduces employee Silence.

Implications for theory/research

Similar to research in other higher education contexts (e.g. Jambo and Hongde, 2020; Jones et al., 2017; Lizier et al., 2024; Sewerin and Holmberg, 2017; van Ameijde et al., 2009) this study demonstrates that the construct of distributed leadership (DL) is relevant in the context of high-performing technical HEIs in India. By demonstrating how DL mediates the relationship between empowering organisation structures (EPS) and behavioural outcomes of voice and silence this work responds to calls for more nuanced empirical investigations of the relationship between organisational processes and individual behaviours in distributed leadership (Tian et al., 2016). As theorized, the study found that participation in decision making (PDM) moderated the relationship between EPS and DL and strengthened the positive effect of EPS on DL.

In a recent review of the literature on employee voice and silence Morrison (2023) noted that very few studies empirically investigate both concepts in the same study (see Sherf et al. 2021 for an exception), thereby leaving the question of ‘whether silence and voice should be conceptualized as opposite ends of the same continuum or as distinct behaviors’ (Morrison, 2023: 92) unresolved. Furthermore, whilst it is not uncommon for studies to explore the relationship between employee voice and/or silence with the style, behaviour and/or personality of individual leaders (ibid), to our knowledge there are very few that investigate links to DL (see e.g. Butler and Tregaskis, 2018; Fu and Liu, 2018; Xu et al., 2021) and none within HE. These are important contributions of this research, which support the notion that (a) voice and silence are distinct, yet related, concepts and (b) that through promoting active participation in decision making universities can develop cultures of DL that enhance employee voice and reduce silence.

Finally, this study takes scales developed outside the HE sector and demonstrates that they can be meaningfully used within an HE context as well. The

findings of this study, the underlying conceptual framework and methodology could be usefully applied to research beyond India and/or the HE context to provide a more nuanced understanding of the antecedents and consequences of DL (see, e.g. Jakobsen et al., 2023; Fu and Liu, 2018; Robinson, 2008).

Implications for policy/practice

As discussed in the literature review, leadership research and practice in India and other emerging economies remains strongly influenced by leader-centric theories that have been developed predominantly from research in commercial organizations in Western contexts. By adopting a DL approach, it may be possible for Indian HEIs and universities to diversify their population of HE leaders, thereby improving access to talent, use of resources and governance processes which have been identified as three of the main challenges facing HEIs in this region (Salmi, 2009; Banker and Bhal, 2020). Furthermore, a DL approach fits well with the democratic ethos that permeates much of Indian society (Choudhary, 2023) and may be effective at increasing the standing of institutions that are not currently regarded as ‘World Class’. This should support the government’s New Education Policy (NEP) 2020, which places an emphasis on broadening access to quality education, creating an environment for lifelong learning and enhanced employability of students. Given that the institutions included in this study are high-performing institutions from across India, they could act as beacons of good practice within their respective regions.

Findings from this study provide support for policy makers and practitioners to formulate policies that promote DL as a desirable and effective approach to leadership in Indian HE. For those implementing policy, it highlights the need to create an empowering environment where support is provided to frontline staff to enable them to actively contribute to leadership practices and processes within their area of work. For

frontline leaders in HE, the study offers practical guidance on how to engage staff through broader allocation of power and authority, and supporting this through access to information, resources, support and learning opportunities (Kanter, 1977, 2008). For senior leaders in academic institutions, it highlights the role they can play in advocating for an inclusive culture that values the Voice and contribution of staff at all levels in the development of world class institutions/universities.

Conclusion

In the current environment of turbulence and change in global HE there is no 'ideal' leader and organisations would do well to leverage the principles of DL to build effective leadership teams based on collaborative constellations (Barrero-Fernandez et al., 2023; Hungund et al., 2021). This study presents a unique conceptualization of DL and tests it empirically in the context of high-performing technical HEIs in a non-Western context (i.e. India). It also suggests that DL may be an effective way of motivating and engaging HE staff who are essentially knowledge workers. From a practitioner perspective, it suggests that building governance systems based on empowerment and participative decision making will strengthen DL practices, enhancing employee Voice and reducing employee Silence.

As with all empirical research there are a number of limitations (such as sample size and population) that should be considered when interpreting findings. Furthermore the quantitative methodology, whilst effective at analysing the strength of relationships, provides a relatively superficial understanding of underlying constructs and the various ways in which they may be conceived and enacted in practice. These issues would merit further investigation in order to (a) identify the extent to which findings could be generalised more broadly across HE in India and/or elsewhere and (b) to provide a more

nuanced appreciation of the concepts of DL, EPS, PDM, voice and silence as perceived by leaders and followers themselves.

