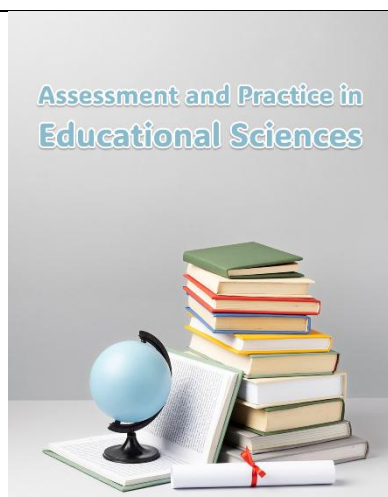




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Design and Validation of an Educational Excellence and Human Resource Development Model for the Ministry of Education (Case Study: Golestan Province)

ABSTRACT

The purpose of the present study was to design and validate a model of educational excellence and human resource development for the Ministry of Education in Golestan Province. The research adopted a mixed-methods approach (qualitative–quantitative), was applied and descriptive in nature, and was conducted using a cross-sectional survey method. The statistical population in the qualitative phase consisted of experts in the field of educational excellence, and in the quantitative phase included all employees of the Ministry of Education in Golestan Province. The sampling method in the qualitative phase was snowball sampling, and in the quantitative phase simple random sampling was used. The qualitative sample size reached 10 participants upon achieving theoretical saturation, and the quantitative sample size was determined to be 297 individuals based on Morgan's Table. The data collection tool in the qualitative phase was a semi-structured interview, and in the quantitative phase a researcher-made questionnaire was used. Data were analyzed using Structural Equation Modeling (SEM) via PLS software. The results indicated that the final criteria consisted of 12 main categories and 37 subcategories. Based on the Interpretive Structural Modeling (ISM), the category of "Human Resource Development" was placed at the first level; the category of "Educational Excellence" at the second level; the categories of "Educational, Promotional, and Research Activities" at the third level; the categories of "Policy-Making" and "Systematic Process" at the fourth level; the category of "Higher Education System" at the fifth level; the categories of "Individual Factors" and "Cognitive-Social Characteristics" at the sixth level; and the categories of "Contextual Factors" and "Structural Factors" at the seventh level. Furthermore, the model fit assessment indicated that the coefficient of determination for the endogenous constructs of the research model was satisfactory. The coefficient of determination for Human Resource Development was reported as 0.653, which is an acceptable value. Similar acceptable values were obtained for all research categories. The variable values generally ranged from 0.15 to 0.35 or greater than 0.35. Therefore, the predictive power of the research categories is estimated to be moderate to strong.

Keywords: design and validation, educational excellence, human resource development, Ministry of Education.

Introduction

Human resources are widely recognized as the most strategic asset for sustaining performance, innovation, and legitimacy in contemporary organizations, particularly in knowledge-intensive and service-oriented sectors such as education (1). In such contexts, human resource management (HRM) and human resource development (HRD) are no longer confined to

administrative functions; rather, they shape the organization's capacity to adapt, learn, and respond to complex societal demands (2). Public education systems, which bear responsibility for fostering human capital at the national level, are especially dependent on coherent models that align HRD practices with broader frameworks of organizational and educational excellence. Designing such models requires integrating strategic, cultural, and structural dimensions of human capability with the specific mission of educational organizations, particularly in settings where reform agendas, value-based expectations, and resource constraints converge (3, 4).

The literature on educational excellence emphasizes that excellence in schools and educational organizations is fundamentally tied to the quality of their human capital and the systems that support its development (5). Studies on organizational excellence in education show that excellence criteria—such as visionary leadership, stakeholder focus, process management, and continuous improvement—are realized only when human resources are systematically empowered, trained, and aligned with strategic goals (6, 7). In the Iranian educational context, where cultural, religious, and value-driven expectations are prominent, models of excellence must also reflect indigenous perspectives, including Islamic teachings on human dignity, responsibility, and service (4, 8). This calls for integrated frameworks that simultaneously address educational outcomes, human resource capabilities, and the normative foundations of the system.

