

## Research Article

# Human Resource Management 5.0 Paradigm Affecting Performance Efficiency toward Sustainable Excellence of Educational Organizations

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In the current era of digital disruption, rapid technological shifts have profoundly affected HRM. This framework aimed to investigate the factors of the HRM 5.0 paradigm affecting performance efficiency toward the sustainable excellence of educational organizations. A mixed-methods design was employed. Qualitative data were collected through documentary analysis and in-depth interviews with 20 key informants. Quantitative data were gathered via questionnaires from 350 participants. The factors of the HRM 5.0 paradigm, including personalized professional development, holistic well-being, dynamic agility, human-machine collaboration, and sustainable organizational culture, are powerful drivers of organizational excellence. These factors collectively account for 70.9% of the variance in performance excellence, with human-machine collaboration emerging as the most significant predictor. Strategic driving emphasizes transforming the digital organizational culture alongside personalized professional development and well-being balance for the sustainable excellence of educational organizations.

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## 1. Introduction

In the 21<sup>st</sup> century, the world has witnessed an unprecedented wave of technological and social transformation, marking the arrival of the era of Society 5.0. This concept envisions a human-centered

society that seamlessly integrates advanced technologies, such as artificial intelligence (AI), big data, the Internet of Things (IoT), and robotics with daily human life to address complex social challenges, improve quality of life, and achieve sustainable development<sup>[1]</sup>. Unlike previous industrial revolutions, which focused primarily on productivity and efficiency, Society 5.0 emphasizes the harmonious coexistence of technology and humanity, placing people at the core of all development efforts<sup>[2]</sup>. This paradigm shift has exerted profound and far-reaching impacts across all sectors of society, including education. As a fundamental pillar of human resource development and national progress, educational institutions bear the critical responsibility of nurturing talent capable of adapting to changing times, driving innovation, and contributing to sustainable societal development<sup>[3]</sup>. The rapid evolution of Society 5.0 has also introduced new challenges and demands within the education sector. To meet these demands, educational organizations must not only update their teaching methods, curricula, and facilities but also fundamentally transform their management systems and practices, particularly in the area of human resource management<sup>[4]</sup>. Human resource management (HRM) has long been recognized as a key determinant of organizational success.

In the context of educational institutions, where human capital is the most valuable asset, effective HRM plays an even more crucial role in ensuring educational quality, enhancing organizational performance, and achieving long-term strategic goals<sup>[5]</sup>. Traditionally, HRM in education has focused on basic administrative functions such as recruitment, selection, training, compensation, and performance appraisal. While these functions remain essential, they are no longer sufficient to meet the requirements of the Society 5.0 era. With this shift, a new management paradigm known as HRM 5.0 has emerged. This approach represents a significant evolution from previous models, integrating digital innovation, sustainability, and human-centric values to create a more holistic, strategic, and future-oriented management system. Unlike HRM 4.0, which primarily emphasized process automation and operational efficiency<sup>[6]</sup>, HRM 5.0 seeks a balanced relationship between technology and people. However, existing research reveals notable gaps in this area. Most studies focus on how AI and automation can boost productivity, but there is limited data on how these technologies influence employees' sense of value and meaningful work<sup>[7]</sup>. Consequently, fostering human-AI collaboration that enhances rather than diminishes employee creativity and self-worth is vital for sustainable excellence.

Additionally, while performance indicators have historically prioritized short-term outcomes, HRM 5.0 requires metrics that link results to employee well-being and organizational resilience. Currently, there is a lack of standardized models for measuring these qualitative dimensions, making it necessary to

develop new indicators that combine objective performance data with subjective measures of well-being to support long-term sustainability. Furthermore, contextual and cultural factors remain underexplored: most existing research focuses on large technology firms or Western contexts, while studies examining educational organizations, often characterized by limited digital skills and infrastructure, remain scarce. These contextual elements significantly influence the acceptance and effectiveness of the HRM 5.0 paradigm. Although the concept is gaining traction in the corporate sector, it remains largely understudied within educational settings.