In an emerging HE system such as India- where effective use of finite resources, attracting and retaining talent, and implementing effective governance systems are key strategic challenges – the evidence from this study suggests that DL could be a viable and inclusive approach to developing world class institutions/universities. The impact of such an approach, however, is dependent on putting in place appropriate structures for empowerment and collective decision making in order to maximise the participation and engagement of staff at all levels.

Disclosure statement

No potential conflict of interest was reported by the author(s).

References

- Abdrasheva, D., Escribens, M., Sabzalieva, E., Vieira do Nascimento, D.M. and Yerovi Verano, C.A., 2022. Resuming or reforming?: tracking the global impact of the COVID-19 pandemic on higher education after two years of disruption.
- Alvehus, J., 2019. Emergent, distributed, and orchestrated: Understanding leadership through frame analysis. *Leadership*, 15(5), pp.535-554.
- Baba, M.M. 2022. Transformational Leadership and Personal Demographic Profile in the Education System of India, *Global Business Review*, 23(5), p.1154-1174.
- Banker, D.V. and Bhal, K.T., 2020. Creating world class universities: Roles and responsibilities for academic leaders in India. *Educational Management Administration & Leadership*, 48(3), pp.570-590.
- Bentler, P.M. and Chou, C.P., 1987. Practical issues in structural modeling. *Sociological methods & research*, 16(1), pp.78-117.
- Barrero-Fernández, B., Mula-Falcón, J. and Domingo, J., 2023. Educational constellations: a systematic review of macro-networks in education. *International Journal of Educational Management*, 37(1), pp.259-277.

- Bolden, R., 2011. Distributed leadership in organizations: A review of theory and research. *International journal of management reviews*, 13(3), pp.251-269.
- Bolden, R., Gosling, J. and O'Brien, A., 2014. Citizens of the academic community? A societal perspective on leadership in UK higher education. *Studies in Higher Education*, 39(5), pp.754-770.
- Bolden, R., Petrov, G. and Gosling, J., 2009. Distributed leadership in higher education: Rhetoric and reality. *Educational Management Administration & Leadership*, 37(2), pp.257-277.
- Boomsma, A., 1983. On the robustness of LISREL (maximum likelihood estimation) against small sample size and non-normality.
- Brown, T.A., 2015. *Confirmatory factor analysis for applied research*. Guilford publications.
- Bryman, A., 2007. Effective leadership in higher education: A literature review. *Studies in higher education*, 32(6), pp.693-710.
- Bush, T. and Glover, D., 2014. School leadership models: What do we know? *School Leadership & Management*, 34(5), pp.553-571.
- Bush, T., 2019. Distributed leadership and bureaucracy: Changing fashions in educational leadership. *Educational Management Administration & Leadership*, 47(1), pp.3-4.
- Butler, P. and Tregaskis, O., 2018. Distributed leadership and employee cynicism: Trade unions as joint change agents. *Human Management Resource Journal*, 28(4), 540-554.
- Campbell, D.T. and Fiske, D.W., 1959. Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological bulletin*, 56(2), p.81.
- Canterino, F., Cirella, S., Piccoli, B. and Shani, A.B.R., 2020. Leadership and change mobilization: The mediating role of distributed leadership. *Journal of Business Research*, 108, pp.42-51.
- Carnoy, M. and Dossani, R., 2013. Goals and governance of higher education in India. *Higher Education*, 65, pp.595-612.
- Chattopadhyay, A., Kupe, T., Schatzer, N.F. and Mogaji, E., 2022. Fireside chat with three vice chancellors from three continents: Re-imagining higher education in emerging economies. In *Re-imagining Educational Futures in Developing*