Recent research has increasingly focused on developing comprehensive HRD models tailored to specific sectors and institutions. For instance, sector-specific models in banking and financial services underscore the importance of structured competency development, career pathways, and learning architectures in achieving strategic agility and organizational excellence (9, 10). Such models show that human resource development must move beyond fragmented training programs toward systemic frameworks in which needs assessment, instructional design, mentoring, and performance management are tightly coupled. Parallel efforts in the public sector, including municipalities and governmental organizations, highlight how systematic HRD interventions—such as psychological capital training based on indigenous values—can enhance employees' resilience, engagement, and contribution to excellence initiatives (8). These findings suggest that similar comprehensive, context-sensitive models are needed for educational systems at provincial and national levels.

Within education, excellence is shaped not only by technical competencies but also by leadership, empowerment, and the cultivation of a shared vision of human flourishing. Studies on leadership in schools demonstrate that higher levels of organizational excellence are associated with level-5 leadership, structural empowerment, and the psychological empowerment of teachers, which together create a climate conducive to innovation, collaboration, and continuous improvement (6). Research on human, spiritual, and psychological capital likewise points to the importance of intangible resources—such as meaning, purpose, and moral commitment—in achieving sustainable excellence in educational organizations (3). Philosophical and cultural perspectives on human excellence, such as those derived from Confucian spirituality and arts education, reinforce the idea that educational excellence entails holistic development of individuals' cognitive, moral, and aesthetic capacities, not merely the acquisition of technical skills (11). Together, these strands of research underscore that models of educational excellence must incorporate both structural and humanistic dimensions.

At the same time, global trends such as digitalization, knowledge-based competition, and environmental concerns are reshaping HRM and HRD paradigms. Studies on electronic human resource development (e-HRD) and electronic HRM demonstrate that leveraging information technology and virtual structures can significantly enhance organizational innovation, flexibility, and excellence, especially when HR processes are integrated with digital platforms and data-driven decision-making (12, 13). Advanced analytical approaches, including dynamic heterogeneous networks and artificial intelligence-based clustering, offer new tools for optimizing human resources, identifying key competencies, and tailoring development strategies to organizational excellence criteria (14, 15). These developments imply that any contemporary model of educational and HR

excellence must consider the role of digital infrastructures, analytics, and innovative HR technologies in supporting learning and performance in education systems.

In parallel, research on HRD in military, security, and strategic institutions shows that human capital development must be grounded in rigorous needs assessment, self-determination theory, and tailored educational interventions that reflect organizational missions and values (16). Lean and green approaches to HR excellence in public and infrastructure sectors further highlight the need to reduce waste, enhance process efficiency, and integrate sustainability into HR policies and practices (17, 18). These models illustrate how excellence frameworks can be operationalized through specific HR structures and processes, and they provide methodological precedents for designing excellence-oriented HR systems in other public sectors, including education. However, the specific dynamics of school systems—such as teacher professionalism, pedagogical autonomy, curriculum reforms, and social accountability—require dedicated models that are empirically validated within the educational field.

Empirical evidence also underscores the strong association between HRM practices and organizational performance across diverse contexts. Studies in business and industry, including international and emerging-economy settings, have consistently found that strategic HR practices—such as selective staffing, continuous training, performance-based rewards, and participatory decision-making—contribute to higher levels of productivity, quality, and competitiveness (2, 19). In the domain of human resource education and development, comprehensive models developed for banks and other organizations demonstrate that alignment between HRD architecture and organizational strategy is critical for achieving excellence and long-term sustainability (9, 20). In education systems, where performance is multidimensional and includes both academic outcomes and broader social goals, the design of HRD models must capture these complex linkages between HR practices and organizational excellence indicators.

Recent studies in the Iranian context have begun to address this need by designing and validating HR excellence and HRD models for different sectors. For example, research on lean human resource excellence in the public sector proposes measurement frameworks that assess the “leanness” of HR processes and their contribution to organizational excellence (17). In power distribution companies, green HRM excellence models integrate environmental responsibility with HR policies, demonstrating how sustainability goals can be embedded into HR architectures (18). Work on HRD grounded in national policy documents—such as the Second Step Statement of the Revolution—seeks to align human resource strategies with macro-level ideological and developmental objectives (20). Despite these advances, there remains a relative paucity of empirical, structurally validated models that simultaneously address educational excellence and human resource development in provincial education organizations.