Compounding this gap is the unique mission of educational institutions: to cultivate intellectual capital requires a delicate balance between adopting technological innovation and maintaining meaningful personnel engagement<sup>[8]</sup>. Previous research has frequently focused only on short-term performance indicators, overlooking the integration of employee well-being and social responsibility that is necessary to achieve sustainable excellence<sup>[9]</sup>. Despite the growing recognition of HRM 5.0's importance, many educational institutions worldwide still struggle to adapt. Research indicates that a significant number continue to rely on outdated, inflexible HRM practices that are incompatible with the needs of the Society 5.0 era. Such practices often fail to attract and retain skilled staff, support professional growth, or enable employees to perform at their full potential<sup>[10]</sup>. As a result, these institutions commonly face challenges including low morale, reduced motivation, high turnover rates, suboptimal performance, and difficulty reaching their strategic objectives<sup>[7][11]</sup>. The adoption of HRM 5.0 is further hindered by barriers such as limited awareness and understanding, insufficient resources and capabilities, resistance to change, and inadequate policy and institutional support.

Therefore, this research aims to explore the HRM 5.0 paradigm specifically tailored for educational organizations. It seeks to identify the key dimensions of HRM 5.0, examine its influence on performance efficiency toward sustainable excellence, and propose strategic guidelines for its implementation. Ultimately, this study intends to develop a management model that will enable educational institutions to achieve sustainable excellence while ensuring their resilience and quality in a rapidly evolving global landscape.

## 2. Theoretical Framework

HRM 4.0 and HRM 5.0 are evolutions of human resource management that change with technology and changing concepts in each era. The different aspects of focus, technology, working, and ethics can be summarized as follows:

| <i>Issues</i>         | <i>HRM 4.0</i>                                                                                              | <i>HRM 5.0</i>                                                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <i>The Focus</i>      | <ul style="list-style-type: none"> <li>Technology and automation.</li> </ul>                                | <ul style="list-style-type: none"> <li>Humanity and experience of personnel.</li> </ul>                                                  |
| <i>The Technology</i> | <ul style="list-style-type: none"> <li>Using technology to increase efficiency and reduce costs.</li> </ul> | <ul style="list-style-type: none"> <li>Using technology to support and create a good experience for personnel.</li> </ul>                |
| <i>Working</i>        | <ul style="list-style-type: none"> <li>Focus on data management and strategic decision-making.</li> </ul>   | <ul style="list-style-type: none"> <li>Focus on flexibility, agility, and creating a good organizational culture.</li> </ul>             |
| <i>The Ethics</i>     | <ul style="list-style-type: none"> <li>Prioritizing the ethical use of technology.</li> </ul>               | <ul style="list-style-type: none"> <li>Prioritizing the responsible and ethical use of AI to reduce bias and create fairness.</li> </ul> |

**Table 1.** The differences between HRM 4.0 and HRM 5.0.

*Source:* Jaiswal, A., Arun, C. J., & Varma, A.,<sup>[7]</sup>

HRM 5.0 goes beyond merely adopting new technologies; it prioritizes employee well-being, professional development, and empowerment, while simultaneously promoting environmental responsibility and social inclusion. As an emerging paradigm, HRM 5.0 is defined by several key characteristics. First, it places a strong emphasis on human-centeredness, viewing employees not merely as operational resources but as active partners in organizational growth and development<sup>[12]</sup>. This approach recognizes the value of cultivating a positive work environment, fostering higher levels of engagement and job satisfaction, and supporting both personal and professional advancement. Second, it strategically leverages advanced technologies, such as artificial intelligence, people analytics, and cloud computing, to streamline HR processes, enable data-driven decision-making, and improve overall organizational agility. Third, it integrates sustainability principles across all HR functions, including recruitment, training, performance management, and employee relations, to encourage environmental stewardship, social responsibility, and long-term organizational resilience<sup>[13]</sup>. In the current transition toward the Society 5.0 and Industry 5.0 eras, educational organizations face complex challenges arising from rapid

technological advancements and evolving societal expectations<sup>[14]</sup>. To respond effectively, human resource management must evolve from the HRM 4.0 model, which focuses primarily on automation and operational efficiency, toward the HRM 5.0 framework. This new paradigm adopts a human-centric philosophy, combining intelligent technologies with sustainable organizational practices to achieve balanced and meaningful development.

