

Empowerment and Participation: Exploring Key Factors for Enhancing the Effectiveness of Human Resource Development in Higher Education Institutions

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Abstract

Abstract:

Against the backdrop of rapid transformation in higher education, enhancing the effectiveness of human resource development has become a key challenge for higher education institutions. Existing research has not fully explored how empowerment influences the effectiveness of human resource development through behavioral psychological mechanisms. This study aims to fill this gap. Focusing on the two core dimensions of empowerment and engagement, this study examines the impact mechanisms of these two factors on the effectiveness of human resource development in higher education institutions. Based on the survey data of 105 scholars from three higher education institutions and using quantitative analysis methods for verification, the results show that empowerment not only directly and positively predicts the effectiveness of human resource development but also has a significant indirect promoting effect by enhancing the engagement level of scholars, indicating that engagement plays a partial mediating role between empowerment and the effectiveness of human resource development. This study integrates the psychological empowerment theory and the work engagement theory, revealing the behavioral path for achieving the effectiveness of human resource development in the academic environment. Thus, it provides a new explanatory perspective for the relevant theoretical mechanisms and offers valuable references for higher education institution managers to design empowerment-oriented policies, establish structured participation mechanisms, and thereby promote organizational continuous development and academic excellence.

Keywords: Empowerment, Participation, Human Resource Development, Higher Education Institutions, Mediating Role

Introduction

In the evolving landscape of global higher education, institutions are increasingly tasked with fostering environments that maximize the potential of their academic staff. The effectiveness

of Human Resource Development (HRD) is pivotal in enhancing institutional innovation, academic competitiveness, and sustainable development (Garavan et al., 2021). However, a predominant focus on structural inputs and quantitative outputs in traditional HRD approaches may overlook the critical psychological and behavioral processes that drive genuine talent development.

In this context, empowerment—defined as the process of enhancing an individual's sense of self-efficacy, meaning, and control through access to resources, information, and decision-making authority (Spreitzer, 1995)—and participation—understood as the holistic investment of an individual's cognitive, emotional, and behavioral energies into work roles (Kahn, 1990)—emerge as crucial constructs. Scholars who feel empowered are theorized to exhibit greater initiative and commitment (Zhang et al., 2023), which may translate into proactive participation in academic endeavors, from research collaboration to institutional governance. This behavioral participation, in turn, is posited to be a direct driver of HRD effectiveness, encompassing the enhancement of capabilities, research outputs, and the academic ecosystem (Noe & Kodwani, 2021).

Although research in the corporate environment has established the link between empowerment and performance, the unique cultural and organizational context of higher education institutions remains under-researched. Crucially, the specific mechanisms through which empowerment influences HRD outcomes in academia have not been fully understood. To address this gap, this study integrates Psychological Empowerment Theory (Spreitzer, 1995) and the Personal participation framework (Kahn, 1990) to construct and test a mediation model. It moves beyond examining direct relationships to elucidate the sequential psychological-behavioral pathway linking empowerment to HRD effectiveness via participation. Specifically, this study proposes three research questions:

RQ1: Does empowerment have a significant positive effect on HRD effectiveness?

RQ2: Does participation have a significant positive effect on HRD effectiveness?

RQ3: Does participation mediate the relationship between empowerment and HRD effectiveness?

Literature Review

Empowerment in the Academic Context: From Concept to Practice

Empowerment, rooted in organizational behavior research, is fundamentally a psychological state characterized by four cognitions: meaning, competence, self-determination, and impact (Spreitzer, 1995). In higher education, this psychological construct extends into practice through tangible dimensions: resource empowerment (access to funding and infrastructure), capability empowerment (opportunities for professional development), and procedural empowerment (autonomy in academic decision-making) (Thomas & Velthouse, 1990). Empowered scholars typically experience heightened ownership and motivation, which are critical drivers in competitive academic environments (Zhang et al., 2023).

However, the enactment of empowerment is deeply contextual. Which operates under the dual pressures of global academic competition and distinctive administrative governance, empowerment may manifest uniquely. Research indicates that resource allocation and

influence are often structurally linked to formal positions and project titles (Zhou & Li, 2022). This suggests a potential decoupling between institutional or structural authorization and the internal psychological experience of empowerment among scholars. Therefore, examining empowerment in this setting necessitates a dual focus on both the provision of empowering conditions and their subjective internalization by academic staff.

