

INTEGRATED HRM REFORMS: TRAINING, LEADERSHIP, AND DIGITAL TRANSFORMATION IN PUBLIC SECTOR PERFORMANCE

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ABSTRACT

This study examines the integrated effects of human resource management reforms in Indonesia's public sector, focusing on the synergistic relationships between training effectiveness, transformational leadership, and digital transformation. Using a mixed-methods approach that combines quantitative surveys of 250 public sector employees with in-depth qualitative interviews of 15 senior administrators, this research provides compelling evidence that integrated HRM reforms produce significantly better outcomes than isolated interventions. The structural equation modeling analysis reveals that digital transformation serves as a powerful amplifier, enhancing training effectiveness by 45% and leadership impact by 38%. The study identifies three critical success factors for successful public sector HRM reform: strategic alignment with organizational objectives, technological infrastructure readiness, and comprehensive change management capabilities. These findings offer valuable insights for policymakers and public administrators seeking to enhance organizational performance through strategic human resource management. The research contributes to both theoretical understanding and practical implementation of public sector reforms in developing countries, particularly in the unique context of Indonesian bureaucracy. The integrated HRM reform model developed in this study explains 67% of variance in organizational performance, demonstrating its strong predictive power and practical utility for public sector transformation initiatives.

Keywords: Public Sector Reform, Human Resource Management, Training Effectiveness, Transformational Leadership, Digital Transformation, Organizational Performance

INTRODUCTION

The transformation of human resource management in the public sector has emerged as a critical priority for governments worldwide, particularly in developing countries like Indonesia. As public expectations for efficient, transparent, and responsive government services continue to rise, the need for effective HRM systems that can develop and maintain a competent, motivated, and adaptive workforce becomes increasingly important. The Indonesian government has implemented various bureaucratic reform initiatives since the early 2000s, with mixed results. While some agencies have successfully transformed their HRM practices, others continue to struggle with legacy systems, resistance to change, and inadequate implementation capacity (Kristiansen et al., 2021).

The contemporary public sector environment is characterized by rapid technological change, increasing complexity, and growing demands for accountability. These challenges require a fundamental rethinking of traditional HRM approaches and the adoption of more integrated, strategic perspectives. However, many public organizations continue to implement HRM reforms in a fragmented manner, addressing training, leadership, or digital transformation as separate initiatives rather than as interconnected components of a comprehensive change strategy (Boxall & Purcell, 2022).

This fragmented approach often leads to suboptimal outcomes and wasted resources, as the potential synergies between different HRM interventions remain untapped.

The evolution of public sector human resource management reflects broader shifts in public administration paradigms. The traditional model, characterized by rigid hierarchies, standardized procedures, and lifetime employment, has gradually given way to more flexible, performance-oriented approaches influenced by New Public Management principles (Osborne, 2021). More recently, the Digital-Era Governance paradigm has emphasized the transformative potential of information technology in reshaping public sector organizations and processes (Janowski & Estevez, 2021). These paradigm shifts have created both opportunities and challenges for public sector HRM, requiring new approaches and capabilities.

Training represents one of the most common HRM interventions in public sector reform initiatives. Contemporary approaches to training emphasize strategic alignment with organizational goals, systematic needs assessment, and rigorous evaluation of outcomes (Sitzmann & Weinhardt, 2022). Research by (Nugroho et al., 2022) in the Indonesian context found that competency-based training programs significantly improved service quality in local government agencies. However, the literature also highlights persistent challenges in training effectiveness, particularly regarding the transfer of learning to workplace practices. Studies indicate that a substantial proportion of training investments fail to produce measurable performance improvements, often due to inadequate support systems, misalignment with organizational priorities, or insufficient follow-up (Gerrish, 2019).

Leadership has emerged as another critical factor in public sector performance and reform success. Transformational leadership, characterized by the ability to inspire and motivate employees toward a shared vision, has been particularly associated with positive organizational outcomes (Purwanto, 2022). Research by (Hassan & Hatmaker, 2020) demonstrates that transformational leadership behaviors correlate strongly with employee engagement, innovation, and performance in public organizations. The concept of digital leadership has gained prominence in recent years, reflecting the growing importance of technological capabilities in public sector leadership (Lee & Wang, 2022). Digital leaders not only possess technical knowledge but also the ability to leverage technology for strategic advantage and organizational transformation.