HRM 5.0 represents a fundamental shift in human resource management, moving beyond traditional administrative tasks to become a strategic, value-driven approach that integrates advanced technology and sustainability. It is designed to align with the core principles of Society 5.0 and Industry 5.0, which seek harmony between technological progress and human values and well-being. Within the context of this study, the key dimensions of HRM 5.0 and the outcome variable are defined as follows:

- a. Personalized professional development refers to strategic HR practices that move away from standardized, one-size-fits-all training programs. Instead, it focuses on designing customized learning pathways, career progression plans, and competency-building initiatives tailored to the specific needs, potential, and professional aspirations of each staff member<sup>[15]</sup>. This ensures that employees acquire the precise skills required for their current roles and future career growth.
- b. Holistic well-being encompasses comprehensive policies that address the needs of the whole individual. It extends beyond basic occupational health and safety standards to include physical health, mental wellness, emotional stability, and positive social relationships within the workplace<sup>[16]</sup>. The goal is to create a supportive environment that reduces work-related stress, prevents burnout, and improves overall work-life balance.
- c. Dynamic agility describes the organizational capacity and workforce mindset to adapt rapidly and effectively to internal and external changes. In educational institutions, this involves flexible management structures, adaptive curricula and teaching methodologies, and the ability to adjust operations in response to social, economic, or technological shifts without compromising service quality or educational standards.
- d. Human-machine collaboration promotes a symbiotic relationship between people and technology. Rather than viewing digital tools as replacements for human labor, HRM 5.0 encourages the use of AI, big data analytics, and automation to augment human capabilities, reduce repetitive administrative tasks, and support evidence-based decision-making<sup>[17]</sup>. This allows educators and staff to focus more on creative interaction, critical thinking, and value-added activities.

- e. Sustainable organizational culture involves cultivating shared values, beliefs, and norms that prioritize long-term stability and ethical conduct<sup>[18]</sup>. It includes fostering a mindset of continuous improvement, social responsibility, environmental awareness, and strong governance. Such a culture strengthens employee commitment, loyalty, and sense of purpose, driving collective progress toward organizational goals.
- f. Sustainable excellence refers to the ability of an educational organization to achieve its objectives effectively, efficiently, and with consistent high quality over the long term. It goes beyond short-term success or financial metrics to include operational effectiveness in delivering educational and administrative services, stakeholder satisfaction in meeting the needs of students, parents, and the community, and long-term resilience, ensuring the institution remains relevant, adaptable, and capable of contributing positively to society and the environment.

Several theoretical frameworks underpin this study's conceptual model. Human Capital Theory posits that employees are valuable intangible assets; investments in their education, training, and health directly enhance their knowledge, skills, and productivity, which in turn leads to improved organizational performance<sup>[10][18]</sup>. The resource-based view suggests that an organization's competitive advantage stems from its unique resources and capabilities, particularly its human capital. By implementing effective HRM 5.0 practices, institutions develop distinctive competencies that are difficult for others to replicate<sup>[19]</sup>. Strategic Human Resource Management Theory emphasizes that HR policies and practices must be aligned with the organization's overall strategic direction to maximize performance. In this context, HRM 5.0 acts as a strategic partner, guiding the institution toward its vision of sustainable excellence<sup>[18]</sup>. Finally, the Technology-Organization Fit Theory explains that successful technology adoption depends on how well digital tools align with the organization's structure, culture, and people. When technology is integrated appropriately, it supports rather than disrupts human work, leading to better overall outcomes<sup>[20][15]</sup>. Based on these dimensions and theoretical foundations, the conceptual framework illustrating how the HRM 5.0 paradigm influences performance efficiency toward sustainable excellence in educational organizations is presented in Figure 1.

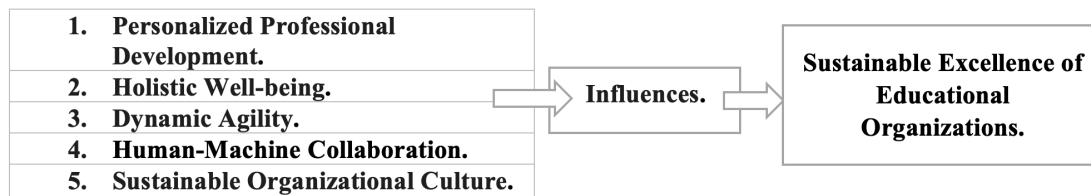


Figure 1. Conceptual framework.

## Research Hypotheses

- **H1:** Personalized professional development significantly and positively influences the sustainable excellence of educational organizations.
- **H2:** Holistic well-being significantly and positively influences the sustainable excellence of educational organizations.
- **H3:** Dynamic agility significantly and positively influences the sustainable excellence of educational organizations.
- **H4:** Human-machine collaboration significantly and positively influences the sustainable excellence of educational organizations.
- **H5:** Sustainable organizational culture significantly and positively influences the sustainable excellence of educational organizations.

