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Article

Rescuing declining schools: A data-driven turnaround strategy through a human resource management lens

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Abstract: This qualitative multiple-case study examines how data-driven decision-making and human resource management (HRM) were understood and used in three secondary schools experiencing decline. Data were drawn from semi-structured interviews with 15 participants, non-participant observations, and school documents. The findings identify four interrelated phases in the schools' turnaround processes: data-based diagnosis, strategic intervention design, phased implementation, and continuous monitoring. Across the cases, documented practices included the use of performance information to identify school needs, professional development and coaching, performance feedback, staff collaboration, and monitoring of selected indicators. Participants' accounts suggest that these practices may help connect organizational diagnosis with staff development and school-improvement planning. However, the study does not establish that HRM practices caused improvements in employee outcomes or sustained school recovery. The resulting human-capital-centered model should therefore be understood as an evidence-informed interpretation and a proposition for further application and evaluation, rather than a validated causal model.

Keywords: school turnaround; human resource management; human capital; teacher development; employee performance

1. Introduction

School decline has become an increasingly important organizational and strategic challenge. Declining schools are commonly characterized by sustained reductions in enrollment, stagnating or declining academic outcomes, weak instructional practices, deteriorating employee performance, and diminishing stakeholder trust. These conditions threaten not only educational quality but also the long-term viability of the organization. Research on low-performing schools has traditionally emphasized leadership, instructional improvement, organizational restructuring, and school-level change (Duke, 2015; Fullan, 2001). However, these perspectives can understate a fundamental organizational reality: school strategies are implemented by people, and the quality, capability, motivation, and engagement of teachers and staff shape whether turnaround strategies are translated into daily practice.

From a strategic human resource management (SHRM) perspective, employees represent a form of human capital that can create organizational value when their knowledge, skills, motivation, and opportunities to contribute are systematically developed and deployed (Wright & McMahan, 2011). HRM research further indicates that skill-enhancing, motivation-enhancing, and opportunity-enhancing practices influence human capital, employee motivation, turnover, operational outcomes, and ultimately organizational performance (Jiang et al., 2012). This logic is particularly relevant to declining schools because teachers are simultaneously knowledge workers, instructional professionals, and

key organizational actors. When teacher capability, commitment, performance, or collaboration deteriorates, organizational decline can become self-reinforcing; conversely, when these human resources are developed and aligned with strategic priorities, they can become a major source of organizational recovery.

The HRM perspective also clarifies why professional development cannot be treated as an isolated training activity. Learning through formal training, informal learning, knowledge sharing, and workplace practice contributes to the development of human capital (Noe et al., 2014). Research in school settings similarly shows that leadership, professional learning climate, and supportive institutional conditions are associated with teacher human capital development. In Indonesian schools, teachers' professional learning and development are shaped by school norms, resources, facilities, school history, student characteristics, principal leadership, and professional interaction among teachers (Rahman, 2022). Thus, teacher development during turnaround requires a system of HRM practices and working conditions rather than one-off workshops.

The existing school turnaround literature provides important insights into diagnosis, leadership, organizational culture, and structural change, while the data-driven decision-making (DDDM) literature emphasizes the collection, analysis, and use of evidence in improvement processes (Datnow & Hubbard, 2015; Mandinach & Schildkamp, 2021). Yet these literatures are not always sufficiently connected to the strategic HRM mechanisms through which organizational change is enacted. A school may possess extensive data and a clear turnaround plan, but improvement is unlikely to be sustained if teachers lack the competencies, motivation, feedback, resources, participation, or developmental opportunities required to implement the plan. The central research gap, therefore, is not simply the absence of an integrated data-driven turnaround model; it is the limited theorization of how HRM practices convert turnaround strategy into teacher and employee outcomes and, subsequently, into organizational recovery.

This study addresses that gap by repositioning HRM and teacher human capital as a central mechanism within the school turnaround process. The study asks three questions: (1) What organizational and human-resource characteristics are associated with sustained school decline? (2) How are data used to identify and respond to teacher and employee capability and performance gaps during turnaround? and (3) How do HRM practices, teacher/employee outcomes, and organizational performance become connected within a data-driven turnaround process?

The study contributes in three ways. First, it extends school turnaround research by incorporating a strategic HRM perspective, particularly human capital, training and development, performance management, employee involvement, and organizational culture. Second, it develops a conceptual explanation of how HRM practices affect proximal employee outcomes—such as capability, motivation, collaboration, and performance—which then support distal school outcomes such as instructional quality, enrollment recovery, and institutional effectiveness. Third, it translates this relationship into a practical turnaround framework based on diagnosis, intervention, implementation, and KPI monitoring. In doing so, the study argues that rescuing a declining school requires not only better data and stronger leadership, but also deliberate investment in the people whose work produces school performance.

2. Literature review and theoretical positioning

2.1 School decline and turnaround

School decline refers to sustained deterioration across multiple dimensions of organizational performance, including student enrollment, academic achievement, instructional quality, organizational effectiveness, and stakeholder trust (Duke,

2015; Susar et al., 2022). Turnaround differs from routine improvement because it seeks to reverse an established negative trajectory through focused, coordinated, and often rapid organizational action. Turnaround research highlights diagnosis, strategic repositioning, leadership, implementation discipline, and sustainability as important components of recovery (Fullan, 2001; Farley-Ripple et al., 2018). The present study retains these dimensions but argues that their effectiveness depends substantially on the organization's capacity to mobilize and develop its human resources.