- Countries: Lessons from Global Health Crises* (pp. 85-96). Cham: Springer International Publishing.
- Choudhary, A., 2023. Constitutional Democracy: Changing Role of People-Centric Administration. *Indian Journal of Public Administration*, p.00195561231166353.
- Crevani, L., Lindgren, M. and Packendorff, J., 2010. Leadership, not leaders: On the study of leadership as practices and interactions. *Scandinavian journal of management*, 26(1), pp.77-86.
- Cunningham, J.A. and Menter, M., 2021. Transformative change in higher education: Entrepreneurial universities and high-technology entrepreneurship. *Industry and Innovation*, 28(3), pp.343-364.
- Dawson, J.F., 2014. Moderation in management research: What, why, when, and how. *Journal of business and psychology*, 29(1), pp.1-19.
- Devos, G., Tuytens, M. and Hulpia, H., 2014. Teachers' organizational commitment: Examining the mediating effects of distributed leadership. *American Journal of Education*, 120(2), pp.205-231.
- Drath, W.H., McCauley, C.D., Palus, C.J., Van Velsor, E., O'Connor, P.M. and McGuire, J.B., 2008. Direction, alignment, commitment: Toward a more integrative ontology of leadership. *The leadership quarterly*, 19(6), pp.635-653.
- Fan, Y., Chen, J., Shirkey, G., John, R., Wu, S.R., Park, H. and Shao, C., 2016. Applications of structural equation modeling (SEM) in ecological studies: an updated review. *Ecological Processes*, 5, pp.1-12.
- Floyd, A. and Fung, D., 2017. Focusing the kaleidoscope: exploring distributed leadership in an English university. *Studies in higher education*, 42(8), pp.1488-1503.
- Fornell, C. and Larcker, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), pp.39-50.
- Frost, D., 2008. 'Teacher leadership': values and voice. *School Leadership and Management*, 28(4), pp.337-352.
- Fu, L. and Liu, Z., 2018. Distributed leadership in organizations: an investigation of antecedent conditions. *Chinese Management Studies*, 12(4), 682-700.

- Gaskin, J. 2016b. SEM Series: Interactions, Gaskination's Statistics. Available at: https://www.youtube.com/watch?v=dpkxkFGctKwo&list=PLnMJlbz3sefJaVv8rBL2_G85HoUko5I--&index=10 (last accessed 14 March, 2020)
- Gaskin, J., 2016a. SEM Series: Mediation, Gaskination's Statistics. Available at: https://www.youtube.com/watch?v=ICnh3s2FG14&list=PLnMJlbz3sefJaVv8rBL2_G85HoUko5I--&index=10&t=0s (last accessed 14 March, 2020)
- Gibb, C.A., 1958. An interactional view of the emergence of leadership. *Australian Journal of Psychology*, 10(1), pp.101-110.
- Gronn, P., 2002. Distributed leadership as a unit of analysis. *The leadership quarterly*, 13(4), pp.423-451.
- Gronn, P., 2008. The future of distributed leadership. *Journal of educational administration*, 46(2). pp: 141-158.
- Günzel-Jensen, F., Jain, A.K. and Kjeldsen, A.M., 2018. Distributed leadership in health care: the role of formal leadership styles and organizational efficacy. *Leadership*, 14(1), pp.110-133.
- Gupta, D. and Gupta, N., 2012. Higher Education in India: Structure, Statistics and Challenges, *Journal of Education and Practice*, 3(2), 17-24.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L., 2006. *Multivariate data analysis (Vol. 6): Pearson Prentice Hall Upper Saddle River.*
- Hardy, C. and Leiba-O'Sullivan, S., 1998. The power behind empowerment: Implications for research and practice. *Human relations*, 51(4), pp.451-483.
- Harris, A. and DeFlaminis, J., 2016. Distributed leadership in practice: Evidence, misconceptions and possibilities. *Management in education*, 30(4), pp.141-146.
- Harris, A. and Spillane, J., 2008. Distributed leadership through the looking glass. *Management in education*, 22(1), pp.31-34.
- Heller, M.F. and Firestone, W.A., 1995. Who's in charge here? Sources of leadership for change in eight schools. *The Elementary School Journal*, 96(1), pp.65-86.
- Henson, R.K., 2001. Understanding internal consistency reliability estimates: A conceptual primer on coefficient alpha. *Measurement and evaluation in counseling and development*, 34(3), pp.177-189.
- Hirschman, A.O., 1970. *Exit, voice, and loyalty: Responses to decline in firms, organizations, and states (Vol. 25)*. Harvard university press.