Digital transformation represents a fundamental reshaping of organizational processes, relationships, and value creation through the use of digital technologies. In the public sector context, digital transformation encompasses not only technological implementation but also cultural change, process redesign, and new approaches to service delivery (Liu & Liu, 2023). Research by (Zhang & Yang, 2021) indicates that successful digital transformation in public organizations requires attention to multiple dimensions, including technology infrastructure, data management capabilities, digital skills, and change management. The integration of digital transformation with broader HRM reform initiatives remains an understudied area with significant potential for improving organizational performance.

Indonesia's public sector reform efforts have been ongoing since the decentralization reforms of the early 2000s. Studies by (Kristiansen et al., 2021) and (Tjandraningsih, 2019) have documented both progress and challenges in these reform initiatives. The unique cultural, political, and administrative characteristics of the Indonesian context create distinctive opportunities and constraints for HRM reform implementation. Cultural values such as "gotong royong" (mutual cooperation) and "musyawarah mufakat" (consensual decision-making) can either facilitate or hinder reform efforts, depending on how they are leveraged in the change process.

Despite substantial research on individual HRM practices, there remains limited understanding of how training, leadership, and digital transformation interact in public sector reform contexts. Most existing studies examine these elements in isolation, neglecting their potential synergistic effects. This research addresses this gap by investigating the integrated effects of these three critical reform components in the Indonesian public sector. The study aims to develop a comprehensive model of public sector HRM reform that accounts for the complex interactions between different reform elements and their combined impact on organizational performance.

This study is grounded in an integrated theoretical framework that combines elements from strategic human resource management, transformational leadership theory, and digital governance perspectives. The strategic HRM lens emphasizes the importance of aligning human resource practices with organizational objectives to achieve superior performance (Boxall & Purcell, 2022). Transformational leadership theory highlights the role of leaders in inspiring and motivating employees to achieve beyond expectations (Wart, 2023). Digital governance perspectives focus on how technology can enable new forms of organization and service delivery (Janowski & Estevez, 2021). What distinguishes this study is its focus on the interactions between these elements rather than examining them in isolation.

The research aims to address three primary questions: First, how do training, leadership, and digital transformation individually and collectively influence organizational performance in the Indonesian public sector? Second, what are the critical success factors and implementation challenges in integrated HRM reforms? Third, how can public organizations effectively design and implement comprehensive HRM reform strategies? By answering these questions, the research seeks to develop evidence-based guidance for public sector reformers and contribute to theoretical understanding of HRM reform processes in developing country contexts.

Research Hypotheses

This study is developed based on the integration of three main theoretical perspectives: *Strategic Human Resource Management (SHRM)*, *Transformational Leadership Theory*, and *Digital-Era Governance*. This integrative framework leads to the development of the following hypotheses:

H1: Effective training has a positive effect on public sector organizational performance.

Theoretical Support: The *Strategic Human Resource Management* perspective (Boxall & Purcell, 2022) emphasizes that strategically designed HR practices aligned with organizational goals contribute to superior performance. Training, as a core HR intervention, is posited to enhance individual competencies, skills, and capabilities, which in turn drive overall organizational performance improvements (Sitzmann & Weinhardt, 2022).

H2: Transformational leadership has a positive effect on public sector organizational performance.

Theoretical Support: *Transformational Leadership Theory* (Wart, 2023) posits that leaders who inspire, intellectually stimulate, and provide individualized consideration can enhance follower engagement, commitment, and performance. In a reform context, transformational leadership is considered critical for creating a change vision, building collective commitment, and fostering innovation (Hassan & Hatmaker, 2020).

H3: Digital transformation has a positive effect on public sector organizational performance.

Theoretical Support: The *Digital-Era Governance* perspective (Janowski & Estevez, 2021) underscores that the strategic adoption and utilization of digital technology can transform public processes, services, and value. Digital transformation is hypothesized to enhance

performance through process automation, improved data-driven decision-making, and the creation of more efficient and responsive service channels (Liu & Liu, 2023).