2.2 Strategic HRM and human capital in schools

Strategic HRM views people-related practices as mechanisms through which organizations develop capabilities and align employee behavior with strategic objectives. Human capital includes the knowledge, skills, abilities, and other attributes embodied in individuals and can operate as a mediator between HR practices and organizational performance (Wright & McMahan, 2011). In schools, teachers constitute a particularly important human-capital resource because instructional knowledge, pedagogical expertise, assessment capability, collaboration, and professional judgment are embedded in teachers' daily work. Teacher quality therefore should be treated not only as an educational variable but also as an organizational capability.

The AMO logic provides a useful mechanism for positioning HRM within turnaround. HR systems can enhance employees' ability through recruitment, training, coaching, and development; motivation through feedback, recognition, career support, and fair performance management; and opportunity through participation, collaboration, autonomy, and access to resources (Jiang et al., 2012). These dimensions are relevant to declining schools because a turnaround strategy requires teachers to acquire new capabilities, commit to changed expectations, and have opportunities to participate in solving organizational problems. High-involvement HR systems likewise emphasize employee participation and the processes through which work practices influence employee and operational outcomes (Boxall & Macky, 2009).

2.3 Teacher development and training as human-capital investment

Teacher development is a strategic investment in human capital rather than a peripheral support activity. Learning research demonstrates that formal training, informal learning, and knowledge sharing contribute to human-capital development (Noe et al., 2014). In school settings, professional learning is shaped by the institutional environment, leadership, teacher collaboration, resources, and school norms. Evidence from Indonesia indicates that professional communication, teacher interaction, and principal leadership can create conditions that support teacher professional learning and development (Rahman, 2022). A recent review of teacher professional development in Indonesia similarly indicates that sustained professional development can influence teaching practices, teacher confidence, student engagement, and performance, while emphasizing the importance of systemic support for sustained effects (Rahmi & Rassanjani, 2025).

2.4 Performance management, feedback, and employee outcomes

Performance management connects strategic objectives with individual and team behavior through expectations, monitoring, feedback, development, and adjustment. Across the three schools, attendance and instructional-practice data helped identify support needs, followed by feedback and professional development. Used this way, performance data can guide improvement rather than serve only as a compliance tool.

The distinction between monitoring and development is important. A dashboard can identify that performance is below target, but HRM practices determine what happens next: coaching, peer support, training, role clarification,

workload adjustment, or accountability. Sustainable HRM research increasingly emphasizes the relationship between HR practices and employee performance, indicating that employee outcomes should be treated as part of the pathway to sustainable organizational performance rather than as secondary indicators (Liang & Li, 2025).

2.5 Leadership, organizational culture, and HRM alignment

Leadership remains important, but its role is reframed in this study as an HRM-enabling mechanism. Transformational leadership can provide direction, motivation, professional growth, and a shared vision (Leithwood & Jantzi, 2006). In turnaround contexts, principals also allocate resources for professional development, establish performance expectations, and create conditions for collaborative inquiry. Organizational culture determines whether these HRM practices are accepted, enacted, and sustained. A culture of collaboration, accountability, learning, and psychological safety can strengthen employee participation in change, whereas resistance, low expectations, and weak collaboration can undermine even technically sound interventions.

2.6 Data-driven decision making as an HRM enabler

DDDM is often presented as a technical process of collecting, analyzing, and using evidence. In the present study, its role is expanded: data are also an HRM infrastructure. Student outcomes, teacher attendance, instructional observations, professional-development participation, performance evaluations, and stakeholder feedback can reveal organizational and human-resource gaps. When such evidence is interpreted collaboratively, data can support targeted development and performance management. This aligns with research showing that data use depends on organizational routines, teacher engagement, leadership, and professional capacity rather than on data availability alone (Datnow & Hubbard, 2015; Mandinach & Schildkamp, 2021).

2.7 Research gap and conceptual framework

Three limitations in the existing literature motivate the present study. First, school turnaround research has emphasized leadership and structural reform more than the HRM mechanisms through which teachers and employees develop the capacity to enact change. Second, DDDM research has emphasized data literacy and evidence use but has paid less attention to how data become HRM interventions such as training, coaching, feedback, performance management, and employee involvement. Third, school improvement models often treat teacher development as an implementation activity rather than as a strategic human-capital pathway connecting organizational inputs to performance outcomes.

The conceptual framework developed in this study therefore proposes the following sequence: (1) turnaround diagnosis identifies organizational and human-resource problems; (2) HRM practices respond through capability development, performance management, feedback, employee involvement, and supportive working conditions; (3) these practices influence teacher/employee outcomes, including human capital, motivation, collaboration, accountability, and performance; and (4) improved employee outcomes contribute to instructional quality and broader organizational outcomes, including academic performance, enrollment, stakeholder confidence, and institutional effectiveness. Leadership, data literacy, and adaptive culture operate as cross-cutting conditions that enable this process. Continuous KPI feedback then informs the next diagnostic cycle. See **Figure 1**.