- Hoang, A.D., 2023. A bibliometrics analysis of research on teachers' satisfaction from 1956 to 2022. *International journal of educational management*, 37(1), pp.164-185.
- Hong, P.C., Chennattuserry, J.C., Deng, X. and Hopkins, M.M. 2021. Purpose-driven leadership and organizational success: a case of higher educational institutions, *Leadership & Organization Development Journal*, 42 (7), p.1004-1017.
- Hooper, D., Coughlan, J. and Mullen, M.R., 2008. Structural equation modelling: guidelines for determining model fit. *Electronic journal of business research methods* 6: 53-60.
- Hu, L.T. and Bentler, P.M., 1999. Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), pp.1-55.
- Hungund, S., Annigeri, A.R., Pandey, I. and Hiremath, G., 2021. Academic leadership and research performance: a study among engineering academicians in emerging nations. *International Journal of Educational Management*, 36(1), pp.81-94.
- IITs, NITs, IIITs, IIMs and SPAs, A.I.I.M.S., 2021. Challenges in Indian higher education. *Current Science*, 121(3), p.339.
- Indiresan, P.V., 2007. Prospects for world-class research universities in India. *World class worldwide: Transforming research universities in Asia and Latin America*, pp.95-121.
- Jain, A.K. and Jeppesen, J.H., 2014. Conceptualizing and implementing the distributed leadership practices in Indian organizations: Preliminary findings. *Journal of Management Development*, 33(3), pp.258-278.
- Jain, A.K. and Madan, A.O., 2022. The Meaning of Distributed Leadership Practices in Indian Organizations Role of Trust in Employer and Fulfilment of Psychological Contract. In *Understanding Psychology in the Context of Relationship, Community, Workplace and Culture* (pp. 173-187). Springer, Singapore.
- Jain, A.K., 2015. An interpersonal perspective to study silence in Indian organizations: Investigation of dimensionality and development of measures. *Personnel Review*, 44 (6), pp. 1010-1036.
- Jain, A.K., 2016. The mediating role of job satisfaction in the relationship of vertical trust and distributed leadership in health care context. *Journal of Modelling in Management*, 11(2), pp.722-738.

- Jain, R., Ping Hung Li, E. and Lee, J.T.H., 2022a. The role of the Indian political regime in higher education reforms for innovation drive: key comparisons with China. *Journal of Asian and African Studies*, p.00219096221097666.
- Jain, V., Mogaji, E., Sharma, H. and Babbili, A.S., 2022b. A multi-stakeholder perspective of relationship marketing in higher education institutions. *Journal of Marketing for Higher Education*, pp.1-19.
- Jakobsen, M.L., Kjeldsen, A.M. and Pallesen, T., 2023. Distributed leadership and performance-related employee outcomes in public sector organizations. *Public Administration*, 101(2), 500-521.
- Jambo, D. and Hongde, L., 2020. The Effect of Principal's Distributed Leadership Practice on Students' Academic Achievement: A Systematic Review of the Literature, *International Journal of Higher Education*, 9(1), 189-198.
- Johns, G., 2024. The context deficit in leadership research. *The Leadership Quarterly*, 35(1), p.101755.
- Jones, S., Harvey, M., Hamilton, J., Bevacqua, J., Egea, K. and McKenzie, J., 2017. Demonstrating the impact of a distributed leadership approach in higher education. *Journal of Higher Education Policy and Management*, 39(2), 197–211.
- Jones, S., Harvey, M., Lefoe, G. and Ryland, K., 2014 Synthesising theory and practice: Distributed leadership in higher education, *Educational Management Administration & Leadership*, 42(5) 603–619.
- Jønsson, T., Unterrainer, C., Jeppesen, H.J. and Jain, A.K., 2016. Measuring distributed leadership agency in a hospital context: development and validation of a new scale. *Journal of health organization and management*, 30(6), pp.908-926.
- Jyoti, J. and Bhau, S. 2016. Empirical Investigation of Moderating and Mediating Variables in between Transformational Leadership and Related Outcomes: A Study of Higher Education Sector in North India, *International Journal of Educational Management*, 30 (6), p.1123-1149.
- Kanter, R.M., 2008. *Men and women of the corporation: New edition*. Basic books.
- Kõiv, K., Liik, K. and Heidmets, M., 2019. School leadership, teacher's psychological empowerment and work-related outcomes. *International Journal of Educational Management*, 33 (7), pp. 1501-1514.

