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Human Resource Technology and Faculty Performance Management in Higher Education: Evidence from a Chinese Vocational College

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Abstract

The digital transformation of human resource management has created opportunities for higher education institutions to improve the efficiency, transparency, and responsiveness of faculty performance systems. However, implementing HR technology does not necessarily produce corresponding improvements in performance-management outcomes. This study examined HR technology and faculty performance management at a vocational college in China. It employed a descriptive-correlational design involving 224 full-time faculty members who had used the institution's HR technology and participated in its performance-evaluation process. Data were collected using a researcher-developed four-point questionnaire. The instrument demonstrated acceptable to excellent internal consistency, with Cronbach's alpha coefficients ranging from .782 to .902. Weighted means and rankings were used for descriptive analysis, while Spearman's rho was used to test the relationships between the constructs. Respondents generally agreed that the HR technology was usable, accessible, available, and supportive of performance-related feedback and communication. Feedback and communication support received the highest assessment, whereas data accuracy and transparency received the lowest. Faculty performance management was also assessed positively, particularly regarding evaluation fairness and timeliness, although clarity of performance standards received the lowest rating. None of the tested cross-construct correlations reached statistical significance. The findings indicate that technological availability alone may be insufficient without stronger data governance, clearer role-aligned standards, and closer integration between HR systems and institutional evaluation processes.

Keywords: *digital human resource management; faculty performance management; higher education; HR technology; organizational innovation; vocational colleges*

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1. Introduction

Digital transformation has altered how organizations manage employees, information, and performance. In higher education, human resource technology increasingly supports administrative functions that were previously conducted through paper-based records, fragmented databases, and manually coordinated evaluation procedures. Digital HR platforms can centralize faculty information, facilitate performance reporting, provide access to evaluation records, and support communication between employees and institutional administrators. Their organizational value, however, depends not merely on the presence of technology but on whether the system is usable, accessible, reliable, transparent, and integrated with existing management processes.

Faculty performance management is a central component of institutional governance because it connects individual responsibilities with educational quality, research productivity, professional development, and organizational objectives. Higher education institutions use performance-management systems to clarify expectations, document accomplishments, conduct evaluations, communicate results, and identify areas requiring improvement. When these processes are delayed, inconsistently applied, or based on unclear standards, faculty members may question the credibility and fairness of the evaluation system. Performance management therefore involves more than the periodic assignment of ratings. It requires clear standards, procedurally fair assessment, timely review, and meaningful communication of performance information.

Human resource technology has been introduced as a potential mechanism for addressing these concerns. Automated performance systems can reduce repetitive administrative work, improve access to employee information, record teaching and research accomplishments, and make evaluation procedures more traceable. Technology can also

enable faculty members to review their records and monitor the progress of performance assessments. Nevertheless, digitalization does not automatically improve performance management. A technically functioning system may remain administratively disconnected from performance standards, evaluation responsibilities, and feedback procedures. Institutions may therefore invest in technological infrastructure without producing corresponding improvements in the faculty's experience of performance management.

The effectiveness of HR technology can be examined through both system-related and information-related dimensions. The DeLone and McLean Information Systems Success Model identifies system quality and information quality as central conditions affecting information-system use and organizational outcomes (DeLone & McLean, 1992, 2003). In the present study, system quality is reflected in usability, accessibility, and availability, while information quality is represented by data accuracy and transparency. Feedback and communication support are also relevant because performance-management technology operates as an organizational interface through which faculty members receive information, monitor evaluation progress, and communicate concerns.

Technology acceptance further depends on the degree to which users can operate a system without unnecessary difficulty. The Technology Acceptance Model emphasizes perceived ease of use as a major determinant of technology adoption (Davis, 1989). In a higher education setting, even a technically advanced HR platform may have limited organizational value when faculty members encounter complicated procedures, restricted remote access, unstable system performance, or inadequate support documentation. Differences in users' technological capabilities may likewise create unequal access to system functions and weaken institutional efforts to standardize performance-management processes.

Beyond technological functionality, faculty performance management is shaped by perceptions of organizational justice. Greenberg's (1987) framework distinguishes distributive, procedural, and interactional justice. These dimensions are applicable to performance management because faculty members assess not only the outcomes they receive but also the fairness of evaluation procedures and the quality of communication surrounding those procedures. A digital system may enhance traceability and reduce certain forms of administrative discretion, but it cannot by itself ensure that performance standards are appropriate, consistently applied, or aligned with faculty responsibilities. Technology must therefore be examined in relation to the institutional processes it is intended to support.