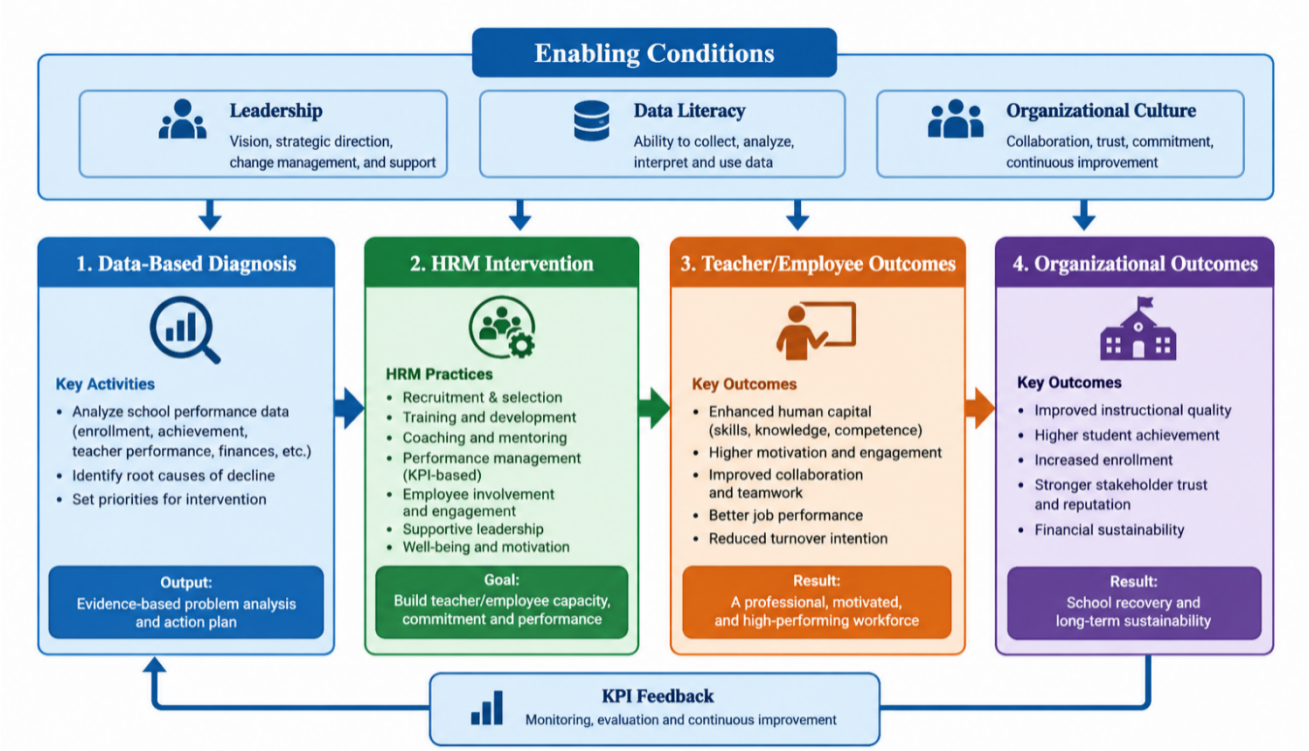


Figure 1. Human-Capital-Centered Data-Driven School Turnaround Framework.

The framework conceptualizes school turnaround as a cyclical process in which data-based diagnosis informs strategic human resource management (HRM) interventions, which subsequently strengthen teacher and employee outcomes and contribute to organizational recovery and sustainable school performance. HRM interventions include recruitment and selection, training and development, coaching and mentoring, performance management, employee involvement, supportive leadership, and mechanisms for motivation and well-being. These practices are expected to strengthen teachers' and employees' human capital, motivation, collaboration, and job performance. Improved employee outcomes, in turn, contribute to instructional quality, student achievement, enrollment recovery, stakeholder trust, and organizational sustainability. Leadership, data literacy, and organizational culture function as enabling conditions across all stages of the turnaround process, while KPI-based feedback supports continuous monitoring, organizational learning, and adaptive adjustment.

3. Methodology

3.1 Research design

This study employed a qualitative multiple-case study design to explore how data-driven strategies can be used to turn around declining schools and how HRM practices shape the implementation of those strategies. A case study design was appropriate because the phenomenon involves complex interactions among organizational conditions, leadership, employee behavior, and contextual pressures in real-life settings. The design also enabled cross-case comparison across three schools.

3.2 Research sites and participants

The study was conducted in three secondary schools, identified by the pseudonyms School A, School B, and School C, in East Java Province, Indonesia. The schools were selected purposively because they had experienced sustained

organizational decline, reflected in decreasing student enrolment, stagnant or declining academic performance, and reduced stakeholder confidence. To protect institutional anonymity, the schools' names and other potentially identifying details are withheld. The schools differed in providing contextual variation for examining leadership and organizational responses to decline. Their approximate characteristics are summarized in general terms to avoid identification.

School selection followed a purposive sampling strategy based on evidence of declining performance and the relevance of each institution to the study's focus on school turnaround. The selection criteria included a documented decline in student enrolment, evidence of stagnant or declining academic achievement, and indications of reduced stakeholder confidence. The study focused on schools with a reported history of decline spanning at least five years, as established through available institutional records and, where applicable, corroborating participant accounts.

Fifteen participants were recruited across the three schools: three principals, nine teachers (three from each school), and three administrative staff members. Participants were selected purposively according to their roles, institutional knowledge, and capacity to provide insights into school leadership, decision-making, teaching and learning, staff performance, organizational culture, and turnaround practices. All participants had at least three years of experience in their respective institutions, enabling them to describe relevant organizational developments and performance trends.

The study's purpose, participation requirements, and confidentiality arrangements were explained before participation. Participation was voluntary, and informed consent was obtained before interviews and other data collection activities. Pseudonyms were used to protect the identities of the schools and participants, and information that could reasonably reveal their identities was treated confidentially.

3.3 Data collection

Data collection took place across the three participating secondary schools. The study involved 15 participants: three principals, nine teachers, and three administrative staff. Semi-structured interviews addressed participants' experiences of school decline, decision-making, staff performance, professional development, leadership, organizational culture, and turnaround practices.

Non-participant observations focused on teaching and learning, staff interaction, leadership practices, collaboration, and the implementation of organizational activities. Observation notes were used to contextualize interview accounts and identify practices or organizational conditions that could be examined alongside documentary evidence.