## 3. Methodology

This study employs an exploratory sequential mixed-methods research design, conducted in three distinct phases. Phase 1 (Qualitative) aims to identify and define the core components of the HRM 5.0 paradigm specifically adapted to the context of higher education. Phase 2 (Quantitative) serves to validate these identified factors and test their causal relationships using statistical analysis. Phase 3 (Integration) synthesizes the findings from both phases to develop a strategic framework for driving sustainable excellence in educational organizations. The study was conducted in Rajabhat Universities within the Central Northeastern Cluster, covering Mahasarakham, Roi Et, and Kalasin provinces, Thailand.

### 3.1. Population and Sampling

- Qualitative Phase: A total of 20 key informants were selected using purposive sampling. Eligibility criteria included holding a senior administrative position, having at least 5 years of relevant work experience, or possessing recognized expertise in organizational management, human resource development, or educational administration.
- Quantitative Phase: The target population consisted of academic and support personnel from the selected universities. The sample size of 350 respondents was calculated using the Taro Yamane formula with a 95% confidence level and a margin of error of 5%. Stratified random sampling was applied to ensure proportional representation of both academic and support staff across all participating institutions.

### 3.2. Research Instruments and Validation

Two main instruments were developed and verified for quality:

1. Semi-structured interview guide: This tool was designed based on theories of HRM 5.0 and indicators of sustainable excellence in education. It consisted of open-ended questions to explore the perspectives of experts regarding the study variables. The central question was: *“How do the dimensions of HRM 5.0, including personalized professional development, holistic well-being, dynamic agility, human-machine collaboration, and sustainable organizational culture, influence performance efficiency toward sustainable excellence in educational organizations?”* Follow-up questions and suggestions were included to gain deeper insights. The instrument was reviewed by experts, achieving an Index of Item-Objective Congruence (IOC) ranging from 0.80 to 1.00, confirming its content validity.
2. Structured questionnaire: Developed from the findings of Phase 1, this instrument measured the relationship between HRM 5.0 factors (independent variables) and sustainable excellence (dependent variable). Responses were rated using a 5-point Likert scale: 5 = *Highest*, 4 = *High*, 3 = *Moderate*, 2 = *Low*, 1 = *Lowest*. To test reliability, a pilot study was conducted with 30 personnel similar to the target sample. The result yielded a Cronbach's Alpha coefficient of 0.89, indicating high internal consistency and reliability.

### 3.3. Data Collection Procedures

Data collection was carried out sequentially in three phases:

- **Phase 1:** Qualitative data collection involved reviewing relevant documents, policies, and previous research related to HRM and educational excellence. We conducted face-to-face or online in-depth interviews with the 20 selected key informants. We verified the completeness and accuracy of the data before proceeding to analysis.
- **Phase 2:** Quantitative data collection involved refining and finalizing the questionnaire based on qualitative findings and validity checks. We distributed the questionnaire to the 350 respondents, with clear explanations of the research objectives and instructions for answering. We retrieved and reviewed all returned questionnaires to ensure data completeness prior to analysis.
- **Phase 3:** Synthesis and strategy formulation involved integrating the results from both qualitative and quantitative analyses. We combined internal factors (strengths and weaknesses), derived from the study, with external factors (opportunities and threats), identified from the interviews and context analysis. We applied the SWOT TOWS Matrix to formulate strategic guidelines for implementing HRM 5.0 effectively.

### 3.4. Data Analysis

Data analysis was performed according to the type of data collected:

1. Qualitative data analysis: Thematic analysis was used, following these six steps: (1) data compilation and organization, (2) transcription and verification of interview content, (3) identification of emerging themes and patterns, (4) categorization of data into relevant dimensions of HRM 5.0, (5) interpretation of findings in relation to the study objectives, and (6) summarization of key conclusions. For strategy development, the TOWS matrix was applied to generate four types of strategies: aggressive (SO), adaptive (WO), defensive (ST), and survival (WT).
2. Quantitative data analysis: Statistical methods were applied using appropriate software:
  - Descriptive statistics: Frequencies, percentages, means, and standard deviations were used to describe the demographic profile and general level of variables.
  - Multiple Regression Analysis (MRA): This was used to examine the influence of HRM 5.0 factors on sustainable excellence, using the equation:  $Y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n$

Where:

- $Y$  = Sustainable excellence of educational organizations
- $a$  = Constant term
- $b_1...b_n$  = Regression coefficients
- $X_1...X_n$  = Dimensions of HRM 5.0

Prior to analysis, assumptions of linearity, normality, and absence of multicollinearity were verified. The stepwise method was used to assess statistical significance ( $p < 0.05$ ), and the coefficient of determination ( $R^2$ ) was calculated to measure the proportion of variance in sustainable excellence explained by the HRM 5.0 factors.