The study identified practical concerns in the implementation of HR technology at Fujian Forestry Vocational and Technical College. These included differences in faculty members' capacity to use the system, limitations in data accuracy, fragmented information, insufficient alignment between technological functions and performance evaluation, and continuing concerns about fairness and feedback timeliness. Such conditions may restrict the organizational value of HR technology even when users generally regard the system as functional. They also illustrate the distinction between technology implementation and technology-enabled management improvement.

Research on electronic and digital human resource management indicates that technology can improve access, process efficiency, and information handling, but organizational benefits depend on implementation context, strategic integration, and the quality of supporting HR practices (Marler & Fisher, 2013; Stone et al., 2015; Strohmeier, 2020). Performance-management research likewise emphasizes system alignment, communication, justice, feedback, and role-relevant standards rather than treating evaluation as a purely technical exercise (Decramer et al., 2013; Schleicher et al., 2018). Nevertheless, several gaps remain. Much of the existing discussion treats HR technology as a unified organizational intervention rather than distinguishing among usability, accessibility, data quality, transparency, and communication support. Research also tends to assume that technological implementation improves performance management without adequately testing whether faculty perceptions of HR technology are statistically associated with clarity, fairness, and timeliness.

The vocational-college context warrants particular attention because such institutions must manage diverse teaching, technical, research, and service responsibilities while responding to broader digital-transformation requirements. A performance-management system that applies standardized indicators without sufficient alignment with specific faculty roles may remain administratively efficient but substantively unclear. Similarly, a system that makes evaluation information accessible may not improve perceived fairness when the standards, responsibilities, and review procedures embedded in the process are inadequately defined. Examining HR technology and performance management as related but distinct organizational systems can therefore produce a more cautious assessment of digital HR innovation.

This study contributes to enterprise strategy and management innovation by evaluating whether HR technology is associated with the organizational process it is intended to strengthen. Rather than presuming that digitalization necessarily improves faculty performance management, it examines the perceived quality of the technology, the effectiveness of the performance-management process, and the statistical relationship between them. The findings can inform institutional decisions concerning HR-system design, data governance, performance-standard development, and the integration of technological and administrative processes.

Objectives of the Study

This study aimed to examine the relationship between human resource technology and faculty performance management in a Chinese vocational college. Specifically, it sought to:

1. assess HR technology in terms of system usability, accessibility and availability, data accuracy and transparency, and feedback and communication support;
2. evaluate faculty performance management in terms of clarity of performance standards, fairness of the evaluation process, and timeliness of performance review;
3. determine whether a significant relationship exists between HR technology and faculty performance management;
4. develop an action plan for strengthening HR information accuracy and transparency and improving the clarity of faculty performance standards.

2. Review of Related Literature

2.1 Information-System Quality and Technology Acceptance

The organizational value of human resource technology depends partly on the quality of the underlying information system. The DeLone and McLean Information Systems Success Model identifies system quality and information quality as principal determinants of system use, user satisfaction, and organizational outcomes (DeLone & McLean, 1992, 2003). Subsequent synthesis of information-systems research confirms that system quality, information quality, use, satisfaction, and net benefits should be examined as interrelated rather than isolated dimensions (Petter et al., 2008). In digital HR management, system quality encompasses usability, reliability, accessibility, and availability, while information quality concerns the accuracy, completeness, relevance, and transparency of employee and performance data.

System usability is particularly relevant because faculty members must be able to perform routine HR and performance-related activities without unnecessary technical difficulty. The Technology Acceptance Model maintains that perceived ease of use influences an individual's willingness to adopt and continue using a technological system (Davis, 1989). However, e-HRM research shows that ease of use alone does not establish strategic value; benefits remain contingent on organizational capability, process redesign, user support, and alignment with HR objectives (Marler & Fisher, 2013; Strohmeier, 2020). Technology may alter how HR services are delivered, but its effectiveness must still be judged by whether it enables the institution to achieve substantive human-resource and management goals (Stone et al., 2015).

Accessibility and availability extend beyond ease of operation. Accessibility concerns whether authorized users can reach the system through appropriate devices and locations, while availability refers to stable operation, acceptable loading performance, and limited interruption. Research on advanced technologies in HRM indicates that digital tools can expand information access, decision support, and learning opportunities, while simultaneously creating concerns involving skills, privacy, bias, and human oversight (Vrontis et al., 2022). Comparable evidence from educational technology likewise shows that widespread use of digital platforms can coexist with more limited adoption of adaptive systems when access, cost, training, privacy, and algorithmic-bias concerns remain unresolved (Rao et al., 2025). In an adjacent organizational setting, adoption was strongest where usability and workflow compatibility were evident, whereas security assurance, implementation cost, and organizational conditions remained more cautious areas of perception (Carandang et al., 2026).