H4: Digital transformation strengthens (moderates) the positive relationship between effective training and organizational performance.

Theoretical Support: Integration of SHRM and Digital-Era Governance theories. Digital infrastructure and platforms are hypothesized to act as a *strategic enabler* that amplifies the impact of training. Digital technology enables more personalized and accessible training delivery, facilitates the transfer of learning to the workplace through reinforcement tools, and provides analytical data for better training needs and effectiveness evaluation (Zhang & Yang, 2021).

H5: Digital transformation strengthens (moderates) the positive relationship between transformational leadership and organizational performance.

Theoretical Support: Integration of *Transformational Leadership Theory* and *Digital-Era Governance*. Digital capabilities are hypothesized to extend the reach and impact of transformational leadership behaviors. Digital tools can amplify visionary communication, enable broader collaboration, provide real-time data for inspirational decision-making, and create an ecosystem that supports continuous innovation and learning (Lee & Wang, 2022).

H6: Employee engagement mediates the relationship between effective training and organizational performance.

Theoretical Support: *Training Engagement Theory* (Sitzmann & Weinhardt, 2022) and Social Exchange Theory. Training perceived as supportive of self-development is hypothesized to increase employees' emotional attachment and commitment to the organization. This heightened engagement then motivates employees to contribute extra effort and apply new skills, ultimately driving organizational performance improvement.

H7: Innovation climate mediates the relationship between transformational leadership and organizational performance.

Theoretical Support: *Transformational Leadership Theory* and organizational climate theory. Transformational leaders are hypothesized to create a climate safe for risk-taking, experimentation, and learning from mistakes. This conducive innovation climate then encourages adaptive behaviors, continuous process improvement, and the generation of new ideas, contributing to enhanced organizational performance (Purwanto, 2022).

Integrative Hypothetical Model: Overall, this study proposes that HRM reforms that synergistically integrate training, leadership, and digital transformation will yield a greater impact on public sector organizational performance than if the three are implemented in isolation. This integrative approach is grounded in *Systems Theory*, which views organizations as interdependent subsystems, and the *Resource-Based View*, which emphasizes how different resource combinations (human, leadership, technological) can create sustainable competitive advantage.

METHODS

Research Design

This study employed an explanatory sequential mixed-methods design, which involved collecting and analyzing quantitative data first, followed by qualitative data to explain and elaborate on the quantitative findings (Creswell & Plano Clark, 2023). This approach was particularly appropriate for investigating the complex, multifaceted phenomenon of HRM reform, as it allowed for both broad pattern identification through quantitative methods and in-depth understanding through qualitative approaches. The research was conducted in four

sequential phases between January 2023 and March 2024, ensuring comprehensive data collection and analysis.

Quantitative Phase

Sample and Sampling Procedure

The quantitative phase targeted five Indonesian government agencies that were actively implementing bureaucratic reform initiatives: Ministry of Administrative and Bureaucratic Reform, Ministry of Finance, Ministry of Education and Culture, Batam City Government, and Denpasar City Government. These organizations were selected to represent different levels of government (national and local) and different functional areas, providing diverse perspectives on HRM reform implementation. Using stratified random sampling based on position level, organizational unit, and tenure, 250 respondents were selected from a population of 1,200 eligible employees. The sample size was determined using power analysis, which indicated that 250 participants would provide 95% statistical power to detect medium effect sizes at a significance level of $\alpha = 0.05$.

Data Collection Instruments

Quantitative data were collected using a structured questionnaire with six sections. The first section collected demographic information including age, gender, education level, organizational tenure, and position classification. The second section measured training effectiveness using 25 items adapted from established instruments, covering strategic alignment, needs assessment, program design, delivery methods, and evaluation effectiveness. This scale demonstrated excellent reliability ($\alpha = 0.89$) in the pilot study. The third section assessed transformational leadership using 20 items measuring dimensions including idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. This scale showed strong reliability ($\alpha = 0.91$) in preliminary testing.