A related stream of research emphasizes the role of psychological empowerment, resonant leadership, and learning organization characteristics in shaping HR excellence and educational outcomes. Studies among faculty members in higher education institutions, for example, show that resonant leadership fosters psychological empowerment, which in turn strengthens learning organization features and enhances performance (21). Research on psychological capital training packages based on Islamic values indicates that interventions targeting hope, resilience, optimism, and self-efficacy can significantly enhance organizational excellence in public organizations (8). These findings are complemented by work that links human, spiritual, and psychological capital to excellence outcomes in education, suggesting that any comprehensive model of educational excellence must incorporate both structural and psychological constructs (3). At the same time, frameworks of human resource management in libraries, information centers, and other knowledge institutions highlight the growing importance of competency-based HRM, continuous learning, and adaptability in knowledge-intensive environments (1).

From a methodological standpoint, the development and validation of complex excellence and HRD models increasingly rely on structural equation modeling (SEM), particularly variance-based approaches such as partial least squares (PLS). Foundational works on PLS path modeling provide robust procedures for estimating complex models with latent constructs, especially when sample sizes are moderate, measurement models are formative or reflective, and the primary objective is prediction and theory development (22-24). Guidelines comparing PLS-SEM with covariance-based SEM further underline the suitability of PLS-SEM for exploratory and predictive modeling in management and social science research, particularly when models are complex and data conditions are less than ideal (25). Criteria for evaluating measurement and structural models—such as reliability, convergent and discriminant validity, and explanatory power—draw heavily on classic and contemporary SEM literature, including studies on reliability assessment, average variance extracted, and model fit indices (7, 26). These methodological advances provide a rigorous basis for designing, testing, and refining educational excellence and HRD models in real-world organizational settings.

Despite the rich body of work on organizational excellence, HRD, and HR analytics, there is still a critical need for context-specific, empirically validated models that integrate educational excellence with human resource development in public education systems, particularly at the provincial level. Existing studies often focus on single sectors (e.g., banking, power distribution, municipalities) or on general frameworks of HR excellence, leaving a gap regarding integrated models tailored to the unique structural, cultural, and policy environment of provincial education organizations (10, 15, 17). Moreover, many frameworks have not been empirically tested through advanced modeling techniques that can capture the complex interrelationships among contextual, structural, individual, and educational factors (13, 14). In the case of the Golestan provincial education organization, there is a pressing need to articulate and validate a comprehensive model that links contextual and structural conditions, individual and sociological characteristics, higher education dynamics, and educational processes to overall educational excellence and human resource development.

Accordingly, the present study seeks to address this gap by designing and empirically validating an educational excellence model for the Golestan provincial education organization with a focus on human resource development, using a mixed-methods design and PLS-SEM to examine the structural relationships among key contextual, structural, individual, and educational factors

Methods and Materials

The purpose of the study was to design and validate an educational excellence model for the Ministry of Education in Golestan Province. This research was applied in nature and employed a mixed-methods design (qualitative–quantitative) using a cross-sectional survey approach. In the qualitative phase, content analysis was used to identify the categories, and fuzzy Delphi was applied for their final validation. Subsequently, Interpretive Structural Modeling (ISM) was utilized to determine the hierarchical levels of the factors, and finally, Structural Equation Modeling (SEM) was used to assess the validity of the model.

The qualitative statistical population consisted of experts in the field of educational excellence, and the quantitative population included employees of the Ministry of Education in Golestan Province. Qualitative sampling was carried out purposively and through snowball technique (10 participants until theoretical saturation), while quantitative sampling was conducted via simple random sampling (297 participants based on Morgan's Table).

The data collection tools were semi-structured interviews and a researcher-made questionnaire. Data were analyzed using content analysis, fuzzy Delphi, ISM, and SEM. The validity of the model was examined through Partial Least Squares (PLS). Factor loadings, Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's alpha were used to evaluate

the outer model, where $AVE > 0.50$ and $CR > 0.70$ indicated acceptable convergent validity and reliability. For the inner model, the coefficient of determination (R^2), Stone–Geisser index (Q^2), and Goodness of Fit (GOF) were used to assess model fit and predictive capability. The results indicated an acceptable fit of the model in explaining the categories of educational excellence.