2.2 Data Accuracy, Transparency, and Communication Support

Data quality is fundamental to technology-enabled performance management because faculty evaluation depends on the information recorded, processed, and presented by the HR system. Information-system research treats accuracy, completeness, relevance, and timeliness as central attributes of information quality (Petter et al., 2008). Data-governance scholarship further emphasizes that reliable organizational data require clearly assigned decision rights, accountabilities, standards, and control mechanisms rather than merely a shared database (Abraham et al., 2019). Related qualitative evidence from accounting practice similarly indicates that deeper technological integration depends on data readiness, verification procedures, governance safeguards, management support, and continued human judgment rather than on system availability alone (Bendal et al., 2026).

Data transparency concerns whether performance information, evaluation indicators, and relevant procedures are visible and traceable to affected users. Transparent systems allow faculty members to inspect their records, understand the basis of evaluation, and identify possible errors. Yet visibility is insufficient when users do not know who owns the data, how corrections are approved, or how conflicting records are reconciled. A governance-oriented approach therefore links transparency with documented standards, review authority, correction procedures, and accountability for data quality (Abraham et al., 2019). These mechanisms are especially important in performance management because the information stored in the system can influence ratings, development decisions, and perceptions of procedural fairness.

Feedback and communication support represent the interactive dimension of HR technology. A digital platform may provide timely notifications, allow faculty members to monitor evaluation progress, and facilitate communication with administrators. Performance-appraisal research, however, demonstrates that reactions to evaluation are shaped by the broader social and communication context in which ratings are produced and explained (Levy & Williams, 2004). Feedback is most useful when it is specific, task-focused, actionable, and connected to continuing performance dialogue; poorly designed feedback can fail to improve performance and may even produce adverse effects (Kluger & DeNisi, 1996). Contemporary performance-management approaches therefore favor regular coaching, goal review, and on-the-job learning over an exclusively annual or administrative evaluation event (Pulakos et al., 2015).

2.3 Faculty Performance Standards, Fairness, and Timeliness

The clarity of performance standards is a basic condition of effective faculty performance management. Performance indicators should communicate what is expected, how accomplishments will be evaluated, and how teaching, research, service, and other institutional responsibilities will be weighted. Performance-management scholarship treats goal setting, performance monitoring, evaluation, feedback, and development as components of an integrated system rather than separate administrative acts (Schleicher et al., 2018). In higher education, satisfaction with employee performance management has been associated with internal consistency among system features, communication, and appropriate alignment with academic employment conditions (Decramer et al., 2013). Standards should therefore be sufficiently explicit for consistent evaluation while remaining responsive to differences in faculty roles, disciplines, workload, and appointment conditions.

Fairness is not confined to the final evaluation rating. It also encompasses the consistency, transparency, and participatory character of the process through which the rating is produced. Adams' (1965) equity theory explains that employees evaluate fairness by comparing their contributions and received outcomes, while Greenberg's (1987) organizational justice framework distinguishes distributive, procedural, and interactional justice. Meta-analytic evidence confirms that these justice dimensions are related to important employee attitudes and behaviors, while also remaining conceptually distinct (Colquitt et al., 2001). In faculty performance management, fairness therefore depends on the appropriateness of standards, consistent application, opportunities for voice or appeal, adequate explanation, and respectful interaction throughout the evaluation process (Levy & Williams, 2004).

Timeliness determines whether performance information can still guide current behavior and development. Delayed evaluation may complete an administrative requirement without helping faculty members adjust goals, correct deficiencies, or strengthen effective practices. Feedback research shows that timing alone is not sufficient; the content and focus of feedback determine whether it directs attention toward the task and supports improvement (Kluger & DeNisi, 1996). Performance management is therefore more developmental when supervisors and employees engage in recurring goal review, coaching, and adjustment rather than waiting for the formal rating period (Pulakos et al., 2015). Adjacent workplace evidence also identifies organizational support, collaboration, communication, and task-related confidence as important correlates of employee productivity, reinforcing the value of responsive performance communication (Espelita & Atento, 2026).

2.4 Integration of HR Technology and Faculty Performance Management

The literature generally presents HR technology as a mechanism for strengthening performance management through improved access, information quality, process visibility, and administrative coordination. Nevertheless, reviews of e-HRM caution that digitalization does not by itself produce strategic outcomes; value depends on the organizational arrangements through which technology is selected, implemented, and used (Marler & Fisher, 2013; Strohmeier, 2020). A parallel socio-technical framework in healthcare proposes that data integration affects organizational outcomes through analytics capability and decision quality, with organizational alignment determining whether technical investments produce coordinated benefits (Atento et al., 2025).

Within higher education, digital transformation involves more than converting manual transactions into electronic forms. A systematic review of digital transformation in higher education institutions identifies strategy, organizational structure, people, processes, technology, and stakeholder experience as interconnected elements of institutional change (Castro Benavides et al., 2020). Research on university performance-management systems similarly indicates that alignment, communication, and differentiated employment conditions shape employee satisfaction with evaluation arrangements (Decramer et al., 2013). HR platforms should therefore be integrated with faculty-role definitions, performance standards, review responsibilities, development processes, and institutional governance rather than treated as stand-alone administrative applications.