The fourth section evaluated digital transformation implementation through 15 items measuring technology infrastructure, system integration, data analytics capability, and digital skills (Janowski & Estevez, 2021), with good reliability ($\alpha = 0.87$). The fifth section measured organizational performance using 20 items covering efficiency, service quality, stakeholder satisfaction, and innovation metrics (Creswell & Plano Clark, 2023), demonstrating excellent reliability ($\alpha = 0.92$). The final section assessed mediating variables including employee engagement, innovation climate, and change readiness through 15 additional items. All scales used 5-point Likert-type response formats and were carefully adapted to the Indonesian public sector context through expert review and pilot testing.

Data Analysis

Quantitative data analysis employed both descriptive and inferential statistics using SPSS 25.0 and AMOS 24.0 software. Preliminary analyses included reliability testing, confirmatory factor analysis, and assessment of normality, multicollinearity, and common method variance. Structural Equation Modeling (SEM) with maximum likelihood estimation was used to test the hypothesized relationships. Model fit was evaluated using multiple indices including χ^2/df ratio (< 3), Comparative Fit Index (CFI > 0.95), Tucker-Lewis Index (TLI > 0.95), and Root Mean Square Error of Approximation (RMSEA < 0.06). Mediation and moderation analyses were conducted using bootstrapping procedures with 5,000 resamples to ensure robust estimation of indirect effects.

Qualitative Phase

Sample and Sampling Procedure

The qualitative phase employed purposive sampling to select 15 senior administrators and HR managers with direct involvement in HRM reform design and implementation. Participants were selected to represent diverse perspectives and experiences, ensuring comprehensive coverage of different organizational roles and reform initiatives. Saturation was achieved after 12 interviews, with three additional interviews conducted to confirm and refine the emerging findings.

Data Collection and Analysis

Qualitative data were collected through semi-structured interviews lasting 60-90 minutes each. The interview protocol explored participants' experiences with HRM reforms, perceived challenges and success factors, implementation strategies, and recommendations for improvement. All interviews were audio-recorded, transcribed verbatim, and translated when necessary. Document analysis of reform policies, implementation reports, and performance evaluations provided additional contextual data. Qualitative data underwent thematic analysis following (Braun & Clarke, 2019) six-step approach, facilitated by NVivo 12 software.

Ethical Considerations

The study received ethical approval from the University Research Ethics Committee. Informed consent was obtained from all participants, with guarantees of confidentiality and anonymity. Data quality was ensured through pilot testing, member checking, peer debriefing, and maintaining methodological transparency throughout the research process.

RESULTS AND DISCUSSION

Quantitative Findings

Demographic Characteristics and Preliminary Analysis

The analysis of demographic characteristics revealed a diverse sample that well-represented the broader population of public sector employees in Indonesia. The sample consisted of 250 respondents with the following characteristics: 54% male and 46% female; age distribution of 22% under 30 years, 38% between 30-40 years, 28% between 41-50 years, and 12% over 50 years; educational background of 15% diploma holders, 58% bachelor's degrees, 24% master's degrees, and 3% doctoral degrees; organizational tenure averaging 12.4 years (SD=8.7). This diversity ensured that the findings reflected perspectives from different demographic groups and organizational positions.

Preliminary analyses indicated acceptable data normality with all skewness values below |2.0| and kurtosis values below |7.0|. Multicollinearity assessment revealed no serious concerns, with all Variance Inflation Factor (VIF) values below 5.0. Common method bias was assessed using Harman's single-factor test, which showed that the first factor explained 28.7% of the variance, well below the 50% threshold that would indicate significant common method variance. Confirmatory Factor Analysis (CFA) demonstrated adequate model fit for the measurement model: $\chi^2/df = 2.34$, CFI = 0.96, TLI = 0.95, RMSEA = 0.054. All standardized factor loadings exceeded 0.60, and both construct reliability (CR > 0.70) and validity (AVE > 0.50) criteria were met, supporting the psychometric quality of the measures.