## 4. Major Findings

The results concerning the HRM 5.0 paradigm, affecting performance efficiency toward the sustainable excellence of educational organizations, are as follows:

### 4.1. *Factors of the HRM 5.0 Paradigm*

The factors of the HRM 5.0 paradigm affecting performance efficiency toward the sustainable excellence of educational organizations were identified as five key components: 1) personalized professional development, 2) holistic well-being, 3) dynamic agility, 4) human-machine collaboration, and 5) sustainable organizational culture. The practices and indicators are shown in Table 2.

| The Factors                                     | The Practices                                                                                                                                                                                                                                                                                                                                                                                                                                                                | The Indicators                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Personalized Professional Development</b> | <ul style="list-style-type: none"> <li>The use of an AI Learning Platform to analyze the skill gaps of each employee allows for the creation of micro-learning programs that employees can choose to develop themselves at their convenience and in line with their field (e.g., teachers focusing on active learning techniques, support staff focusing on data management), along with a one-on-one mentoring and coaching system to unlock specific potential.</li> </ul> | <ul style="list-style-type: none"> <li>Individual development plans (IDP), upskilling/reskilling rates, and employee satisfaction with development programs. The skill proficiency index reflects the level of expertise in newly acquired skills after development, and the personal growth rate shows the proportion of personnel who advance in their careers or attain higher academic qualifications.</li> </ul> |
| <b>2. Holistic Well-Being</b>                   | <ul style="list-style-type: none"> <li>Managing employee assistance programs (EAPs) that provide mental health and financial counseling, designing flexible work hours policies for educators to allow for rest or family time, and creating a psychologically safe work environment where ideas can be expressed without fear of criticism.</li> </ul>                                                                                                                      | <ul style="list-style-type: none"> <li>Employee happiness levels, low turnover rates, and mental health indices. The absenteeism rate (reduced sick leave or personal leave) and well-being survey score (assessment of happiness and satisfaction in work life).</li> </ul>                                                                                                                                          |
| <b>3. Dynamic Agility</b>                       | <ul style="list-style-type: none"> <li>Restructuring from a hierarchical structure to cross-functional teams, such as establishing teams for educational innovation, using agile management methods, and empowering decision-making in all sectors of educational management to immediately address problems.</li> </ul>                                                                                                                                                     | <ul style="list-style-type: none"> <li>Response time to challenges, flexibility in work modes, and project success rates during crises. The adaptability index measures the speed at which a curriculum or teaching method can be adjusted during a crisis, and the innovation cycle time is the time from the generation of a new idea to its actual implementation in the classroom or organization.</li> </ul>     |
| <b>4. Human-Machine Collaboration</b>           | <ul style="list-style-type: none"> <li>The use of AI assistants to help with administrative tasks, grading exams, or analyzing test scores will free up teachers' time to act as "coaches" for students. This also includes training in digital literacy and AI prompt engineering to enable personnel to</li> </ul>                                                                                                                                                         | <ul style="list-style-type: none"> <li>Tech adoption rates, reduction in error rates, and overall productivity gains. The automation ratio is the proportion of routine tasks replaced by technology, allowing personnel to focus on strategic work. The digital adoption rate is the</li> </ul>                                                                                                                      |

| The Factors                                  | The Practices                                                                                                                                                                                                                                                                           | The Indicators                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                              | work seamlessly with technology, as well as the use of data-driven decision-making in human resource management.                                                                                                                                                                        | rate at which personnel effectively utilize digital tools.                                                                                                                                                                                                                                                                                                                                              |
| <b>5. Sustainable Organizational Culture</b> | <ul style="list-style-type: none"> <li>• Instilling concepts of environmental, social, and governance in all sectors of work, fostering a culture of lifelong learning, and recognizing and commending not only achievements but also good deeds and sacrifices for society.</li> </ul> | <ul style="list-style-type: none"> <li>• Employee engagement scores, ethical compliance indices, and external social recognition. The employer branding score measures the organization's reputation for attracting talent, and the sustainability maturity level reflects the success of projects that positively impact the organization, students, community, and a learning environment.</li> </ul> |

**Table 2.** Factors, practices, and indicators of the HRM 5.0 paradigm affecting performance efficiency towards sustainable excellence of educational organizations.