- Kok, S.K. and McDonald, C., 2017. Underpinning excellence in higher education—an investigation into the leadership, governance and management behaviours of high-performing academic departments. *Studies in Higher Education*, 42(2), pp.210-231.
- Langfred, C.W., 2004. Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. *Academy of management journal*, 47(3), pp.385-399.
- Laschinger, H.K.S., Finegan, J., Shamian, J. and Wilk, P., 2001. Impact of structural and psychological empowerment on job strain in nursing work settings: Expanding Kanter's model. *JONA: The Journal of Nursing Administration*, 31(5), pp.260-272.
- Leithwood, K. and Harris, A. eds., 2009. *Distributed leadership: Different perspectives*. Springer Netherlands.
- LePine, J.A. and Van Dyne, L., 1998. Predicting voice behavior in work groups. *Journal of applied psychology*, 83(6), p.853.
- Lizier, A., Brooks, F. and Bizo, L., 2024. Importance of clarity, hierarchy, and trust in implementing distributed leadership in higher education. *Educational Management Administration & Leadership*, 52(4), 901-915.
- Lumby, J., 2013. Distributed leadership: The uses and abuses of power. *Educational Management Administration & Leadership*, 41(5), pp.581-597.
- Lumby, J., 2019. Leadership and power in higher education. *Studies in Higher Education*, 44(9), pp.1619-1629.
- Majooni, H., Ardalanm, M.R., Ghanbari, S. and Afzali, A., 2022. The Relationship between Distributed Leadership and School Organizational Excellence with the Mediating Role of Structural and Psychological Empowerment in Teachers. *Iranian Journal of Educational Society*, 15(1), pp.46-57.
- Menon, S. and Suresh, M., 2020. Factors influencing organizational agility in higher education. *Benchmarking: An International Journal*, 28 (1), pp. 307-332.
- Meyer, J.W. and Rowan, B., 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American journal of sociology*, 83(2), pp.340-363.
- Mogaji, E. and Jain, V., 2020. Impact of the pandemic on higher education in emerging countries: Emerging opportunities, challenges and research agenda. *Challenges and Research Agenda (June 8, 2020)*.

- Morrison, E.W., 2023 Employee Voice and Silence: Taking Stock a Decade Later. *Annual Review of Organizational Psychology and Organizational Behavior*, 10:79-107.
- Morrison, E.W., 2014. Employee voice and silence. *Annu. Rev. Organ. Psychol. Organ. Behav.*, 1(1), pp.173-197.
- Mowles, C., Filosof, J., Flinn, K., Mason, P., Culkin, N., Andrews, R. and James, D., 2019. Transformational change in the higher education sector: An inquiry into leadership practice.. London: Advance HE.
- National Institutional Ranking Framework (NIRF) 2019, Ministry of Human Resource Development (MHRD), Government of India (GOI). Available at: <https://www.nirfindia.org/2019/Ranking2019.html>. (Last accessed 14 July, 2019).
- National Institutional Ranking Framework (NIRF) 2022, Ministry of Education (MoE), Government of India (GOI). Available at: <https://www.nirfindia.org/2022/OverallRanking.html>. (Last accessed 2 March, 2023).
- Nguyen, D., Harris, A. and Ng, D., 2020. A review of the empirical research on teacher leadership (2003–2017) Evidence, patterns and implications. *Journal of educational administration*, 58(1), pp.60-80.
- Nunnally, J. and Bernstein, I.H., 1978. *Psychometric theory*. New York: McGraw-Hill.
- Or, M.H. and Berkovich, I., 2023. Participative decision making in schools in individualist and collectivist cultures: The micro-politics behind distributed leadership. *Educational Management Administration & Leadership*, 51(3), pp.533-553.
- Ospina, S.M., Foldy, E.G., Fairhurst, G.T., and Jackson, B., 2020. Collective dimensions of leadership: Connecting theory and method. *Human Relations*, 73(4), 442-443.
- Paletta, A., Alimehmeti, G., Mazzetti, G. and Guglielmi, D., 2021. Educational leadership and innovative teaching practices: a polynomial regression and response surface analysis. *International Journal of Educational Management*, 35(4), pp.897-908.