Documentary materials included student performance records, enrollment data covering three to five years, teacher attendance reports, school strategic plans, and other relevant performance records. Documents were selected according to their relevance to the study questions, their connection to the three case schools, and their ability to provide information about school performance, human-resource practices, or improvement activities.

3.4 Data analysis

Data analysis followed an iterative process of data reduction, data display, and conclusion drawing (Miles et al., 2014). Initial open coding identified concepts arising from the interview, observation, and documentary materials, including school decline, data use, leadership, teacher development, employee performance, and organizational change. Axial coding examined relationships among these categories, while selective coding integrated the related categories into an emerging account of the turnaround process. Cross-case analysis was then

used to identify recurring patterns and differences among Schools A, B, and C.

The five HRM dimensions—(1) human-capital development; (2) training, coaching, and professional learning; (3) performance management and feedback; (4) employee motivation, involvement, and accountability; and (5) organizational conditions and culture that enable employees to perform—were used as an interpretive framework for organizing and examining HRM-related evidence. They were not treated as substitutes for open coding. Rather, the inductively developed categories were subsequently compared with these dimensions to assess how the case evidence related to the study's HRM perspective. The emerging turnaround model was developed by integrating patterns across the coded material and the cross-case analysis.

Coding was conducted by Yohanes Laga Payong. The analysis proceeded through open, axial, and selective coding. Open coding identified concepts in the interview, observation, and documentary materials; axial coding examined relationships among the emerging categories; and selective coding integrated these categories into an account of the school turnaround process. Cross-case analysis was used to compare patterns and differences across Schools A, B, and C. The five HRM dimensions served as an interpretive framework for examining the relationship between the emerging categories and the study's human resource management perspective. As coding was conducted by one researcher, the study did not involve independent double coding.

3.5 Trustworthiness and ethics

Trustworthiness was supported through triangulation across interviews, observations, and documents, together with attention to credibility, dependability, and confirmability. Ethical clearance was secured before data collection. Participants provided informed consent, and pseudonyms were used for schools and participants. Data were stored securely and used exclusively for research purposes.

Figure 2 presents an illustrative dashboard template for organizing school-level performance indicators alongside human resource management (HRM) information. It is intended to demonstrate how indicators such as enrollment, academic performance, teacher attendance, and stakeholder satisfaction could inform school diagnosis, staff development, and performance review. The numerical values, targets, and performance categories shown in the illustration are hypothetical and should not be interpreted as observed results from Schools A, B, or C. The dashboard is a proposed management tool rather than a validated measurement instrument. No composite KPI achievement score is reported as an empirical finding because the present study does not establish a verified indicator-weighting and normalization procedure for calculating such a score.