These relationships should not be treated as automatic. A system can be usable and accessible while remaining disconnected from the substantive design of performance standards. Accurate data cannot ensure fairness when criteria are inappropriate or inconsistently applied. Likewise, real-time access does not necessarily create timely developmental feedback when supervisors and faculty members do not engage in regular performance discussions. Technology may function as enabling infrastructure, but its management effects depend on data governance, standard setting,

administrative coordination, faculty participation, and communication. Comparable implementation studies show that favorable engagement with formal management systems may coexist with documentation and resource burdens, and that operational gains remain contingent on leadership reinforcement, training, communication, monitoring, and other organizational practices (Garcia & Atento, 2026; Gamasan & Atento, 2026).

2.5 Synthesis and Research Gaps

The reviewed literature indicates that effective digital HR management requires the alignment of system quality, information quality, data governance, organizational justice, and performance-management practice. Usability, accessibility, and availability facilitate system use, but they do not independently establish organizational value (Davis, 1989; Marler & Fisher, 2013; Petter et al., 2008). Accurate and transparent data require defined ownership, standards, validation, and correction mechanisms (Abraham et al., 2019). Clear role-relevant standards, fair procedures, meaningful communication, and continuing feedback define the quality of the performance-management process (Colquitt et al., 2001; Decramer et al., 2013; Schleicher et al., 2018).

Several limitations remain. First, much of the literature discusses HR technology as a broad intervention without separately examining usability, accessibility, availability, data quality, transparency, and communication support. Second, some studies prioritize evaluation outcomes while giving less attention to clarity of standards, procedural fairness, and timeliness. Third, research frequently examines technology adoption or performance-management effectiveness independently, leaving limited evidence about whether favorable perceptions of one system are associated with favorable perceptions of the other. Fourth, evidence from vocational-college settings remains limited. The present study responds by separately examining four dimensions of HR technology and three dimensions of faculty performance management and by testing the relationships between them rather than presuming that digitalization necessarily improves management effectiveness. Within higher education, digitalization has likewise been observed to remain oriented toward pragmatic continuity rather than coordinated institutional transformation when governance, curriculum, and support mechanisms are fragmented (Atento, 2025).

3. Methodology

3.1 Research Design

The study employed a descriptive-correlational research design. The descriptive component assessed faculty members' perceptions of the institution's human resource technology and faculty performance-management practices. The correlational component examined whether perceptions of HR technology were significantly associated with perceptions of faculty performance management. Because the study did not manipulate the variables or assign participants to experimental conditions, the findings were interpreted as associations rather than causal effects.

3.2 Research Setting and Participants

The study was conducted at Fujian Forestry Vocational and Technical College in China. The target population comprised 533 full-time faculty members employed by the institution in 2025. The final sample consisted of 224 respondents. Eligible respondents were full-time faculty members who had been formally employed for at least one year, had completed at least one faculty performance-evaluation cycle, were familiar with the institution's performance-management system, and had used an institutional HR technology application. Part-time instructors, adjunct or external faculty members, administrative personnel, and nonteaching employees were excluded.

3.3 Research Instrument

Data were collected using a researcher-developed questionnaire concerning HR technology and faculty performance management. The instrument was informed by the DeLone and McLean Information Systems Success Model, the Technology Acceptance Model, organizational justice theory, and relevant literature. The measures analyzed in the study covered four HR technology dimensions: system usability, accessibility and availability, data accuracy and transparency, and feedback and communication support. Faculty performance management was assessed through clarity of performance standards, fairness of the evaluation process, and timeliness of performance review. Each reported dimension contained five statements. Responses were recorded using a four-point Likert scale: 4 - Strongly Agree, 3 - Agree, 2 - Disagree, and 1 - Strongly Disagree. Mean ranges were interpreted as follows: 3.50-4.00, Strongly Agree; 2.50-3.49, Agree; 1.50-2.49, Disagree; and 1.00-1.49, Strongly Disagree.

The questionnaire was evaluated by three specialists in human resource management from higher education and vocational-college settings. Their comments concerning the relevance, clarity, and appropriateness of the statements were incorporated before pilot testing. The revised instrument was pilot-tested among 30 full-time faculty members who were not included in the final survey.

3.4 Reliability of the Measures

Internal consistency was assessed using Cronbach's alpha. As summarized in Table 1, the coefficients ranged from .782 to .902, indicating acceptable to excellent internal consistency across the seven reported dimensions.