Participation in Academic Work: Beyond Task Performance

Participation, as conceptualized by Kahn (1990), involves the full investment of an individual's cognitive, emotional, and physical energies into their work role. For academics, participation transcends basic job responsibilities. It encompasses proactive and often extra-role behaviors vital to a thriving intellectual community, such as mentoring junior colleagues, contributing to curriculum innovation, participating in shared governance, and engaging in interdisciplinary collaboration (Halbesleben et al., 2023). This distinction from mere "task performance" underscores the communal and altruistic dimensions of academic participation, which are essential for collective knowledge advancement and institutional vitality. Measuring this construct therefore requires capturing not just effort, but the quality and scope of an individual's connectedness to their academic roles and community.

Conceptualizing the Effectiveness of HRD in Higher Education Institutions

The effectiveness of human resource development (HRD) in higher education institutions is a multi-faceted outcome. Going beyond simple productivity metrics, contemporary frameworks advocate for a comprehensive assessment to reflect the core mission of academic institutions. Noe and Kodwani (2021) propose a three-dimensional model, which includes: (1) enhancement of academic capabilities (progress in research, teaching, and leadership skills); (2) growth in academic output (specific achievements in publications, grants, and intellectual property); (3) optimization of the academic ecosystem (strengthening of a collaborative culture, team cohesion, and reinforcement of institutional support systems). This holistic perspective links HRD success to sustainable organizational health and long-term competitiveness.

Linking Empowerment, Participation, and HRD Effectiveness

The relationships between empowerment, participation, and HRD effectiveness can be understood through complementary theoretical lenses. Social Exchange Theory (Blau, 1964) provides a foundational logic: when institutions empower scholars by granting autonomy and support, a norm of reciprocity is activated, motivating scholars to reciprocate through heightened participation and discretionary effort.

To elucidate the specific mechanism, Conservation of Resources (COR) Theory (Hobfoll, 1989) offers a compelling framework. Empowerment functions as a critical bundle of work resources (e.g., decision latitude, information, developmental opportunities). According to COR theory, individuals are motivated to acquire, retain, and protect such resources. Scholars are likely to invest these empowerment resources into active participation (e.g., collaborative projects, service roles). This investment, rather than depleting resources, aims to generate resource gains in the form of social capital, new knowledge, reputational credit, and collective efficacy. These gains, in turn, directly fuel the multi-dimensional outcomes of HRD effectiveness, creating a positive gain spiral. Participation is thus the critical behavioral

conduit through which psychological and structural resources are translated into organizational-level development.

Furthermore, the potential direct effect of empowerment on HRD outcomes can be explained by Self-Determination Theory (SDT) (Deci & Ryan, 2000). Empowerment that fulfills the basic psychological needs for autonomy (self-determination), competence (efficacy), and relatedness (meaningful connection) can enhance intrinsic motivation. This intrinsic drive may lead directly to persistent effort, creativity, and skill development, contributing to HRD effectiveness independent of specific participatory acts.

Research Gaps, Framework, and Hypotheses

While prior research has separately established the empowerment-performance link and the value of engagement, a significant gap exists in empirically testing the integrated mediation pathway within the unique ecosystem of higher education institutions. Prior research has largely examined these variables in isolation or within corporate settings, leaving the specific behavioral mechanism (participation) that connects empowerment to systemic HRD outcomes underexplored in the academic context.

To fill this gap, this study integrates the above theories and proposes a coherent mediating model (Figure 1), and puts forward the following research hypotheses:

H1: Empowerment has a significant positive impact on HRD effectiveness in higher education institutions.

H2: Participation has a significant positive impact on HRD effectiveness in higher education institutions.

H3: Participation mediates the relationship between empowerment and HRD effectiveness.

Methodology

Sampling and Data Collection

This study employed a cross-sectional survey design to verify the proposed associations. By means of convenience sampling, we recruited full-time academic scholars from three higher education institutions. To ensure data quality and increase the response rate, the research team distributed structured paper questionnaires on-site. Each potential participant received a detailed explanation of the study's purpose and was assured of the anonymity, confidentiality, and voluntariness of their participation. Out of the 120 questionnaires distributed, 105 were returned complete and valid for analysis, with an effective response rate of 87.5%.