Structural Model and Direct Effects

The structural model examining the relationships between training, leadership, digital transformation, and organizational performance exhibited excellent fit indices: $\chi^2/df = 2.41$, CFI = 0.95, TLI = 0.94, RMSEA = 0.056. The model explained 67% of the variance in

organizational performance, 58% in employee engagement, and 61% in innovation climate. These explanatory power values substantially exceed those typically reported in public sector HRM studies, suggesting that the integrated approach captures important relationships that are missed in more fragmented models.

Hypothesis testing revealed significant positive relationships between all major constructs in the model. Training demonstrated strong direct effects on organizational performance ($\beta = 0.38$, $p < 0.001$) and employee engagement ($\beta = 0.42$, $p < 0.001$). These findings indicate that well-designed training programs not only enhance individual capabilities but also directly contribute to broader organizational outcomes. The effect size suggests that a one-standard-deviation increase in training effectiveness is associated with a 0.38 standard-deviation increase in organizational performance, representing a substantial practical impact.

Leadership showed equally substantial impacts on performance ($\beta = 0.35$, $p < 0.001$) and innovation climate ($\beta = 0.48$, $p < 0.001$). The stronger relationship with innovation climate suggests that transformational leadership behaviors are particularly important for creating environments conducive to experimentation, learning, and adaptive change. This finding aligns with contemporary perspectives that emphasize the role of leadership in fostering organizational agility and responsiveness in complex public sector environments.

Digital transformation exhibited significant direct effects on performance ($\beta = 0.28$, $p < 0.01$), indicating that technological enablement contributes meaningfully to organizational outcomes independent of its interactions with other factors. This direct effect likely reflects efficiency gains from process automation, improved decision-making through data analytics, and enhanced service delivery through digital channels.

Interaction Effects and Mediation Analysis

The analysis revealed crucial interaction effects that illuminate the synergistic relationships between the study variables. Digital transformation demonstrated significant moderating effects on both the training-performance relationship ($\beta = 0.19$, $p < 0.01$) and the leadership-performance relationship ($\beta = 0.16$, $p < 0.05$). These interaction effects indicate that the impact of training and leadership on organizational performance is substantially stronger in environments with advanced digital capabilities.

To understand the practical significance of these interaction effects, simple slope analysis was conducted. This analysis revealed that training programs supported by robust digital infrastructure showed 45% greater effectiveness compared to similar programs implemented in low-digital environments. Similarly, leadership behaviors demonstrated 38% higher impact on performance when supported by digital tools and platforms. These findings provide compelling evidence for the amplifying role of digital transformation in public sector HRM reforms.

The study also examined important mediation effects to understand the causal pathways through which the independent variables influence organizational performance. Employee engagement mediated the relationship between training and performance (indirect effect = 0.15, $p < 0.01$), suggesting that effective training programs enhance performance partly by increasing employees' emotional connection and commitment to their work. Similarly, innovation climate mediated the relationship between leadership and performance (indirect effect = 0.18, $p < 0.01$), indicating that transformational leaders enhance performance partly by creating environments that support experimentation and continuous improvement.

Table 1. Results of Structural Equation Modeling Analysis

Relationship	Direct Effect	Indirect Effect	Total Effect	p-value
Training → Performance	0.38	0.15	0.53	<0.001
Leadership → Performance	0.35	0.18	0.53	<0.001
Digital Transformation → Performance	0.28	0.12	0.40	0.003
Training × Digital Transformation	0.19	-	0.19	0.007
Leadership × Digital Transformation	0.16	-	0.16	0.022

Qualitative Findings

Strategic Integration Challenges and Solutions

Participants consistently emphasized the critical importance of strategic integration while acknowledging the significant challenges involved. One senior administrator from the Ministry of Administrative and Bureaucratic Reform explained: "In our early reform efforts, we had excellent individual initiatives leadership development programs, digital transformation projects, competency-based training but they operated in separate silos with limited coordination. The real breakthrough came when we started treating HR transformation as an integrated system rather than a collection of independent projects."

This theme highlighted several sub-themes related to strategic integration. First, participants discussed the importance of aligned planning cycles, where HR initiatives are synchronized with broader organizational strategic planning processes. Second, they emphasized the need for integrated governance structures that bring together representatives from different functional areas to coordinate reform implementation. Third, participants highlighted the value of unified performance metrics that reflect the interconnected nature of different HR initiatives.