Findings and Results

In the qualitative phase of the study, 10 experts in the field of education (7 men and 3 women) participated; 8 held PhDs and 2 held master's degrees, and 9 had more than 5 years of managerial experience. In the quantitative phase, 297 individuals participated; 53% were between 41 and 50 years old, 48% held doctoral degrees or higher, and 65% had more than 15 years of work experience.

The results of the hierarchical structuring of the categories showed that: at level one was “Human Resource Development”; at level two was “Educational Excellence”; at level three were “Educational, Promotional, and Research Activities”; at level four were “Policy-Making” and “Systematic Process”; at level five was “Higher Education System”; at level six were “Individual Factors and Sociological Characteristics”; and at level seven were “Contextual and Structural Factors.” The last two categories were identified as causal conditions and foundational dimensions of the educational excellence model of the Golestan Ministry of Education.

Table 1. Hierarchical Structuring of Main Categories of the Educational Excellence and Human Resource Development Model

Main Categories	Output: Influence	Input: Dependence	Intersection	Dependence	Driving Power	Level
D01 Educational Excellence	D01, D02	D01, D10, D11, D12	D01	4	2	2
D02 Human Resource Development	D02	D01, D02	D02	2	1	1
D03 Policy-Making	D03, D10, D11, D12	D03, D09	D03	2	4	4
D04 Systematic Process	D04, D10, D11, D12	D04, D09	D04	2	4	4
D05 Contextual Factors	D05, D06, D07, D08, D09	D05, D06	D05, D06	2	5	7
D06 Structural Factors	D05, D06, D07, D08	D05, D06	D05, D06	2	4	7
D07 Individual Factors	D07, D09	D05, D06, D07	D07	3	2	6
D08 Sociological Characteristics	D08, D09	D05, D06, D08	D08	3	2	6
D09 Higher Education System	D03, D04, D09	D05, D07, D08, D09	D09	4	3	5
D10 Educational Activities	D01, D10, D11	D03, D04, D10, D11	D10, D11	4	3	3
D11 Promotional Activities	D01, D10, D11	D03, D04, D10, D11	D10, D11	4	3	3
D12 Research Activities	D01, D12	D03, D04, D12	D12	3	2	3

The results of the validity assessment for the categories of the educational excellence and human resource development model are presented in Table 2. The Average Variance Extracted (AVE) exceeded 0.50 for all constructs; therefore, convergent validity was confirmed. Cronbach's alpha for all variables was above 0.70, confirming reliability.

Composite Reliability (CR) was also greater than AVE and above the threshold of 0.70 in all cases; thus, the third reliability condition was also satisfied.

Table 2. External Validity of the Main Categories of the Educational Excellence and Human Resource Development Model

Main Categories	Code	AVE	Composite Reliability (CR)	Cronbach's Alpha
Educational Excellence	D01	0.837	0.939	0.902
Human Resource Development	D02	0.810	0.927	0.883

Policy-Making	D03	0.811	0.928	0.883
Systematic Process	D04	0.849	0.944	0.911
Contextual Factors	D05	0.866	0.951	0.923
Structural Factors	D06	0.753	0.902	0.836
Individual Factors	D07	0.733	0.916	0.878
Sociological Characteristics	D08	0.644	0.780	0.775
Higher Education System	D09	0.683	0.914	0.880
Educational Activities	D10	0.770	0.870	0.705
Promotional Activities	D11	0.733	0.846	0.740
Research Activities	D12	0.686	0.812	0.764

The relationships among the variables were examined using a causal structural model through the Partial Least Squares (PLS) technique. The overall research model is illustrated in Figure 1. In this model, which is the output of SmartPLS software, the standardized factor loadings of the variables are presented. The t-statistics and bootstrap values for assessing the significance of relationships are shown in Figure 2.