*Source: Author(s), 2025.*

Key factors of the HRM 5.0 paradigm include: 1) personalized professional development, which focuses on tailoring learning paths based on individual needs and potential, using data to analyze strengths and areas for improvement; 2) holistic well-being, which involves caring for employees in all dimensions—physical, mental, emotional, and social—to promote a healthy work-life balance; 3) dynamic agility, the ability to adapt quickly to changes through flexible work structures and timely decision-making; 4) human-machine collaboration, which involves integrating AI and automation to support work, reducing repetitive tasks, and enhancing human creativity and strategic thinking; and 5) sustainable organizational culture, which entails building shared values focused on ethics, social responsibility, and long-term commitment for stable organizational success affecting performance efficiency towards sustainable excellence of educational organizations. Strategic driving guidelines for the HRM 5.0 paradigm to enhance performance efficiency towards sustainable excellence of educational organizations

#### 4.2. Influence of Factors of HRM 5.0 Paradigm on Sustainable Performance Excellence

The influence of the factors of the HRM 5.0 paradigm on sustainable performance excellence of educational organizations includes 1) personalized professional development, 2) holistic well-being, 3) dynamic agility, 4) human-machine collaboration, and 5) sustainable organizational culture, which exert a statistically significant positive influence on sustainable performance excellence at the .05 level, as shown in Table 3.

| Predictors                                     | <i>B</i> | <i>S.E.</i> | $\beta$ | <i>t</i> | <i>p-value</i> |
|------------------------------------------------|----------|-------------|---------|----------|----------------|
| Constant                                       | 0.421    | 0.115       | –       | 3.661    | 0.000**        |
| 1. Personalized professional development. (X1) | 0.245    | 0.042       | 0.215   | 5.833    | 0.000**        |
| 2. Holistic well-being. (X2)                   | 0.188    | 0.038       | 0.176   | 4.947    | 0.000**        |
| 3. Dynamic agility. (X3)                       | 0.212    | 0.045       | 0.201   | 4.711    | 0.000**        |
| 4. Human-machine collaboration. (X4)           | 0.267    | 0.051       | 0.242   | 5.235    | 0.000**        |
| 5. Sustainable organizational culture. (X5)    | 0.195    | 0.039       | 0.188   | 5.000    | 0.000**        |

**Table 3.** Multiple regression analysis results.

**Note:**  $R=0.842$ ,  $R^2= 0.709$ ,  $Adj. R^2= 0.705$ ,  $F=16742$ ,  $p < .05^{**}$

**Source:** Author(s), 2025.

This indicates that all five factors of the HRM 5.0 paradigm exert a statistically significant positive influence on sustainable performance excellence at the 0.05 level. Together, these predictors account for 70.9% of the variance in organizational performance ( $R^2$  of 0.709). Key Insights: 1) The strongest predictor, human-AI collaboration ( $\beta$  of 0.242), is the most significant factor, suggesting that integrating intelligent technology with human expertise is vital for education in the 5.0 era. 2) Personalized professional development ranked second in influence ( $\beta$  of 0.215), emphasizing that educators value development paths tailored to their unique potential. 3) The statistical significance of all factors yielded a  $p$ -value of less than 0.05, validating that the HRM 5.0 paradigm framework is a robust model for driving sustainable excellence in educational organizations.

#### 4.3. Strategic Driving Guidelines for the HRM 5.0 Paradigm to Enhance Performance Efficiency Towards Sustainable Excellence of Educational Organizations

The strategic driving guidelines for the HRM 5.0 paradigm to enhance performance efficiency towards sustainable excellence of educational organizations, using the SWOT matrix (TOWS matrix), use data from the HRM 5.0 paradigm factors to develop an aggressive strategy (SO), adaptive strategy (WO), defensive strategy (ST), and survival strategy (WT), as shown in Table 4.