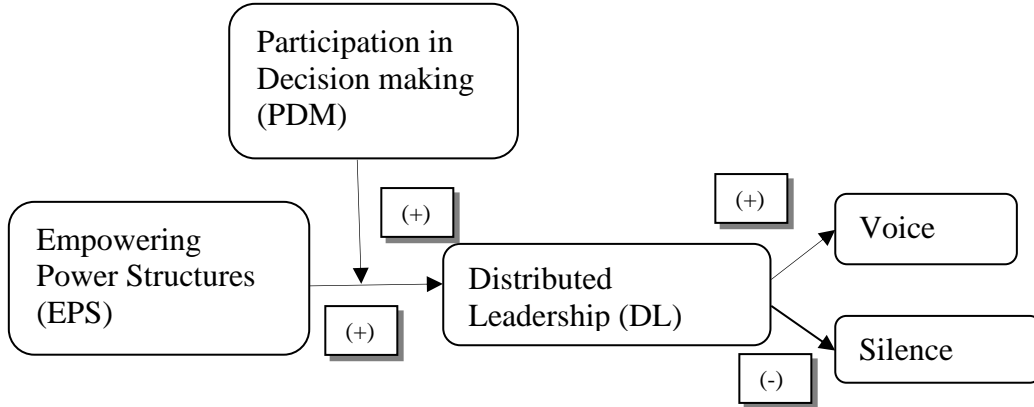
- Panagiotopoulos, G., Panagiotis, K. and Karanikola, Z., 2019. Professional development and empowerment of primary school teachers. *European Journal of Training and Development*, 6(4), pp.9-19.
- Pandit, J.M. and Paul, B., 2023. Higher Education in India: Structure and Governance. In *Strategic Human Resource Management in Higher Education: Roadmap for Indian Institutions* (pp. 27-60). Singapore: Springer Nature Singapore.
- Pilbeam, C. and Jamieson, I., 2010. Beyond leadership and management: The boundary-spanning role of the pro-vice chancellor. *Educational Management Administration & Leadership*, 38(6), pp.758-776.
- Preacher, K.J., Rucker, D.D. and Hayes, A.F., 2007. Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate behavioral research*, 42(1), pp.185-227.
- Pryor, D. and Henley, A., 2018. Boundary spanning in higher education leadership: identifying boundaries and practices in a British university. *Studies in Higher Education*, 43(12), pp.2210-2225.
- QS World University Rankings, 2019. Available at: <https://www.topuniversities.com/university-rankings/world-university-rankings/2019>. (Last accessed 14 July, 2020)
- QS World University Rankings, 2023. Available at: <https://www.topuniversities.com/university-rankings/world-university-rankings/2023>. (Last accessed 12 March, 2023)
- QS World University Rankings, 2024. Available at: <https://www.topuniversities.com/world-university-rankings?region=Asia&countries=in>. (Last accessed 17 March, 2024)
- Robinson, V.M.J., 2008. Forging the links between distributed leadership and educational outcomes, *Journal of Educational Administration*, 46(2), 241-256.
- Ruben, B.D. and Gigliotti, R.A., 2021. Explaining incongruities between leadership theory and practice: integrating theories of resonance, communication and systems. *Leadership & Organization Development Journal*, 42(6), pp.942-957.
- Ruh, R.A., White, J.K. and Wood, R.R., 1975. Job involvement, values, personal background, participation in decision making, and job attitudes. *Academy of Management Journal*, 18(2), pp.300-312.

- Salmi J (2009) *The Challenge of Establishing World-Class Universities*. Washington, DC: World Bank Publications.
- Sewerin, T. and Holmberg, R., 2017. Contextualizing distributed leadership in higher education. *Higher Education Research & Development*, 36(6), 1280–1294.
- Sherf, E.N., Parke, M.R. and Isaakyan, S., 2021. Distinguishing voice and silence at work: Unique relationships with perceived impact, psychological safety, and burnout. *Academy of Management Journal*, 64(1), pp.114-148.
- Sinha, C. 2020. Authentic Leadership, Power and Social Identities: A Call for Justice in Indian Higher Education System, *Higher Education for the Future*, 7(2), p.147-168.
- Somech, A., 2010. Participative decision making in schools: A mediating-moderating analytical framework for understanding school and teacher outcomes. *Educational Administration Quarterly*, 46(2), pp.174-209.
- Spillane, J.P., Halverson, R. and Diamond, J.B., 2004. Towards a theory of leadership practice: A distributed perspective. *Journal of curriculum studies*, 36(1), pp.3-34.
- Srivastava, A.P., Shree, S. and Agarwal, S. 2022. Does authentic leadership develop inclusive classrooms: a model examination? *International Journal of Educational Management*, 36 (4), p.495-514.
- Srivastava, S., Jain, A.K. and Sullivan, S., 2019. Employee silence and burnout in India: the mediating role of emotional intelligence. *Personnel Review*, 48(4), pp.1045-1060.
- Tian, M., Risku, M. and Collin, K., 2016. A meta-analysis of distributed leadership from 2002 to 2013: Theory development, empirical evidence and future research focus. *Educational Management Administration & Leadership*, 44(1), 146-164.
- Unterrainer, C., Jeppesen, H.J. and Jønsson, T.F., 2017. Distributed leadership agency and its relationship to individual autonomy and occupational self-efficacy: a two wave-mediation study in Denmark. *Humanistic Management Journal*, 2(1), pp.57-81.
- Van Ameijde, J.D.J., Nelson, P.C., Billsberry, J., and Van Meurs, N., 2009. Improving leadership in Higher Education institutions: a distributed perspective. *Higher Education*, 58, 763–779.