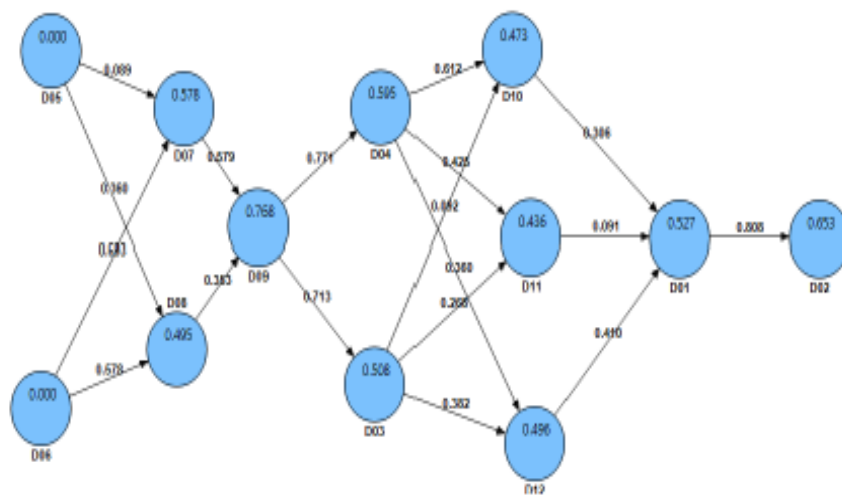


Figure 1. Structural Equation Modeling in Path Analysis Mode Using Partial Least Squares (PLS)

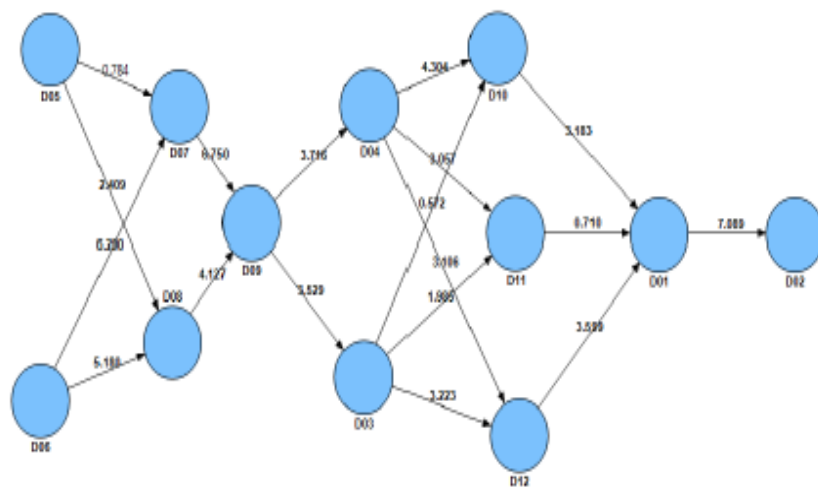


Figure 2. Structural Equation Modeling in t-Statistic Mode Using Partial Least Squares (PLS)

The results of the model analysis showed that structural factors had a positive and significant effect on sociological characteristics ($\beta = 0.578$, $t = 6.280$) and on individual factors ($\beta = 0.683$, $t > 1.96$). Contextual factors also had a positive and

significant effect on sociological characteristics ($\beta = 0.360$), but their effect on individual factors was nonsignificant ($\beta = 0.089$, $t = 0.784$). Furthermore, sociological characteristics ($\beta = 0.363$) and individual factors ($\beta = 0.579$) had a significant effect on the higher education system. The higher education system exhibited a positive and significant effect on the systematic process ($\beta = 0.771$) and on policy-making ($\beta = 0.713$). Finally, the systematic process significantly strengthened educational activities ($\beta = 0.612$, $t = 4.304$).

Table 3. Summary of Structural Equation Modeling Results

Independent Variable	Dependent Variable	Path Coefficient	t-Statistic	Result
Structural Factors	Sociological Characteristics	0.578	6.280	Confirmed
Structural Factors	Individual Factors	0.683	5.180	Confirmed
Contextual Factors	Sociological Characteristics	0.360	2.409	Confirmed
Contextual Factors	Individual Factors	0.089	0.784	Rejected
Sociological Characteristics	Higher Education System	0.363	4.127	Confirmed
Individual Factors	Higher Education System	0.579	6.750	Confirmed
Higher Education System	Systematic Process	0.771	3.716	Confirmed
Higher Education System	Policy-Making	0.713	3.529	Confirmed
Systematic Process	Educational Activities	0.612	4.304	Confirmed

Based on the results of Table 4, the coefficient of determination (R^2) for the endogenous constructs of the research model is acceptable. The coefficient of determination for Human Resource Development was reported as 0.653, which is considered an acceptable value. The positive values indicate a desirable quality of the model.