Table 1. *Internal Consistency of the Study Measures*

Construct and dimension	Items	Cronbach's α	Interpretation
HR technology - System usability	5	.892	Good
HR technology - Accessibility and availability	5	.902	Excellent
HR technology - Data accuracy and transparency	5	.855	Good
HR technology - Feedback and communication support	5	.848	Good
Faculty performance management - Clarity of performance standards	5	.819	Good
Faculty performance management - Fairness of the evaluation process	5	.782	Acceptable
Faculty performance management - Timeliness of performance review	5	.799	Acceptable

The coefficients indicate that the items within each dimension measured sufficiently coherent constructs for subsequent analysis. Accessibility and availability produced the highest reliability coefficient, while fairness of the evaluation process produced the lowest; nevertheless, all reported coefficients exceeded .70.

3.5 Data-Gathering Procedure

The questionnaire was finalized after expert review and pilot testing. Before the main data collection, the researcher secured ethical clearance and requested authorization from the administration and Human Resource Office of the participating institution. Data were gathered over approximately two months using online and printed questionnaires. The online version was distributed through the institution's official faculty communication platforms, while printed questionnaires were administered during faculty meetings, academic activities, and training sessions. Completed questionnaires were reviewed for completeness and consistency. Questionnaires containing substantial missing data or invalid entries were excluded, while valid responses were coded for analysis.

3.6 Data Analysis

Weighted means and rankings were used to summarize faculty assessments of the four HR technology dimensions and the three faculty performance-management dimensions. Spearman's rank-order correlation coefficient was used to test the relationships between the HR technology measures and faculty performance-management measures. Statistical significance was evaluated at an alpha level of .05. Data were analyzed using jamovi 2.7.38 (The jamovi project, 2026).

3.7 Ethical Considerations

The study obtained ethical clearance from the relevant institutional research ethics committee before data collection. Participants received information concerning the purpose of the research, the questionnaire contents, the intended use of the data, confidentiality protections, and the voluntary nature of participation. Informed consent was obtained before respondents completed the questionnaire. The survey was administered anonymously and did not request direct identifiers such as names, employee numbers, or departmental affiliations. Respondents could discontinue participation at any time without penalty. The collected data were restricted to academic use, stored securely, and scheduled for disposal after the prescribed retention period.

4. Results and Discussion

4.1 Assessment of Human Resource Technology

The respondents generally assessed the institution's human resource technology positively. As summarized in Table 2, all four dimensions received an Agree interpretation, with an overall composite mean of 3.01.

Table 2. *Assessment of Human Resource Technology*

Dimension	Composite mean	Interpretation	Rank
Feedback and communication support	3.05	Agree	1
Accessibility and availability	3.03	Agree	2
System usability	3.00	Agree	3

Dimension	Composite mean	Interpretation	Rank
Data accuracy and transparency	2.96	Agree	4
Overall composite mean	3.01	Agree	-

Feedback and communication support received the highest composite mean of 3.05. The highest-rated item under this dimension was the ability to view the progress and review process of a performance evaluation in real time, with a weighted mean of 3.13. Timely feedback on work performance and task completion also received a favorable assessment at 3.10. These results indicate that faculty members recognized the system's capacity to display evaluation information and communicate updates during the assessment process.

Nevertheless, the item concerning the availability of a convenient channel for faculty members and administrators to communicate about performance and feedback concerns received the lowest mean within the dimension at 2.97. Although still interpreted as Agree, this result suggests that the system functioned more effectively as an information-monitoring platform than as a fully interactive communication mechanism.

Accessibility and availability ranked second, with a composite mean of 3.03. System stability received the highest item-level assessment at 3.09, followed by access to performance records and assessment results at 3.06. Remote access through mobile phones and computers received the lowest rating at 2.97. This indicates that respondents generally regarded the platform as stable and accessible, although cross-device and off-campus access remained comparatively weaker.

System usability obtained a composite mean of 3.00. The simplicity and comprehensibility of the interface received the highest weighted mean of 3.12, whereas the system's ability to support performance reporting and data queries without technical obstacles received the lowest mean of 2.88. A system may therefore appear easy to navigate while still presenting difficulties during more complex or transaction-intensive HR activities.

Data accuracy and transparency received the lowest composite mean of 2.96. Faculty members gave the highest rating to the accurate and complete recording of their teaching and research accomplishments, with a mean of 3.08. However, the timely correction of inaccurate performance data received the lowest item-level assessment among all HR technology indicators, at 2.85. This identifies data-correction procedures as the most evident weakness in the institution's HR technology.

4.2 Assessment of Faculty Performance Management

Faculty performance management also received a generally positive assessment. The three dimensions produced closely distributed composite means ranging from 2.97 to 2.99, with an overall composite mean of 2.98.