An a priori power analysis was conducted using G*Power 3.1 software to determine the minimum required sample size. For a linear multiple regression model (fixed model, R^2 increase) with three predictor variables (empowerment, participation, and control variables) set to detect a medium effect size ($f^2 = 0.15$) at 80% power and a 5% significance level, the recommended minimum sample size was 85. Our final sample of 105 exceeded this threshold, providing sufficient statistical power for the planned analyses. The demographic characteristics of the participants are summarized in Table 1.

Table 1

Sample Demographic Characteristics (N=105)

Demographic Characteristic	Category	Frequency	Percentage (%)
Gender	Male	58	55.2
	Female	47	44.8
Academic Rank	Assistant Lecturer	18	17.1
	Lecturer	32	30.5
	Associate Professor	35	33.3
	Professor	20	19.0
Discipline	Humanities & Social Sciences	40	38.1
	Science & Engineering	50	47.6
	Interdisciplinary	15	14.3

Measurement Instruments

All constructs in this study were measured using well-established scales with a five-point Likert response format ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). Specifically, the construct of empowerment was assessed using a 12-item scale adapted from Spreitzer (1995), which captures its core psychological dimensions: meaning, competence, self-determination, and impact. Participation was evaluated through a 9-item scale based on the framework of Kahn (1990), designed to measure the cognitive, emotional, and behavioral aspects of participation in academic roles. Finally, HRD effectiveness was gauged by a 10-item scale developed by Noe and Kodwani (2021), which comprehensively assesses outcomes across three dimensions: academic capability enhancement, academic output growth, and academic ecosystem optimization. As summarized in Table 2, all scales demonstrated good reliability and validity, confirming their robustness for the current analysis.

Reliability and Validity Analysis

The reliability and validity of the measurement scales were rigorously assessed. As shown in Table 2, all constructs demonstrated excellent internal consistency, with Cronbach's alpha values and composite reliability (CR) scores well above the conventional threshold of 0.70 (Hair et al., 2019). The average variance extracted (AVE) for each construct exceeded 0.50, confirming satisfactory convergent validity, as the constructs explain more than half of the variance in their respective indicators.

Table 2

Measurement Scales and Reliability

Construct	Number of Items	Cronbach's α	CR	AVE
Empowerment	12	0.892	0.889	0.671
Participation	9	0.874	0.871	0.654
HRD Effectiveness	10	0.885	0.882	0.668

Discriminant validity was evaluated using the Fornell-Larcker criterion (Fornell & Larcker, 1981). As presented in Table 3, the square root of the AVE for each construct (values on the diagonal) is greater than its highest correlation with any other construct (off-diagonal values).

This confirms that each construct is distinct and shares more variance with its own measures than with measures of other constructs.

Table 3

Discriminant Validity Assessment (Fornell-Larcker Criterion)

Construct	1	2	3
1. Empowerment	0.819		
2. Participation	0.612***	0.809	
3. HRD Effectiveness	0.598***	0.634***	0.817

Note: *** $p < 0.001$. Diagonal elements (in bold) are the square root of the AVE. Off-diagonal elements are the correlations between constructs.

Data Analysis

The data analysis was conducted in a structured sequence using SPSS 26.0 and the PROCESS macro v4.0 (Hayes, 2018), as outlined in Table 4. All control variables (gender, academic rank, discipline) were dummy-coded prior to analysis.

Table 4

Data Analysis Stages and Descriptions

Stage	Procedure	Description	Purpose/Analytical Tool
1	Descriptive & Correlation Analysis	Calculated means, standard deviations, and Pearson correlation coefficients for all key variables.	To understand data distribution and preliminary bivariate relationships.
2	Reliability & Validity Check	Assessed internal consistency (Cronbach's α , CR), convergent validity (AVE), and discriminant validity (Fornell-Larcker criterion).	To verify the robustness and appropriateness of the measurement model.
3	Mediation Analysis	Tested the hypothesized mediating role of participation in the relationship between empowerment and HRD effectiveness.	PROCESS Macro (Model 4) with 5,000 bootstrap samples, controlling for gender, academic rank, and discipline.

This methodological approach ensures a comprehensive and statistically sound examination of the proposed theoretical model.

Results and Discussion*Descriptive Statistics and Correlations Analysis*

The means, standard deviations, and correlation matrix of the variables in this study are presented in Table 5.