- Vuori, J., 2019 Distributed leadership in the construction of a new higher education campus and community, *Educational Management Administration & Leadership*, 47(2) 224–240.
- Watermeyer, R., Bolden, R., Knight, C. and Holm, J., 2022. *Leadership in global higher education*. Advance HE, London.
- Western, S., 2019. *Leadership: A Critical Text, 3rd edition*. London: Sage.
- Witt, L.A., Andrews, M.C. and Kacmar, K.M., 2000. The role of participation in decision-making in the organizational politics-job satisfaction relationship. *Human Relations*, 53(3), pp.341-358.
- Woods, P.A., 2016. Authority, power and distributed leadership. *Management in Education*, 30(4), pp.155-160.
- Woody, E., 2011. An SEM perspective on evaluating mediation: What every clinical researcher needs to know. *Journal of Experimental Psychopathology*, 2(2), pp.210-251.
- Xu, S., Zhang, H., Dai, Y., Jun M. and Lyu, L., 2021. Distributed Leadership and New Generation Employees' Proactive Behavior: Roles of Idiosyncratic Deals and Meaningfulness of Work. *Frontiers in Psychology*, 12:755513.
- Yoon, H.J., 2012. Predicting employee voice behavior: an exploration of the roles of empowering leadership, power distance, organizational learning capability, and sense of empowerment in Korean organizations. PhD. Dissertation, University of Minnesota, USA.
- Zhu, F., Wang, L., Yu, M., Müller, R. and Sun, X., 2019. Transformational leadership and project team members' silence: the mediating role of feeling trusted. *International Journal of Managing Projects in Business*, 12(4), pp.845-868.