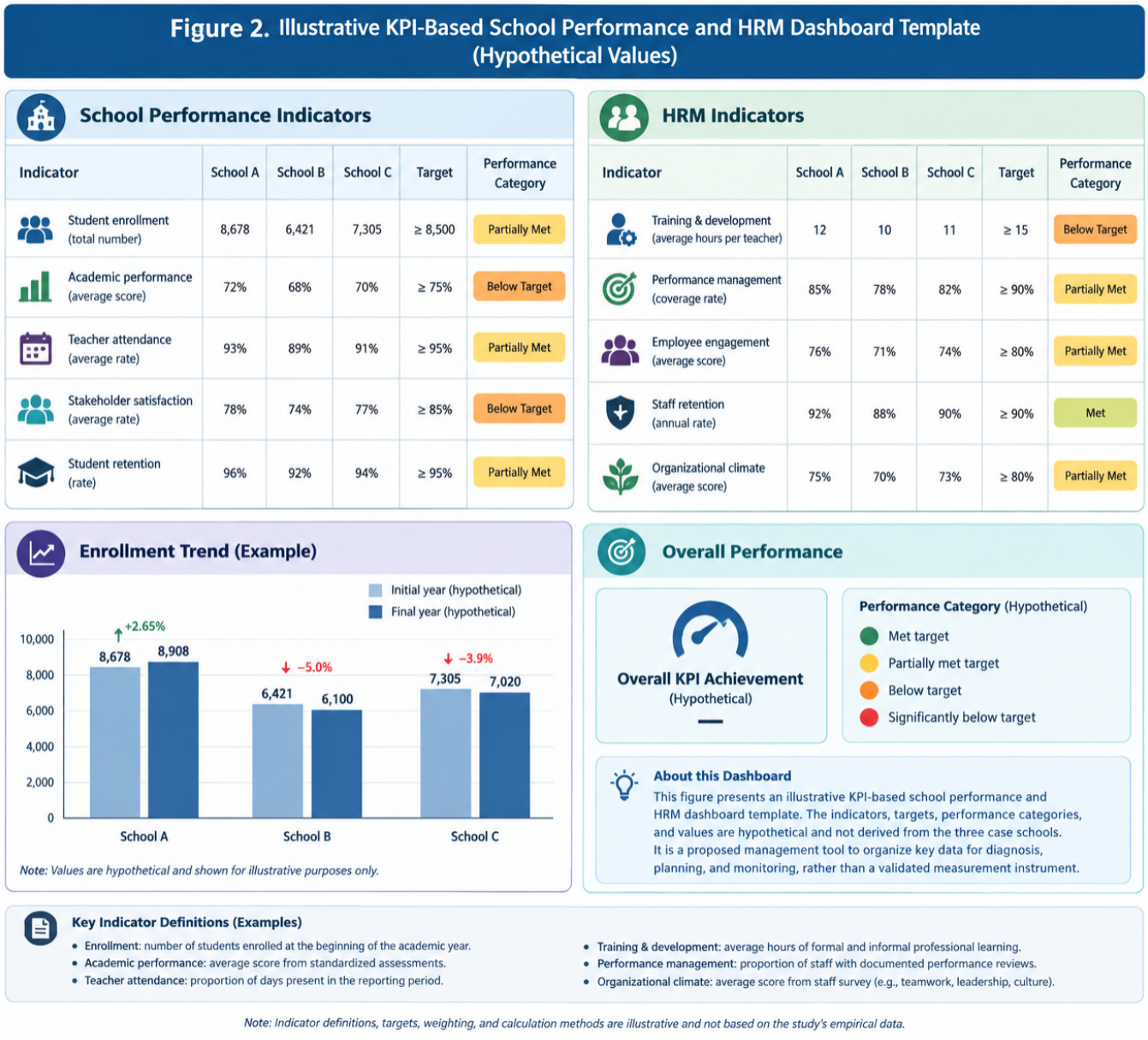


Figure 2. Illustrative KPI-Based School Performance and HRM Dashboard Template (Hypothetical Values).

4. Findings

4.1 Data-based diagnosis of school decline

All three case schools experienced sustained decline over approximately five years, particularly in student intake, academic performance, and organizational effectiveness. Document analysis indicated decreases in student intake ranging from 20% to 45%, accompanied by stagnation or decline in academic achievement. Interview evidence indicated that the schools possessed data but lacked routines and analytical capacity to use it systematically.

A principal explained: "We had the data, but we did not really analyze it. Most decisions were based on assumptions rather than evidence." (Principal, School A). A teacher similarly noted: "We usually focus on completing the curriculum, but we rarely analyze student learning outcomes in depth." (Teacher, School B).

From an HRM perspective, these findings indicate that organizational decline cannot be diagnosed adequately through student outcomes alone. The data also need to reveal the human-capital conditions behind those outcomes: teacher attendance, instructional practice, professional learning, performance expectations,

collaboration, and support needs. The diagnosis stage therefore functions as both an organizational diagnosis and a human-resource diagnosis.

4.2 Strategic intervention design

4.2.1 Vision reset and strategic repositioning

All schools redefined their vision and strategic direction to respond to current challenges and community expectations. A principal stated: "We realized that our vision was outdated. We needed a new direction that reflects today's realities and expectations." (Principal, School C). From an HRM perspective, vision reset matters because strategic priorities must be translated into employee expectations, competencies, roles, and performance standards. A strategic vision becomes operational only when teachers and staff understand what must change in their work.

4.2.2 Data-driven academic interventions

Schools used student performance data to implement student-performance mapping, remedial and enrichment programs, and differentiated instruction. A teacher reported: "After analyzing the test results, we grouped students based on their needs and adjusted our teaching strategies." (Teacher, School A). This finding demonstrates the connection between data use and teacher human capital: evidence becomes organizationally valuable when teachers possess the capability and opportunity to translate it into changed instructional practice.

4.2.3 Strengthening human resources

Human-resource strengthening emerged as a distinct turnaround strategy. Schools used professional development, coaching, teacher attendance information, and instructional-performance data to identify support and improvement needs. One principal stated: "We started using attendance and evaluation data to provide feedback to teachers. It helped us identify who needed support." (Principal, School B).

Performance evidence was linked to feedback and development rather than used only to demand improvement. This resembles an HRM cycle in which data identify capability gaps, targeted support develops human capital, and subsequent monitoring informs further action. The cases suggest that coaching and professional development are most relevant when tied to identified needs.

4.2.4 School culture transformation

Culture transformation focused on discipline, collaboration, accountability, and shared responsibility. A teacher observed: "At first, there was resistance. But gradually, teachers began to work more collaboratively and take responsibility." (Teacher, School C). This finding suggests that employee involvement and organizational culture are important conditions for HRM effectiveness. Turnaround requires changes not only in formal systems but also in norms concerning responsibility, collaboration, learning, and accountability.

4.3 Phased implementation and KPI-based performance management

Implementation occurred in phases and was monitored through KPIs related to enrollment, academic performance, teacher attendance, and stakeholder satisfaction. Regular evaluation meetings were used to review evidence and revise actions. A principal explained: "Every month, we review our data. If something is not working, we revise our approach." (Principal, School A).

KPI monitoring can provide infrastructure for developmental performance management. School-level indicators track progress, while selected employee-level indicators can identify needs for support, coaching, clearer expectations, or accountability. The aim is to align individual and team performance with school priorities while using evidence to guide development

4.4 Cross-case integrated turnaround process

Cross-case analysis produced four interrelated phases: (1) Data-Based Diagnosis; (2) Strategic Intervention Design; (3) Phased Implementation; and (4) Continuous Monitoring. HRM practices connect these phases by translating identified needs into staff development, feedback, collaboration, and performance review.

Phase 1—Data-Based Diagnosis: identify student, organizational, and human-resource performance gaps.

Phase 2—Strategic Intervention Design: translate diagnosis into HRM and educational interventions, including teacher development, coaching, performance expectations, collaboration, and resource allocation.

Phase 3—Phased Implementation: enact changes through leadership alignment, employee participation, professional learning, feedback, and accountability.

Phase 4—Continuous Monitoring: use KPIs to assess employee and organizational outcomes and feed evidence back into the next diagnostic cycle.

The core contribution is therefore not a linear "data-to-action" model. It is a human-capital-centered feedback system in which data identify organizational and employee needs; HRM practices build ability, motivation, and opportunity; employee outcomes influence instructional and organizational performance; and performance data trigger further learning and adjustment.