Table 4. Values of Redundancy and Communal Validity

Main Categories	Code	Diagnosis Coefficient	Communal Validity	Redundant Validity
Educational Excellence	D01	0.527	0.684	0.648
Human Resource Development	D02	0.653	0.657	0.621
Policy-Making	D03	0.508	0.658	0.622
Systematic Process	D04	0.595	0.696	0.660
Contextual Factors	D05	—	0.713	0.677
Structural Factors	D06	—	0.600	0.564
Individual Factors	D07	0.578	0.580	0.544
Sociological Characteristics	D08	0.495	0.491	0.455
Higher Education System	D09	0.768	0.530	0.494
Educational Activities	D10	0.473	0.617	0.581
Promotional Activities	D11	0.436	0.580	0.544
Research Activities	D12	0.496	0.533	0.497

Discussion and Conclusion

The purpose of this study was to design and validate an integrated model of educational excellence and human resource development for the Golestan Province Education Organization. The overall findings demonstrated a structured, multi-level relationship between contextual, structural, individual, sociological, and educational factors, confirming the conceptual assumptions of excellence-driven models in both education and human resources. Results of structural equation modeling showed that structural factors exerted strong and significant effects on both sociological characteristics and individual factors, whereas contextual factors significantly influenced sociological characteristics but not individual factors. Furthermore, sociological and individual factors significantly shaped the performance of the higher education system, which in turn predicted systematic processes and policy-making. These systematic processes subsequently strengthened educational activities. Together, these findings indicate that educational excellence and human resource development in a provincial education system cannot be understood without accounting for the interaction between deep structural foundations and human-level factors.

The significance of structural factors observed in this study aligns with extensive literature emphasizing the foundational role of organizational structure, HR architecture, and systems design in shaping human behaviors and organizational outcomes.

Prior research has shown that structural empowerment and leadership arrangements are directly associated with organizational excellence in school environments (6). Similarly, models of HR excellence in public organizations emphasize that structural clarity, organizational systems, and formalized processes form the backbone of excellence frameworks (3). The strong path coefficient observed for structural factors influencing individual and sociological characteristics is therefore consistent with prior evidence demonstrating how structural enablers such as resource allocation, workflow processes, and formal HR systems shape employee capabilities, identities, and interactions (7). These results also echo studies in HR optimization and modeling where structural design is seen as essential for coordinating complex human resources in dynamic environments (14).

The finding that contextual factors significantly predicted sociological characteristics but did not significantly influence individual factors offers an important nuance. This is consistent with the general premise that contextual conditions—such as culture, external regulations, and socio-environmental pressures—tend to shape broader social patterns (e.g., norms, shared beliefs, group relations) rather than deeply personal attributes such as psychological empowerment, intrinsic motivation, or personal competencies. In support of this, prior research on organizational excellence grounded in Islamic teachings also emphasizes that contextual foundations (values, norms, cultural expectations) strongly shape collective identity and willingness to adopt excellence-related behaviors (4). Similarly, work on human, spiritual, and psychological capital highlights that contextual systems shape collective perceptions but individual psychological attributes require deliberate structural and developmental interventions (3). This supports the idea that while environmental and contextual influences shape the social climate of educational organizations, they may be insufficient on their own to directly alter individual competencies or personal psychological empowerment without structured HRD initiatives.

The significant effect of sociological characteristics and individual factors on the higher education system further underscores the strong human-centric orientation of HRD and educational excellence models. Prior studies across education and public sector organizations have repeatedly found that excellence is rooted in the capacities, motivations, and interactions of individuals and groups. For instance, studies showing the role of emotional, psychological, and spiritual capital in driving excellence highlight the deep connection between personal attributes and institutional performance (3, 8). Similarly, research on resonant leadership demonstrates that empowering psychological environments foster organizational learning and impact organizational outputs in higher education (21). The strong coefficients observed in the present study confirm that individual and sociological variables serve as primary drivers of quality at the higher education level, which subsequently influence downstream educational processes.