|                                                                                                                                        |                                                                                                                                                                                                        |                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Strategy</b>                                                                                                                        | <b>Strength (S)</b><br>1) Having a clear HRM 5.0 structure in 5 areas.<br>2) Personnel are highly ready to use technology.                                                                             | <b>Weaknesses (W)</b><br>1) High regular teaching workloads may impact well-being.<br>2) Digital skills disparities within organizations.                                                                         |
| <b>Opportunities (O)</b><br>1) Government policies that support the use of AI in education.<br>2) Easier access to digital technology. | <b>Aggressive strategy (SO)</b><br>• Strategy to accelerate smart innovation by leveraging technological readiness that integrates AI into routine tasks to enhance efficiency and achieve excellence. | <b>Adaptive strategy (WO)</b><br>• Strategy for developing specialized skills that leverages opportunities from online learning resources and provides personalized development to bridge the digital skills gap. |
| <b>Threats (T)</b><br>1) Rapid technological changes.<br>2) Limited budget of the faculty/department.                                  | <b>Defensive strategy (ST)</b><br>• Strategy to build a resilient culture that leverages the strengths of organizational culture and agility to build resilience against external fluctuations.        | <b>Survival strategy (WT)</b><br>• Strategy for proactive health management by reducing redundant work processes using technology to prevent burnout from change.                                                 |

**Table 4.** Strategic analysis for driving the HRM 5.0 paradigm (SWOT/TOWS matrix).

Source: Author(s), 2025.

Strategic driving guidelines for the HRM 5.0 paradigm can be summarized into three key areas: 1) Aggressive strategy (SO): Leverage AI integration to automate routine tasks, empowering educators to focus on high-value student coaching. 2) Adaptive strategy (WO): Implement personalized learning paths to bridge digital literacy gaps among staff members. 3) Defensive strategy (ST): Utilize organizational agility and a strong ethical culture to remain resilient against rapid external technological disruptions. 4) Survival strategy (WT): Re-engineer work processes to reduce workload, ensuring mental well-being and preventing burnout during transitions. The key to driving the HRM 5.0 paradigm is the synergy between intelligence and humanity. By focusing on human-machine collaboration supported by a sustainable culture, educational institutions can achieve long-term excellence. Thus, the strategic driving guidelines, aimed at achieving practical, integrated implementation through action plans, comprise short-term goals, focusing on building positive attitudes and digital skills to reduce resistance to change; medium-term goals, focusing on improving process efficiency with AI to reduce redundant tasks and shifting the focus to personalized professional development; and long-term goals, aiming to cultivate a flexible and sustainable organizational culture that prioritizes both work efficiency and employee well-being towards sustainable excellence of educational organizations.

## 5. Discussion

The HRM 5.0 paradigm, including 1) personalized professional development, 2) holistic well-being, 3) dynamic agility, 4) human-machine collaboration, and 5) sustainable organizational culture, positively influences sustainable performance excellence at a .05 significance level. Furthermore, the HRM 5.0 paradigm, using AI technology to support decision-making, analyze personnel data, and manage various processes, allows HRM 5.0 to focus fully on personnel development. Building a workforce ready for change through personnel data analysis allows HRM 5.0 to recognize adaptability and promote digital skills development in its workforce, ensuring they are ready to cope with technological change<sup>[19]</sup>. Additionally, organizations must invest in developing essential skills and knowledge, such as digital literacy, for their employees to work effectively with technology. A positive employee experience helps organizations retain talented employees, which is crucial in an era where talent is scarce<sup>[12]</sup>. The HRM 5.0 paradigm will foster a learning culture where employees can continuously develop themselves and discover new potential, leading to long-term organizational sustainability<sup>[5]</sup>. Using data in personnel management enables organizations to make effective decisions, such as workforce planning, budget allocation, and the design of organizational management approaches that align with organizational

goals<sup>[11]</sup>. The HRM 5.0 paradigm acts as a medium for communication and coordination between personnel and management, fostering better understanding<sup>[21]</sup>. Furthermore, the HRM 5.0 paradigm in its findings regarding personalized professional development supports the theory of individualized learning pathways. When educational institutions tailor development to match individual strengths, it fosters higher engagement. This resonates with Duvvuri, A.<sup>[22]</sup>, who emphasized that professional mastery in the new era must be specifically cultivated rather than generalized. Meanwhile, human-machine collaboration is the most influential factor, aligning with Hidayat, M., and Basuil, D. A.<sup>[3]</sup>, and Malik, N., Tripathi, S. N., Kar, A. K., and Gupta, S.<sup>[23]</sup>, who assert that the synergy between human intelligence and AI enhances efficiency. In educational settings, offloading administrative tasks to AI allows educators to focus on high-touch coaching, thereby driving institutional excellence. The significance of dynamic agility reflects the need for educational institutions to remain resilient amidst digital disruption, while holistic well-being acts as a foundation for long-term productivity. These findings are consistent with Berhil, S., Benlahmar, H., & Labani, N.<sup>[24]</sup>, who argued that sustainable organizations are those that balance technological advancement with human-centric values and mental health support.