5. Discussion

5.1 Turnaround as a human-capital problem as well as an organizational problem

The findings suggest that human resource management provides a useful perspective for understanding how schools respond to organizational decline. Across the three cases, participants described practices such as professional development, coaching and feedback, performance monitoring, and staff collaboration as part of their schools' improvement efforts. These practices appear to have helped schools connect identified needs with staff development and performance-management activities. However, the findings should be interpreted in the context of the qualitative evidence: they do not independently establish that the practices caused improvements in human capital or organizational performance. Rather, the cases suggest possible relationships between data-informed diagnosis, HRM practices, and school improvement that warrant further investigation. Decline is visible through organizational indicators such as enrollment and achievement, but the capacity to reverse decline resides substantially in the people who enact the school's strategy. This is consistent with strategic HRM research that conceptualizes human capital as an important mechanism connecting HR practices and organizational performance (Wright & McMahan, 2011). In the present cases, teacher attendance, instructional practice, professional development, collaboration, and accountability were not peripheral issues; they were part of the organizational recovery process. This perspective extends school turnaround research by shifting the question from "What intervention should the school implement?" to "What human capabilities and employee behaviors must change for the intervention to work?" Such a shift makes HRM an explanatory mechanism rather than an administrative support function.

5.2 HRM practices as the mechanism linking strategy to performance

The findings can be interpreted through the ability–motivation–opportunity (AMO) framework. Training, coaching, professional learning, and data literacy are relevant to employees' ability; feedback and clearer expectations may

support motivation; and collaborative inquiry and employee participation can create opportunities to contribute. Jiang et al. (2012) show, in a broad HRM meta-analysis, that skills-, motivation-, and opportunity-enhancing HR practices relate to human capital and employee motivation and, through these mechanisms, to operational and financial outcomes. The present study suggests that a similar logic can be applied to school turnaround, with instructional quality and institutional effectiveness functioning as important organizational outcomes.

In the three cases, the evidence documents the use of several practices consistent with these mechanisms. Participants' accounts also suggest that the practices helped identify development needs and encouraged collaboration. However, the study does not establish the magnitude of changes in employee capability, motivation, or performance attributable to these practices. The AMO framework therefore provides an interpretive lens for understanding the findings, rather than a causal relationship demonstrated by the present data. The proposed connection between employee outcomes and wider school recovery remains a proposition requiring further empirical testing.

5.3 Teacher development must be embedded in the work system

The findings also indicate that professional development should not be separated from daily work. Training becomes more valuable when it responds to diagnosed performance needs, is reinforced through coaching and peer collaboration, and is followed by monitoring and feedback. This interpretation is consistent with the broader learning literature, which identifies formal and informal learning and knowledge sharing as mechanisms of human-capital development (Noe et al., 2014). The findings suggest that professional development is more useful when connected to teachers' work and identified development needs. Coaching, peer collaboration, and feedback may help teachers apply learning in practice, although the extent of these effects was not independently measured in this study. Rahman (2022), examining schools in regional Indonesia, identifies school norms, resources, principal leadership, and professional interactions among teachers as conditions shaping teachers' professional learning and development. This study provides relevant contextual support for considering how school conditions may shape professional learning, while the present cases offer a complementary perspective on how development and performance-management practices feature in turnaround efforts. Accordingly, turnaround programs should move from event-based training toward continuous development systems. A practical sequence is: diagnose capability needs → establish individual/team development goals → provide targeted learning → apply learning in practice → coach and provide feedback → measure performance change → revise development plans. This sequence makes teacher development a strategic HRM process rather than a compliance requirement.

5.4 Performance management should be developmental and accountable

The cases show that attendance and instructional-performance data were used to identify support needs. This is consistent with the idea that performance management should connect expectations, evidence, feedback, and development. However, a turnaround context also requires accountability because persistent underperformance can undermine collective recovery. The appropriate balance is developmental accountability: employees receive clear standards and evidence-based feedback, while the organization provides reasonable opportunities, resources, coaching, and support for improvement.

5.5 Leadership and culture as conditions for HRM effectiveness

Leadership remains essential because HRM systems do not operate automatically. Principals and other leaders interpret data, allocate development resources, establish expectations, create psychological and professional conditions

for learning, and model accountability. The findings therefore reinforce transformational and instructional leadership perspectives while adding a human-resource dimension: leadership is partly the process of mobilizing, developing, and aligning human capital for strategic recovery.

Culture also determines whether HRM practices become routine. The observed shift from resistance toward collaboration and responsibility indicates that turnaround involves changes in employee norms and relationships. High-involvement approaches emphasize the importance of employee participation and the processes through which work practices affect employee and operational outcomes (Boxall & Macky, 2009). Thus, sustainable turnaround requires both formal HRM systems and cultural conditions that encourage employees to learn, participate, and take responsibility.

5.6 Data as HRM infrastructure

A central contribution of the study is the reframing of DDDM as HRM infrastructure. Data are useful not only for monitoring students and school-level outcomes but also for identifying employee capability and performance needs. This creates a stronger bridge between DDDM and HRM: data-based diagnosis informs people-related intervention; people-related intervention changes employee outcomes; employee outcomes contribute to organizational performance; and performance evidence informs the next cycle. This cyclical logic addresses the fragmentation between school turnaround, DDDM, and HRM.

5.7 Sustainable turnaround

Sustainable turnaround is an important objective of school improvement, but it should be distinguished from the changes documented within the present study. The cases provide evidence of turnaround-related practices, including performance monitoring, professional development, feedback, collaborative work, and the use of data to review school priorities. These practices offer insight into how schools attempt to address organizational decline. However, the available evidence does not establish that the schools achieved sustained recovery or that any recovery was caused by HRM practices.