Table 3. *Assessment of Faculty Performance Management*

Dimension	Composite mean	Interpretation	Rank
Fairness of the evaluation process	2.99	Agree	1
Timeliness of performance review	2.98	Agree	2
Clarity of performance standards	2.97	Agree	3
Overall composite mean	2.98	Agree	-

Fairness of the evaluation process ranked first, with a composite mean of 2.99. The availability of a reasonable channel through which faculty members could question evaluation results and explain their position received the highest mean of 3.08. By contrast, the general statement that the evaluation process was fair and reasonable received the lowest mean within the dimension at 2.96. The presence of an appeal channel represents an important procedural safeguard, but it does not independently establish that all evaluation standards, decisions, and implementation practices are perceived as fully fair.

Timeliness of performance review ranked second, with a composite mean of 2.98. Receiving performance feedback within a reasonable period obtained the highest weighted mean of 3.06, while regular performance-related communication outside the formal assessment stage received the lowest mean of 2.91. The institution therefore appeared relatively effective in providing feedback after an evaluation but less consistent in maintaining performance discussions throughout the work cycle.

Clarity of performance standards received the lowest composite mean of 2.97. Clear and measurable performance targets obtained the highest item-level mean of 3.08. However, the alignment of evaluation standards with faculty job responsibilities received the lowest mean of 2.91. Faculty members therefore appeared to understand the measurable targets assigned to them but were comparatively less convinced that the standards adequately reflected the actual requirements of their positions. Performance indicators can be clearly quantified without adequately representing differences in teaching assignments, research expectations, administrative responsibilities, or institutional service.

4.3 Relationship Between HR Technology and Faculty Performance Management

Spearman's rank-order correlation was used to examine the relationships between the four dimensions of HR technology and the three dimensions of faculty performance management. Table 4 presents the twelve cross-construct correlations.

Table 4. Relationships Between HR Technology and Faculty Performance Management

HR technology dimension	Performance-management dimension	Spearman's rho	p	Interpretation
System usability	Clarity of performance standards	-.083	.214	Not significant
System usability	Fairness of the evaluation process	.018	.792	Not significant
System usability	Timeliness of performance review	-.000	.996	Not significant
Accessibility and availability	Clarity of performance standards	.062	.355	Not significant
Accessibility and availability	Fairness of the evaluation process	-.104	.122	Not significant
Accessibility and availability	Timeliness of performance review	-.115	.085	Not significant
Data accuracy and transparency	Clarity of performance standards	-.041	.541	Not significant
Data accuracy and transparency	Fairness of the evaluation process	-.024	.717	Not significant
Data accuracy and transparency	Timeliness of performance review	-.053	.432	Not significant
Feedback and communication support	Clarity of performance standards	-.013	.848	Not significant
Feedback and communication support	Fairness of the evaluation process	-.066	.328	Not significant
Feedback and communication support	Timeliness of performance review	.123	.066	Not significant

None of the twelve cross-construct correlations reached statistical significance. The coefficients were also small, ranging from -.115 to .123. Accordingly, the findings did not establish that faculty members who assessed HR technology more favorably also assessed performance standards, evaluation fairness, or review timeliness more favorably.

The largest positive coefficient was between feedback and communication support and timeliness of performance review, Spearman's rho = .123, p = .066. Although this was the coefficient closest to the significance threshold, it remained statistically nonsignificant and should not be described as evidence of an effect or a confirmed relationship. Similarly, accessibility and availability had a small negative relationship with timeliness, Spearman's rho = -.115, p = .085, but this result also failed to reach significance. The institution's technological system and its performance-management process were therefore both assessed positively at the descriptive level, but favorable perceptions of one were not systematically associated with favorable perceptions of the other.

4.4 Discussion

The descriptive findings indicate that the institution had established a generally functional digital HR environment. Faculty members agreed that the platform was usable, accessible, relatively stable, and capable of providing performance-related information. This finding is broadly consistent with the Technology Acceptance Model, which identifies ease of use as an important condition of technology acceptance (Davis, 1989), and with the DeLone and McLean framework, which emphasizes system and information quality as components of information-system success (DeLone & McLean, 1992, 2003).

The results, however, distinguish basic system functionality from complete management integration. Faculty members rated the interface positively but provided a lower assessment of the system's ability to support HR tasks without technical obstacles. They also recognized access to performance information but gave comparatively lower ratings to remote access, error correction, and two-way communication. The institution therefore appeared to have progressed further in digitalizing information display and administrative monitoring than in developing an integrated platform for collaborative performance management.