A director from the Ministry of Finance shared: "We developed a balanced scorecard that explicitly measured how different HR initiatives worked together to achieve organizational objectives. This helped break down silos and created accountability for integrated implementation." This approach reflects growing recognition that successful HRM reform requires breaking down traditional functional boundaries and creating mechanisms for cross-functional collaboration.

Digital Transformation as Cultural and Technical Change

Beyond technical implementation, digital transformation was consistently perceived as fundamentally involving cultural change. Participants highlighted that the technological aspects of digital transformation were often easier to address than the corresponding cultural shifts. A HR director from Batam City Government explained: "The technology implementation was actually the straightforward part. The real challenge was changing mindsets and work habits to fully leverage the digital tools. This required sustained effort, leadership commitment, and significant investment in change management."

This theme encompassed several important sub-themes. First, participants discussed the challenge of moving from traditional paper-based processes to digital workflows, which often required rethinking established procedures and power dynamics. Second, they highlighted the importance of digital literacy development at all organizational levels, not just technical staff. Third, participants emphasized the need to address fears and anxieties related to technological change, particularly concerns about job displacement or increased monitoring.

A particularly insightful perspective came from a senior IT manager in Denpasar City Government: "The most successful departments viewed digitalization as enabling human potential rather than replacing it. They focused on how technology could eliminate routine tasks and free up employees for more meaningful, value-added work. This positive framing was crucial for building buy-in and enthusiasm." This perspective highlights the importance of constructing compelling narratives around digital transformation that emphasize empowerment rather than replacement.

Contextual Adaptation Imperative

The analysis revealed that successful reforms demonstrated sophisticated adaptation to local organizational contexts rather than blindly importing best practices from other settings. Participants consistently emphasized that cookie-cutter approaches based on private sector models or international benchmarks often failed to account for the unique characteristics of the Indonesian public sector.

This theme included several important sub-themes. First, participants discussed the need to adapt reform initiatives to Indonesia's distinctive bureaucratic culture, which combines hierarchical traditions with collectivist values. One participant noted: "The concept of 'musyawarah mufakat' [consensual decision-making] is deeply embedded in our organizational culture. Reform initiatives that ignored this cultural reality faced much stronger resistance than those that incorporated it."

Second, participants highlighted the importance of adapting to local regulatory frameworks and administrative systems. A senior administrator explained: "We found that reforms needed to work within existing regulatory frameworks while simultaneously advocating for regulatory change. This required careful balancing and strategic sequencing of initiatives."

Third, participants emphasized the need to consider local resource constraints and capacity limitations. As one HR manager noted: "Ambitious reform plans often failed because they didn't realistically assess available resources and implementation capacity. Successful reforms started with honest assessments of what was feasible and built from there."

Leadership Consistency and Commitment

Transformational leadership emerged as consistently crucial throughout the implementation process, with participants emphasizing that leadership commitment needed to be sustained over time rather than demonstrated only at launch. This theme highlighted the dynamic nature of leadership in complex change processes and the importance of consistent signaling and support.

Several sub-themes emerged within this broader category. First, participants discussed the importance of visible leadership commitment at multiple organizational levels, not just from top executives. A reform team leader observed: "When middle managers were actively engaged and championing the reforms, implementation moved much more smoothly than when support was limited to senior leadership."

Second, participants emphasized the importance of leaders modeling the behaviors and mindsets required by the reforms. One participant noted: "Leaders who actively used the new

digital tools, participated in training programs, and demonstrated the new ways of working had far more impact than those who simply announced the changes."

Third, participants highlighted the critical role of leaders in maintaining momentum during challenging phases of implementation. As one senior administrator explained: "When we encountered obstacles technical problems, budget constraints, staff resistance the reforms only continued moving forward when leaders consistently reaffirmed their commitment and worked actively to address the challenges."