The study consequently treats sustainability as a proposed outcome of an integrated turnaround process rather than a demonstrated result. The conceptual model suggests that recurring teacher development, performance management, employee participation, and data-informed organizational learning could help schools maintain improvement efforts over time. Recruitment and selection, employee well-being initiatives, retention, and financial sustainability are additional potential components or outcomes that schools may consider when adapting the model; they were not established as observed results of the three cases. Future research using longitudinal enrolment and achievement records, repeated employee measures, staff retention data, and relevant financial indicators could assess whether the proposed practices are associated with sustained improvement. See **Figure 3**.

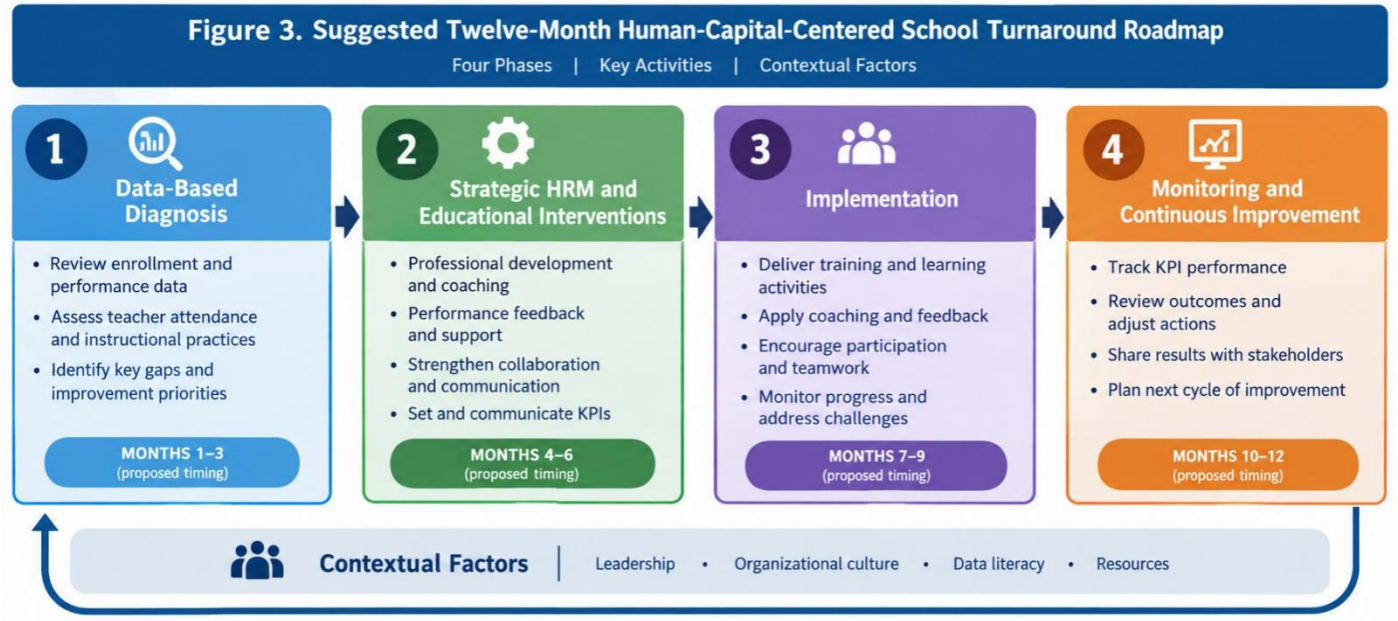


Figure 3. Suggested 12-Month Human-Capital-Centered School Turnaround Roadmap

The twelve-month period is a proposed planning horizon for adapting the study's findings into a practical school improvement process. It does not represent a verified implementation timeline followed by Schools A, B, or C. The stages, activities, and anticipated outcomes are recommendations for future application and should be adapted to each school's baseline conditions, resources, and improvement priorities.

The suggested roadmap translates the study's findings into a possible implementation sequence. The diagnosis stage establishes baseline conditions and identifies organizational and human-resource needs. Intervention design links these needs with appropriate educational and HRM responses. Implementation involves professional learning, coaching, feedback, collaboration, and other selected activities. Monitoring evaluates progress against predefined indicators and informs subsequent adjustments. The proposed twelve-month schedule is illustrative; actual implementation and outcomes would need to be documented and evaluated separately. The four phases summarize a proposed twelve-month roadmap for applying the study's findings. The timeline is illustrative and should not be interpreted as a verified implementation schedule in the three case schools. Detailed activities and proposed timing are provided in **Table 1**. These proposed outcomes are not demonstrated effects of the present study.

Table 1. Monthly Schedule of Human-Capital-Centered School Turnaround Roadmap

Proposed period	Phase	Key activities	Expected focus
Month 1-3	Data-based diagnosis	Review school performance, enrollment, attendance, and instructional data; identify priorities	Define improvement needs
Month 4-6	Strategic intervention design	Establish development goals, coaching plans, performance expectations, and indicators	Prepare targeted interventions
Month 7-9	Implementation	Conduct professional learning, coaching, feedback, and collaborative activities	Apply planned interventions
Month 10-12	Monitoring and continuous improvement	Review indicators, discuss progress, adjust interventions, and plan the next cycle	Inform ongoing improvement

6. Conclusion

This study examined school turnaround through a human resource management perspective across three secondary schools experiencing sustained decline. The findings identify four interrelated phases: data-based diagnosis, strategic intervention design, phased implementation, and continuous monitoring. Across these phases, the cases documented the use of student performance and teacher attendance data, professional development, coaching, feedback, collaborative work, and KPI review.