The relatively low assessment of data accuracy and transparency is particularly consequential. The lowest-rated HR technology indicator concerned the timely correction of inaccurate performance data. Data-governance research emphasizes that reliable organizational data require clearly assigned ownership, decision rights, standards, validation routines, and correction procedures (Abraham et al., 2019). When faculty members cannot efficiently challenge or correct inaccurate records, the technological system may reproduce administrative errors rather than eliminate them. The managerial issue consequently includes accountability for data ownership, validation, correction, and interdepartmental coordination.

Feedback and communication support ranked highest among the HR technology dimensions, but the detailed results reveal an important qualification. Faculty members favorably assessed real-time monitoring of evaluation progress, yet the availability of convenient communication channels received a lower rating. This suggests that the system's strongest communication function was informational rather than dialogical. It allowed faculty members to see what was happening but provided less support for discussing why an evaluation had progressed in a particular manner or how performance could be improved.

A similar pattern appeared in the assessment of performance management. Respondents recognized the availability of an appeal channel, but the broader judgment that the evaluation process was fair and reasonable received a comparatively lower assessment. Organizational justice theory distinguishes between the existence of formal procedures and employees' actual experience of procedural and interactional fairness (Greenberg, 1987). An appeal mechanism can protect procedural rights, but fairness also depends on the appropriateness of standards, consistency of implementation, adequacy of explanation, and quality of interpersonal treatment.

Clarity of performance standards was the lowest-rated performance-management dimension. Although performance targets were considered measurable, respondents were less certain that the standards corresponded to their job responsibilities. This pattern is consistent with higher-education performance-management research emphasizing internal alignment, communication, and sensitivity to differing academic employment conditions (Decramer et al., 2013). It also supports the systems perspective that performance standards, monitoring, feedback, and development should operate as coordinated components rather than isolated requirements (Schleicher et al., 2018). The institution's challenge was therefore not merely to communicate existing standards more clearly but also to examine whether the standards appropriately represented variations in faculty work.

The timeliness results further suggest that performance management remained concentrated around formal evaluation periods. Respondents generally received feedback within a reasonable period after assessment, but regular discussions outside the evaluation stage were less evident. Timely release of evaluation results is administratively important, but developmental performance management requires continuing dialogue, goal review, coaching, and adjustment. Research on feedback and contemporary performance management likewise indicates that improvement depends on the quality, focus, and continuity of performance conversations rather than on the mere delivery of a rating (Kluger & DeNisi, 1996; Pulakos et al., 2015).

The absence of statistically significant relationships between HR technology and performance management does not necessarily indicate that technology is irrelevant. A more defensible interpretation is that the institution's HR system and performance-management process may have operated as parallel organizational arrangements without sufficient functional integration. Faculty members could perceive the technology as usable while independently evaluating performance standards as unclear. They could access evaluation information while still questioning whether the criteria were aligned with their responsibilities.

One plausible statistical explanation is the limited variation in the responses. All composite means were clustered closely around 3.00 on a four-point scale, and every dimension received the same verbal interpretation. Restricted variation can reduce the magnitude of observable correlations. The single-institution setting may also have produced relatively uniform experiences of both the HR system and the performance-management process. These explanations remain inferential and should be examined in future research rather than treated as established causes.

For enterprise strategy and management innovation, the central contribution of the study is the distinction between digitizing a process and transforming a management system. Digital HR technology can increase access, traceability, and administrative efficiency, but substantive improvement requires alignment between technological functions and the institutional logic of performance management. The results support prioritizing data-correction mechanisms, role-aligned performance standards, two-way communication, and continuing performance dialogue rather than treating additional technology acquisition as the principal solution.

5. Conclusions, Recommendations, and Implications

5.1 Conclusions

The institution had implemented a generally functional HR technology system. Faculty members agreed that the system was usable, accessible, available, and capable of supporting performance-related feedback and communication. The highest assessment was recorded for feedback and communication support, particularly the ability to monitor the progress of performance evaluations. However, data accuracy and transparency received the lowest assessment. The timely correction of inaccurate performance data emerged as the most evident weakness, indicating that the system's information-governance mechanisms required further improvement.

Faculty performance management was generally assessed positively. Respondents agreed that the evaluation process was reasonably fair, performance reviews were conducted with acceptable timeliness, and performance standards were generally understandable. Nevertheless, clarity of performance standards received the lowest composite assessment. Respondents were comparatively less convinced that the evaluation criteria were adequately aligned with their actual job responsibilities. This suggests that the institution's performance standards may be measurable without being sufficiently differentiated according to faculty roles.

None of the tested relationships between the dimensions of HR technology and faculty performance management reached statistical significance. The correlation coefficients were small, indicating that favorable perceptions of the technological system did not systematically correspond with favorable perceptions of performance standards, evaluation fairness, or review timeliness. The findings therefore do not support the assumption that the presence or favorable assessment of HR technology necessarily produces stronger faculty performance management.