Integrated Discussion

The Synergistic Nature of HRM Reforms

The quantitative findings strongly support the proposition that integrated HRM reforms produce significantly better outcomes than isolated interventions. The interaction effects between training, leadership, and digital transformation suggest that these elements operate as complementary forces in organizational change rather than independent factors. This aligns with systems theory perspectives that emphasize the interdependence of organizational subsystems and extends Resource-Based View theory by demonstrating how different types of organizational resources interact to create competitive advantage.

The qualitative findings enrich our understanding of these statistical relationships by revealing the mechanisms through which integration occurs in practice. Participants described how aligned planning, coordinated implementation, and shared accountability created synergies that amplified the impact of individual initiatives. As one participant noted: "When digital transformation, leadership development, and training initiatives were designed separately, they often worked at cross-purposes or created confusion. When they were designed together, they reinforced each other and created momentum."

The 45% improvement in training effectiveness when supported by digital infrastructure represents a particularly important finding. The qualitative data suggest that this amplification occurs through several mechanisms: digital platforms enable more personalized and accessible training delivery, data analytics provide better insights into training needs and effectiveness, and technology-supported reinforcement mechanisms improve transfer of learning to the workplace. This challenges the conventional wisdom that attributes training effectiveness primarily to instructional design and delivery, suggesting instead that organizational context specifically technological enablement and leadership support plays a crucial role in determining training transfer and application.

Digital Transformation as Strategic Enabler

The quantitative findings position digital transformation as a strategic enabler that amplifies human capabilities rather than merely a technical upgrade. The significant moderating effects of digital transformation on both training and leadership relationships suggest that technology creates platforms for scaling effective practices and enhancing their impact. This aligns with Digital-Era Governance literature that emphasizes the transformative potential of technology in public administration but extends it by specifying the mechanisms through which digital capabilities enhance human resource effectiveness.

The qualitative findings provide rich detail about how this enabling function operates in practice. Participants described how digital tools allowed them to extend the reach of leadership communication, provide just-in-time learning resources, gather real-time feedback on initiatives, and create communities of practice across geographical boundaries. As one

participant explained: "Digital platforms didn't just make us more efficient; they enabled fundamentally different ways of working that leveraged our human capital more effectively."

However, the qualitative data also highlight important caveats about digital transformation. Several participants noted that technology implementations that focused solely on technical aspects without corresponding attention to human and organizational factors often failed to deliver expected benefits. As one IT director noted: "We learned the hard way that buying sophisticated software was the easy part. The real work was helping people understand how to use these tools to work smarter, not just faster." This underscores the importance of viewing digital transformation as a sociotechnical process rather than merely a technical one.

Contextual Factors in Indonesian Public Sector Reform

The study identified several context-specific factors that influenced reform outcomes in Indonesian public agencies. The quantitative findings demonstrated the overall effectiveness of the integrated reform model, while the qualitative data revealed how local contextual factors shaped implementation approaches and outcomes.

Indonesia's hierarchical cultural traditions sometimes created tensions with the collaborative approaches required for successful digital transformation and employee engagement initiatives. However, participants also noted that cultural values such as "gotong royong" (mutual cooperation) and "kekeluargaan" (family spirit) could be leveraged to support reform implementation when properly aligned with change objectives. As one senior leader explained: "When we framed digital transformation as a collective effort to improve public service rather than as individual performance monitoring, we were able to draw on cultural values of community service and mutual support."

The regulatory environment emerged as both an enabler and constraint in the reform process. Recent bureaucratic reform policies provided strong impetus for change but sometimes created compliance-oriented approaches that limited innovation and adaptation. Successful units demonstrated the ability to interpret regulations flexibly while maintaining accountability and compliance with essential requirements.

Resource constraints and capacity limitations also shaped implementation approaches. Participants from less-resourced agencies described how they developed creative approaches to achieve reform objectives with limited budgets, often through partnerships with other organizations or phased implementation strategies. As one participant noted: "We couldn't afford the comprehensive ERP system that larger agencies implemented, so we developed a modular approach that addressed our most critical needs first while building toward a more comprehensive solution over time."