The findings suggest that HRM provides a useful perspective for understanding how schools identify employee-related needs and organize responses to performance challenges. Participants' accounts indicate that data-informed feedback and collaborative practices were relevant to the schools' improvement efforts. Nevertheless, the qualitative evidence does not establish that HRM practices caused improvements in employee performance, student achievement, enrollment, stakeholder confidence, or long-term institutional sustainability. The findings should therefore be understood as context-specific evidence of practices and perceived processes, rather than proof of causal effects or completed school recovery.

The study contributes a human-capital-centered, data-driven turnaround model that integrates organizational diagnosis, HRM-related interventions, employee outcomes, organizational performance, and KPI-based feedback. The model combines processes observed in the cases with theoretically informed propositions for future practice. Components such as recruitment and selection, employee well-being initiatives, staff retention, and financial sustainability are proposed extensions rather than established findings from the three schools.

Practically, the model encourages school leaders to connect performance information with targeted professional development, coaching, constructive feedback, employee participation, and regular review of improvement priorities. Its effectiveness should be evaluated through longitudinal research that specifies indicator definitions, establishes baseline measurements, tracks employee and organizational outcomes, and examines alternative explanations for observed changes. Such research would help determine whether, under what conditions, and through which mechanisms HRM practices contribute to sustainable school turnaround.

This study highlights the relevance of human resource management to understanding school turnaround in three declining secondary schools. The cases document how school leaders used data, professional development, coaching, feedback, and staff collaboration in their responses to organizational challenges. The findings suggest that these practices may help schools align staff development and performance-management efforts with improvement priorities. However, the study does not establish that these practices produced measurable improvements in human capital, organizational recovery, or long-term performance.

7. Implications

7.1 Theoretical implications

The study extends school turnaround theory by treating HRM as a mechanism through which strategy is enacted and sustained.

It connects DDDM with strategic HRM by showing how data can identify human-capital needs and trigger targeted development and performance-management responses. It positions teacher human capital as a proximal mechanism linking HRM practices to instructional and organizational outcomes. It introduces a cyclical model integrating diagnosis, HRM intervention, employee outcomes, organizational outcomes, and feedback.

7.2 Practical implications

Develop an integrated school HRM dashboard covering teacher attendance, professional-development participation, coaching, performance review, instructional practice, collaboration, and development actions alongside student and enrollment indicators.

Replace generic training with needs-based professional development linked to diagnosed performance and capability gaps.

Establish recurring coaching and feedback cycles so that training is translated into classroom and organizational practice.

Use performance management as developmental accountability: set clear expectations, provide evidence-based feedback, offer support, and follow up on improvement.

Strengthen employee participation in diagnosis and problem solving so that teachers become co-owners of turnaround rather than passive recipients of change.

7.3 Policy implications

Education authorities and school networks should support turnaround through integrated capacity-building systems rather than isolated compliance programs. Policy and governance arrangements should provide access to professional learning, leadership development, data infrastructure, and HRM capability. Accountability systems should balance performance expectations with organizational support and development opportunities.

7.4 Limitations and future research

A further limitation concerns the extent to which the proposed human-capital-centered school turnaround framework can be evaluated from the present evidence. The qualitative multiple-case design provides insight into practices, participants' accounts, and perceived relationships among HRM and school-improvement activities; it does not independently establish the effectiveness of the full model or demonstrate that improvements are sustained over the long term. The proposed links between HRM practices, employee-level mechanisms, and organizational outcomes should therefore be treated as propositions for further investigation. Future longitudinal or comparative studies could examine how these relationships develop over time and whether the proposed framework is applicable across different school contexts.

8. Final model

The Human-Capital-Centered, Data-Driven School Turnaround Model

The study proposes a human-capital-centered, data-driven school turnaround model based on the practices and processes identified across three secondary-school cases. The model integrates five connected elements:

1.**Data-based diagnosis:** Use student performance, enrolment, teacher attendance, instructional practice, and other available organizational information to identify performance gaps and improvement priorities.

2.**Strategic HRM and educational interventions:** Connect the identified needs with relevant responses, including professional development, coaching, feedback, performance management, employee participation, and instructional interventions.

3.**Employee-level processes:** Examine whether these practices are associated with changes in teacher capability, collaboration, motivation, engagement, and job performance. These are proposed mechanisms and outcomes to be assessed, rather than uniformly demonstrated effects in the present cases.

4.**Organizational outcomes:** Monitor instructional quality, student achievement, enrolment, stakeholder confidence, and organizational effectiveness.

Improvements in these areas should be established through dated records rather than inferred from the implementation of HRM practices alone.

5.**KPI-based monitoring and feedback:** Review performance indicators periodically, assess progress against defined baselines and targets, and use the evidence to revise priorities and interventions.

Leadership, organizational culture, data literacy, and resource availability are treated as contextual conditions that may influence how these processes operate. Recruitment and selection, employee well-being, turnover intention, and financial sustainability are proposed extensions for future application where relevant data and institutional conditions permit their assessment.

The model is cyclical rather than strictly linear. Performance monitoring can inform subsequent diagnosis, while the interpretation of results can guide adjustments to HRM and educational interventions. This feedback process represents the proposed logic of the framework; the present study does not establish that every link in the model occurred or that it produced sustained recovery in all three schools.

The central proposition is that **data-informed diagnosis, when connected to appropriate HRM and educational practices, may help schools address employee-related and organizational performance gaps.** Whether these practices produce measurable employee improvement and sustained school recovery depends on implementation, contextual conditions, and outcomes that must be evaluated over time. The model is therefore presented as an analytically informed framework for school turnaround, grounded in qualitative case evidence and intended for further testing, refinement, and contextual adaptation.

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