The higher education system, in turn, significantly predicted both systematic processes and policy-making. These findings reflect broader literature asserting that higher education institutions play a significant regulatory, developmental, and academic role in shaping national and provincial education systems. The capacity of higher education institutions to influence systematic processes aligns with models of human resource education and development in universities and professional institutions, which emphasize the institution's capacity to guide curriculum, training standards, competency frameworks, and educational strategies (9, 12). Systematic processes are critical for ensuring the coherence of HRD systems, as seen in e-HRM and e-HRD literature that emphasizes standardized and streamlined processes to enhance organizational performance and innovation (13). Further, the link between higher education and policy-making echoes research showing that educational policy frameworks are heavily influenced by academic institutions, expert networks, and research-driven competencies (11). This supports the observation that universities and higher education bodies act as knowledge sources and decision-support infrastructures for educational policy development.

The final relationship observed in the model—between systematic processes and educational activities—illustrates the operational mechanism through which excellence is enacted within educational institutions. Systematic processes serve to

integrate planning, implementation, assessment, and feedback cycles, thereby enhancing the quality and consistency of educational activities. This association is well supported by findings from lean HR excellence studies that highlight the importance of systematization and process optimization for achieving high-performance HR systems in the public sector (17). Similarly, models addressing green HRM excellence emphasize that systematic HR policies are essential for aligning organizational actions with larger sustainability goals (18). In the context of this study, the observed relationship suggests that systematization is a critical mechanism through which human resource development and educational excellence translate into visible improvements in teaching, learning, and support processes.

Taken together, the structural model indicates a cascading framework: foundational structural and contextual conditions influence human-centred variables (individual and sociological characteristics), which shape the performance of higher education institutions, which in turn guide systematic processes and policy-making, ultimately influencing educational activities. This layered structure resembles many documented excellence models, including total quality management frameworks that emphasize the interplay between leadership, people, processes, and outputs (19). It also reflects the logic of modern HRD models, which posit that structural and contextual factors enable capability development, which then shapes organizational processes and performance (1, 2).

The study's results also resonate with the predictive and diagnostic capabilities of PLS-SEM methods. By applying PLS-SEM, the study ensured strong predictive accuracy, which is consistent with methodological guidelines emphasizing the use of PLS-SEM for exploratory and predictive models with complex structural relationships (23-25). Moreover, reliability and validity assessments, including AVE, CR levels, and discriminant validity, followed established criteria proposed by foundational SEM scholars (22, 26). Thus, both the empirical model and its methodological rigor are aligned with international standards and prior studies.

Despite its contributions, this study has several limitations. First, the quantitative component relied on self-reported data from employees, which may be subject to response bias, social desirability, or inflated perceptions of organizational processes. Second, the research was conducted within a single provincial education organization, limiting the generalizability of the findings to other regions or national contexts that may differ culturally, structurally, or administratively. Third, although the mixed-methods design strengthened the model, qualitative sampling was limited to 10 experts, and broader stakeholder perspectives—such as students, parents, or policymakers—were not included. Fourth, the study employed cross-sectional data, restricting the ability to capture temporal dynamics or causal evolution of excellence-related processes. Finally, although structural models explained significant variance in outcomes, additional unmeasured factors (e.g., leadership styles, technological readiness, policy shifts) may also influence excellence dimensions.

Future studies should expand sampling to include multiple provinces or national-level organizations to enhance generalizability and capture contextual variations across educational systems. Longitudinal research would help trace how excellence processes evolve over time, particularly in response to policy reforms or organizational changes. Future research may also incorporate additional stakeholders such as students, school leaders, and parents to capture a more holistic understanding of educational excellence. Moreover, researchers could integrate digital transformation variables, such as e-HRM, AI-supported HR systems, and learning analytics, which are becoming increasingly relevant. Finally, qualitative case studies or comparative analyses across different educational contexts could enrich the theoretical understanding of excellence and HRD interactions.

Educational managers should prioritize strengthening structural frameworks and formalizing systematic processes, as these variables were shown to have profound influence on downstream educational activities. Policymakers should leverage the strategic role of higher education institutions by fostering closer partnerships between universities and provincial education

systems for policy design, training development, and competency modeling. HR professionals in education should design targeted development programs for teachers and staff to cultivate individual and sociological competencies that drive organizational excellence. Finally, organizations should consider integrating digital HR systems and continuous feedback mechanisms to support data-driven decisions and enhance the alignment between human resource development and educational excellence.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adhered in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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