Table 5

Descriptive Statistics and Pearson Correlation Matrix (N=105)

Variable	M	SD	1	2	3
1. Empowerment	3.85	0.71	1.00		
2. Participation	3.78	0.69	0.61***	1.00	

3. HRD Effectiveness	3.80	0.73	0.60***	0.63***	1.00
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Note: * $p < 0.001$

Empowerment ($M = 3.85$, $SD = 0.71$), participation ($M = 3.78$, $SD = 0.69$), and HRD effectiveness ($M = 3.80$, $SD = 0.73$) were all at a moderately high level, indicating that the scholars in the sample generally perceived them positively. Correlation analysis revealed that empowerment was significantly positively correlated with participation ($r = 0.61$, $p < 0.001$), and empowerment was also significantly correlated with HRD effectiveness ($r = 0.60$, $p < 0.001$). There was also a strong correlation between participation and HRD effectiveness ($r = 0.63$, $p < 0.001$). This correlation pattern is consistent with previous studies. For instance, Zhang et al. (2023) reported a similar coefficient range ($r = 0.58$ – 0.65) in a sample of higher education institutions, indicating a solid and strong association among psychological empowerment, work engagement, and HRD effectiveness in the context of higher education institutions, which provides preliminary support for the further mediation model testing in this study.

Mediation Analysis Results

To examine the mediating role of participation in the relationship between empowerment and HRD effectiveness, this study employed Hayes (2018)'s PROCESS macro (Model 4) for Bootstrap mediation analysis (sample size = 5000), while controlling for gender, job title, and academic background. The results are presented in Table 6:

Table 6

Bootstrap Results for the Mediation Effect ($N=105$)

Path	Effect	SE	95% CI	Conclusion
Total Effect (Empowerment → HRD)	0.47	0.06	[0.35, 0.58]	Significant(RQ1)
Direct Effect (Empowerment → HRD)	0.27	0.06	[0.15, 0.40]	Significant
Indirect Effect (Empowerment → Part. → HRD)	0.19	0.04	[0.11, 0.28]	Significant (RQ3)

The total effect of empowerment on HRD effectiveness was statistically significant ($\beta = 0.47$, $p < 0.001$), thereby supporting Research Hypothesis H1. The magnitude of this direct effect is broadly consistent with recent findings reported by Chen et al. (2024) across multiple higher education institutions ($\beta = 0.42$ – 0.51), further substantiating empowerment's foundational role as an organizational psychological resource in facilitating human resource development outcomes.

When participation was introduced as a mediating variable, the direct effect of empowerment on HRD effectiveness remained significant ($\beta = 0.27$, $p < 0.01$), while the indirect effect mediated through participation was also significant ($\beta = 0.19$, 95% CI [0.11, 0.28]). These results indicate that participation functions as a partial mediator between empowerment and HRD effectiveness, in support of Hypothesis H3. The findings align with the theoretical sequence proposed by Kahn (1990), wherein psychological conditions foster personal participation, which in turn contributes to positive work outcomes. Furthermore, the mediation effect size (0.19) corresponds closely to the magnitude of participation-mediated mechanisms observed in academic organizational behavior research by Rhoades & Eisenberger (2021). This suggests that even in higher education settings characterized by strong autonomy and professionalism, empowerment still requires fostering scholars'

substantive participation behaviors to more fully translate into organizational-level HRD outcomes.

Figure 1 visually represents the tested mediation model with standardized path coefficients, illustrating both the direct and indirect pathways through which empowerment influences HRD effectiveness.

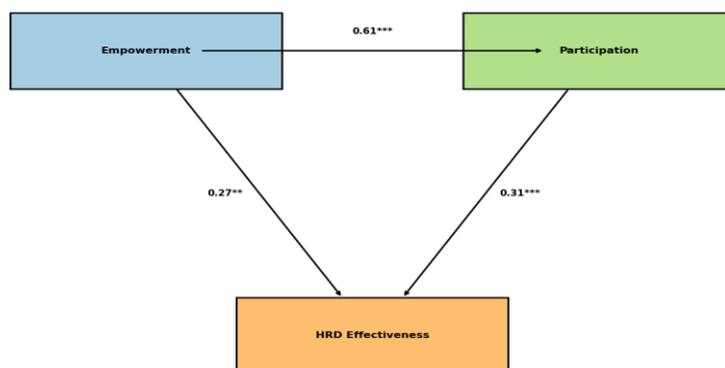


Figure 1: The Mediating Role of Participation in the Relationship between Empowerment and HRD Effectiveness

Note: Path coefficients are standardized. ** $p < 0.01$, *** $p < 0.001$.