Figure 1

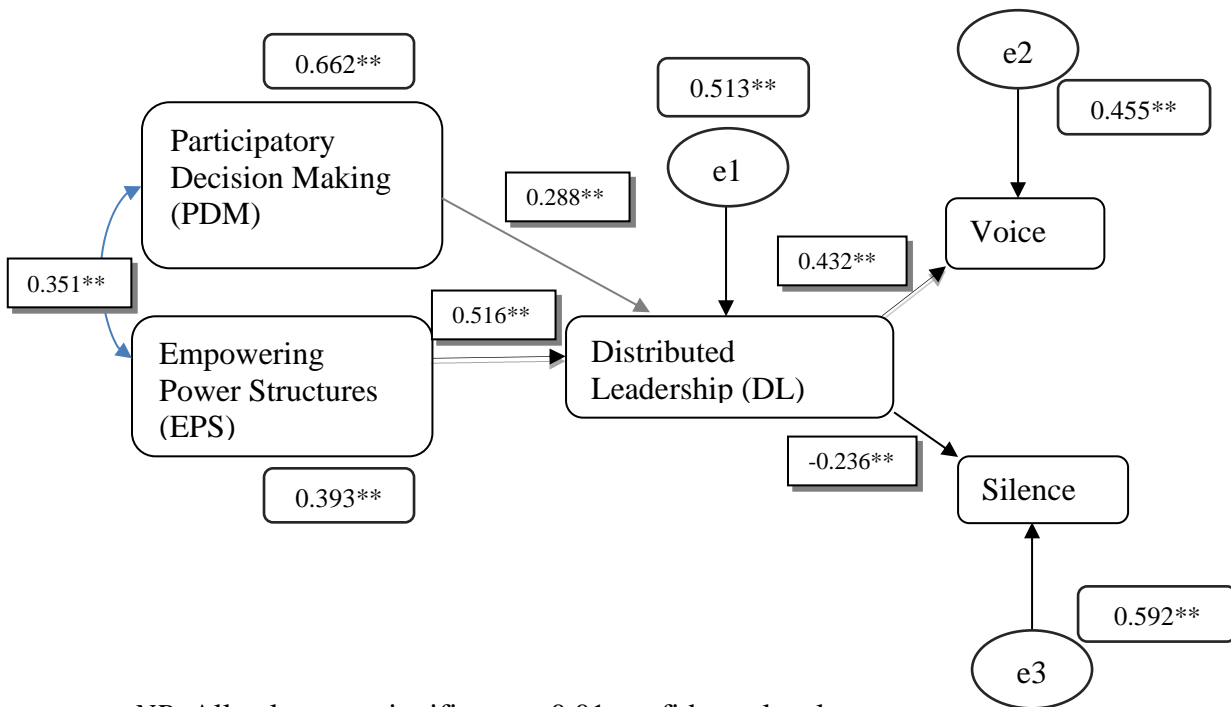
Conceptual model



Source: Author's own work

Figure 2

Causal structural model

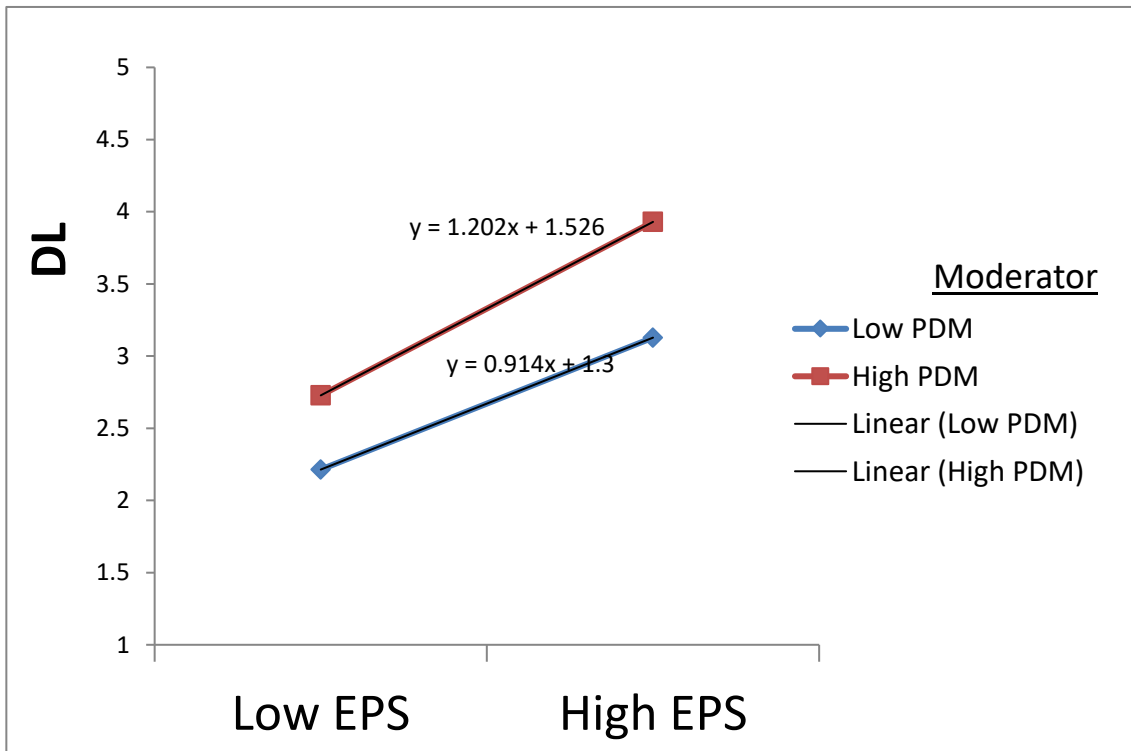


NB: All values are significant at 0.01 confidence level.

Source: Author's own work

Figure 3

Moderation effect



Source: Author's own work

Table I

Descriptive Statistics, correlations among variables, internal consistency and discriminant validity

Variable	Descriptive Statistics		Reliability and Validity			Correlation Matrix				
	Mean	Std. Deviation	Composite Reliability (CR)	Cronbach's Alpha	Average Variance Extracted (AVE)	1	2	3	4	5
1. Empowering Power Structures (EPS)	3.684	0.628	0.860	0.906	0.496	1				
2. Participation in Decision-Making (PDM)	3.812	0.815	0.810	0.806	0.518	0.687**	1			
3. Distributed Leadership (DL)	3.57	0.883	0.899	0.898	0.562	0.550**	0.518**	1		
4. Voice	4.026	0.776	0.909	0.913	0.625	0.308**	0.296**	0.491**	1	
5. Silence	1.980	0.798	0.821	0.911	0.543	-0.025	-0.101	-0.261**	-0.357**	1

NB: **. Correlation is significant at the 0.01 level (2-tailed).

Source: Author's own work

Table II

Regression weights

Hypothesis	Structural Relationship			Estimate	Standard Error	Critical Ratio	P
H1	DL	<---	EPS	0.516	0.096	5.374	***
H2	DL	<---	PDM	0.288	0.074	3.890	***
H5	Voice	<---	DL	0.432	0.047	9.237	***
H6	Silence	<---	DL	-0.236	0.053	-4.427	***

NB: The table shows that all values are significant at $p < 0.01$ i.e. 99% confidence level.

Source: Author's own work