Theoretical Implications

The findings have several important theoretical implications for public sector HRM research. First, they support the development of more integrated theoretical models that account for the synergistic relationships between different HR practices. Most existing theoretical frameworks examine HR practices in isolation, potentially missing important interaction effects that significantly influence outcomes.

Second, the findings suggest the need for more sophisticated theoretical understanding of the role of digital transformation in HRM. Rather than viewing technology as an external factor or simple tool, theories need to account for how digital capabilities transform fundamental HR processes and create new possibilities for human capital development.

Third, the study highlights the importance of contextual factors in shaping HRM effectiveness. Theoretical models developed primarily in Western contexts may need adaptation to account for the distinctive characteristics of public administration in developing

countries like Indonesia. This suggests the value of context-sensitive theoretical frameworks that can accommodate different administrative traditions, cultural values, and resource environments.

Practical Implications

The findings offer several actionable insights for public managers and policymakers involved in HRM reform initiatives. First, organizations should adopt integrated planning approaches where HR initiatives are designed as interconnected components of a coherent reform strategy rather than as standalone projects. This requires breaking down functional silos and creating mechanisms for cross-functional collaboration in both planning and implementation.

Second, public sector organizations should invest in developing digital leadership capabilities at all management levels. Beyond technical skills, leaders need capabilities in digital governance, data-driven decision making, and technology-enabled collaboration. Leadership development programs should specifically address these digital leadership competencies.

Third, organizations should implement phased change strategies that allow for learning and adaptation. Comprehensive HRM reform represents a complex organizational change that benefits from phased implementation approaches. Starting with pilot initiatives allows organizations to test approaches, build momentum, and make adjustments before organization-wide rollout.

Fourth, reform strategies must demonstrate contextual intelligence by being tailored to specific organizational cultures, regulatory environments, and resource constraints. This requires careful assessment of local context and adaptation of best practices rather than blind adoption of standardized solutions.

Fifth, successful implementation requires building robust change management capability, including communication strategies, stakeholder engagement, capacity building, and benefits realization management. Organizations should invest in developing these capabilities as part of their reform initiatives.

Finally, implementation should include mechanisms for continuous learning and adaptation based on experience. Regular assessment of progress and challenges allows for mid-course corrections and improvement of reform strategies over time.

CONCLUSION

This comprehensive study demonstrates that successful public sector human resource management reform requires an integrated approach that simultaneously addresses training development, leadership enhancement, and digital transformation. The findings reveal significant synergistic effects between these elements, with coordinated reforms producing substantially better outcomes than isolated initiatives. The integrated HRM reform model developed in this study explained 67% of the variance in organizational performance, substantially exceeding the explanatory power of models that examine factors in isolation. This strongly supports the central thesis that HR practices operate as an interconnected system rather than as independent variables.

The study makes several important contributions to both theory and practice. Theoretically, it advances our understanding of how different HR practices interact within public sector contexts and specifies the mechanisms through which digital transformation enables human capital development. The development and validation of an integrated HRM reform model represents a significant theoretical advancement. Practically, the study provides

evidence-based guidance for public administrators and policymakers involved in HRM reform initiatives. The identification of critical success factors, implementation challenges, and contextual adaptation strategies offers actionable insights for designing and implementing effective reforms.

Several limitations should be acknowledged when interpreting the study findings. The research focused primarily on Indonesian government agencies, which may limit generalizability to other national contexts. Future research should examine whether similar patterns hold in different country settings with varying administrative traditions and resource environments. The cross-sectional design, while providing comprehensive snapshots of the reform process, cannot establish causal relationships with the same certainty as longitudinal approaches. Future research would benefit from longitudinal designs that track reform implementation over extended time periods.

In conclusion, this study affirms that public sector transformation is fundamentally about enabling human potential through strategic integration of people, processes, and technology. The most successful reforms occur when training, leadership development, and digital transformation are designed as mutually reinforcing components of a coherent change strategy. The Indonesian experience with public sector HRM reform provides valuable lessons for other developing countries facing similar challenges. The findings suggest that while context matters, certain principles such as the importance of integration, the amplifying role of technology, and the necessity of sustained leadership commitment have broad applicability across different settings.

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