The institution's primary challenge was not simply technological adoption but the integration of technology with management processes. The HR system appeared effective in providing access to information and monitoring evaluation progress, yet comparatively weaker in data correction, two-way communication, role-specific performance-standard design, and continuing performance dialogue. Digitalization had therefore improved certain administrative functions without fully transforming the broader performance-management system.

5.2 Recommendations

1. The Human Resource Office and Information Technology Office should establish a formal data-governance mechanism for faculty performance information, including standardized data-entry procedures, designated data owners, regular verification schedules, documented correction workflows, and defined response periods for resolving erroneous records.
2. The institution should create a centralized electronic procedure for reporting and correcting inaccurate HR and performance data. The system should generate a traceable record showing when an error was reported, which office reviewed it, what action was taken, and when the correction was completed.
3. The Human Resource Office, Academic Affairs Office, department heads, and faculty representatives should review the existing performance standards and align them with actual faculty job descriptions, key result areas, and institutional responsibilities. Indicators and weights should be differentiated where legitimate differences in faculty work exist.
4. Before each evaluation cycle, the institution should conduct orientation and consultation sessions explaining the performance standards, indicators, weights, scoring procedures, documentation requirements, and appeal mechanisms. A faculty performance-evaluation handbook or digital guide should be accessible through the HR system.
5. The HR platform should be strengthened as a two-way communication system rather than serving primarily as an information-display mechanism. Faculty members should be able to request clarification, submit supporting documents, communicate with evaluators, and receive documented responses within the system.
6. Department heads and supervisors should conduct regular performance conversations outside the formal evaluation period, including goal setting, progress review, identification of resource needs, developmental feedback, and adjustment of performance expectations.
7. Future research should replicate the study across several vocational colleges and higher education institutions, examine mediating or moderating variables, and use longitudinal or comparative designs to assess how HR technology and faculty performance-management practices develop over time.

Table 5 consolidates the principal institutional actions derived from the study's lowest-rated dimensions and reported recommendations.

Table 5. *Proposed Institutional Action Plan*

Key result area	Priority strategies	Responsible units	Success indicators
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Key result area	Priority strategies	Responsible units	Success indicators
Timely correction of performance data	Standardize error-reporting and correction procedures; establish regular review; train faculty on correction channels.	Human Resource Office; IT Office; Academic Affairs; Research and Finance units; faculty representatives	Documented response times; declining repeat errors; faculty awareness of correction and appeal channels.
Performance-data verification	Monitor system performance; cross-validate data across units; conduct annual system and data audits.	IT Office; Human Resource Office; Academic Affairs; Research Office	Stable system availability; quarterly verification completed; identified discrepancies corrected; annual audit completed.
Alignment of performance criteria with job responsibilities	Review criteria against job descriptions and KRAs; consult faculty; periodically revise indicators and weights.	Human Resource Office; Academic Affairs; department heads; Quality Assurance; faculty representatives	Approved role-aligned criteria; documented faculty consultation; periodic revisions completed.
Communication of evaluation criteria	Conduct pre-cycle orientation; issue a digital evaluation handbook; provide consultation and feedback sessions.	Human Resource Office; Academic Affairs; department heads; Quality Assurance; IT and Faculty Development offices	At least 90% orientation attendance; all faculty receive the guide; fewer unresolved clarification requests.

5.3 Implications of the Study

Theoretical Implications

The findings qualify the assumption that information-system success or technology acceptance automatically leads to improved management outcomes. The DeLone and McLean Information Systems Success Model and the Technology Acceptance Model explain whether a technological system possesses desirable qualities and whether users are likely to accept it. However, the present findings indicate that usability and access may not be sufficient to produce clearer standards, fairer evaluation procedures, or more timely performance management. HR technology is better understood as enabling infrastructure whose organizational effects depend on data governance, policy alignment, administrative coordination, supervisory behavior, role clarity, and organizational justice.

Practical and Managerial Implications

For institutional managers, the study demonstrates that digital transformation should not be evaluated solely through system acquisition, user access, or interface quality. A technically operational HR platform may coexist with unresolved management weaknesses. Implementation success should therefore be assessed according to whether technology improves data reliability, standard clarity, procedural consistency, feedback quality, and faculty development. Management attention should focus on integrating technical and administrative processes rather than adding system features without corresponding process reform.

Institutional and Management-Innovation Implications

The study provides a basis for strengthening coordination among the Human Resource Office, Information Technology Office, Academic Affairs Office, Quality Assurance Office, department heads, and faculty representatives. HR technology and performance management should not be administered as separate systems. The principal management-innovation implication is the distinction between process digitalization and organizational transformation.

Process digitalization converts manual activities into electronic procedures, whereas organizational transformation changes how decisions are made, responsibilities are assigned, information is validated, employees participate, and performance is improved.

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