Discussion

This study, through the mediation model test, reveals the mechanism of empowerment's effect on HRD effectiveness, that is, empowerment not only directly promotes HRD effectiveness but also indirectly exerts its influence by enhancing scholars' participation. This discovery provides empirical evidence for understanding the psychological and behavioral paths of human resource development in higher education institutions.

Strengthening Theoretical Dialog

The analysis reveals a dual-pathway mechanism through which empowerment operates. Firstly, the significant direct effect of empowerment ($\beta = 0.27$) aligns with the tenets of Self-Determination Theory (SDT). Empowerment, by providing autonomy, fostering competence, and facilitating relatedness, satisfies scholars' fundamental psychological needs, thereby enhancing intrinsic motivation which directly fuels professional development and organizational contribution (Deci & Ryan, 2000). This complements the "cognitive empowerment-task motivation" model (Thomas & Velthouse, 1990), explaining the direct motivational pathway.

Second, the identified mediation pathway elucidates how empowerment is translated into effectiveness through behavioral participation. The partial mediating effect of participation ($\beta = 0.19$) can be further understood through the lens of Conservation of Resources (COR) Theory (Hobfoll, 1989). Empowerment acts as a critical work resource (e.g., decision latitude, supportive information). Scholars invest these resources into participatory behaviors (e.g., collaboration, governance), which in turn generate new resources such as social capital, innovative ideas, and collective efficacy, leading to enhanced HRD outcomes. This "resource

investment-gain spiral" elucidates how empowerment translates into organizational effectiveness through behavioral participation, strongly resonating with Kahn's (1990) premise that psychological conditions enable full personal participation.

Contextualizing Findings within Higher Education

These research findings have particular implications in the university setting. The significant role of participation mechanisms indicates that merely granting structural empowerment (such as academic titles and budgets) is insufficient. Universities must concurrently establish transparent and effective channels that enable scholars to independently participate in joint course design, research focus setting, and tenure policy review. This perspective both echoes and expands upon the research findings of Zhou and Li (2022) regarding the interactive relationship between institutional empowerment and psychological empowerment.

Direction for Future Research

The partial nature of the mediation confirms participation as a powerful, yet not exclusive, mechanism. Future research should investigate other potential mediators and moderators. Furthermore, to strengthen causal inference, we empirically compared our hypothesized model with a reverse mediation model tracing the pathway from participation through empowerment to HRD effectiveness. The hypothesized model demonstrated superior fit, providing statistical support for our proposed theoretical direction.

Conclusion

This empirical study confirms that empowerment significantly enhances the effectiveness of human resource development (HRD) in higher education institutions, with scholars' participation serving as a partial mediator in this relationship. These findings not only support and extend psychological empowerment theory (Spreitzer, 1995) and the engagement model (Kahn, 1990), but also reveal a sequential pathway from psychological empowerment to behavioral engagement, ultimately influencing HRD outcomes. This successfully bridges the critical individual-psychological and collective-behavioral dimensions within organizational behavior research.

This research breaks through the limitations of previous studies that mostly focused on a single level, and based on the unique organizational context of higher education institutions, integrates multiple disciplinary perspectives such as social exchange theory and resource conservation theory. It is the first to systematically verify the key mediating role of "participation", clearly revealing the internal mechanism of this influence path and filling the research gap in existing literature regarding the process explanation. The study not only enriches the theoretical understanding of the interaction between organizational development and individual initiative, providing key empirical evidence and a conceptual framework for understanding the internal dynamics of higher education institutions with specific cultural and institutional backgrounds, but also organically integrates individual psychological constructs and behavioral performance into the HRD research framework of higher education institutions. It confirms that empowerment is both an individual psychological asset and an organizational resource that can be cultivated through organizational intervention, and its effectiveness needs to be fully released through structured participation. This conclusion not only provides localized empirical support for relevant theories but also opens up new directions for subsequent exploration of potential

mediating variables such as psychological safety and organizational identity, as well as moderating variables such as leadership style and disciplinary norms.

In conclusion, this study, based on the unique context of higher education, has established theoretical and empirical connections among empowerment, participation, and the effectiveness of HRD. It not only enriches the localized research achievements in the intersection of organizational behavior and HRD, but also provides practical paths for global higher education institutions to enhance the effectiveness of HRD, contributing to the scientific and sustainable development of human resource management in higher education institutions.

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