Strategic driving guidelines for the HRM 5.0 paradigm are the synergy between intelligence and humanity. By focusing on human-machine collaboration supported by a sustainable culture, educational institutions can achieve long-term excellence<sup>[25]</sup>. However, the HRM 5.0 paradigm collectively predicts operational excellence at a high rate of 70.9%. Several key points merit discussion: 1) Synergy between human and intelligent technology, which emerged as the most influential factor, aligns with Kravchuk, O.<sup>[15]</sup>, who argues that HRM 5.0 is characterized by technology augmenting rather than replacing human potential. In an educational context, AI is a catalyst to streamline routine tasks, allowing educators to focus on high-value creative pedagogical innovations and student engagement. 2) The nexus of well-being and performance, as shown by the significance of holistic well-being and sustainable culture, suggests that excellence in the 5.0 era is inseparable from employee quality of life. This supports the views of Hassan, Z.<sup>[26]</sup>, who emphasizes that sustainable HRM thrives when organizations shift from traditional control to a care-based model, ensuring long-term resilience over short-term productivity gains. 3) The high predictive power of the model underscores that organizations prioritizing dynamic agility and personalized professional development are better equipped to navigate global shifts<sup>[17]</sup>. This confirms that a proactive (SO) strategy, rooted in a flexible culture, is essential for transforming educational institutions into centers of sustainable excellence. Hence, achieving sustainable excellence in

educational organizations under the HRM 5.0 paradigm requires balancing "technological intelligence" and "the values of the teaching spirit." When technology manages systems and humans innovate and care for learners with understanding, the organization can adapt flexibly to change and maintain long-term excellence.

## 6. Conclusion & Implementation Guidelines

This study concludes that the HRM 5.0 paradigm consists of five key dimensions: 1) Personalized Professional Development, which focuses on designing learning and career pathways tailored to individual needs, competencies, and potential. 2) Holistic Well-being, which promotes physical and mental health as well as a healthy work–life balance. 3) Dynamic Agility, which refers to the capacity to adapt quickly to changes through flexible management structures and responsive decision-making. 4) Human–Machine Collaboration, which involves integrating artificial intelligence and automation to support daily operations, thereby enhancing human creativity, critical thinking, and strategic capabilities. 5) Sustainable Organizational Culture, which establishes shared values emphasizing ethics, social responsibility, and long-term commitment to ensure stable and enduring organizational success. The findings confirm that all these dimensions have a significant positive influence on sustainable excellence at the 0.05 statistical level. Collectively, they explain 70.9% of the variance in organizational performance. Among them, human–machine collaboration emerged as the strongest predictor of success. This indicates that the advancement of modern educational institutions does not rely solely on advanced technology but, more importantly, on how effectively technology is used to augment human capabilities while preserving human values, professional judgment, and ethical standards. Based on these results, the following strategic guidelines are proposed for practical and integrated implementation, structured across three timeframes:

- Short-term: Focus on raising awareness, building positive attitudes toward change, and developing basic digital literacy to reduce resistance and build confidence among staff.
- Medium-term: Focus on improving operational efficiency by applying technology to automate repetitive tasks while shifting resources toward customized training and competency development.
- Long-term: Aim to embed a flexible, inclusive, and sustainable organizational culture that balances productivity, innovation, and employee well-being, ultimately driving the institution toward long-term sustainable excellence.

## Implementation Recommendations

To translate these strategies into practice, actions are recommended at two levels:

### 1) Policy and Strategic Level

Organizations should establish a dedicated working group or committee responsible for overseeing the adoption of HRM 5.0. This unit should specifically promote human-machine collaboration by defining clear guidelines for using technology to handle routine and administrative tasks, thereby freeing up staff time to focus on high-value, creative, and educational responsibilities. Policies should also emphasize the balance between digital transformation and human-centric values.

### 2. Operational and Functional Level

- Professional development: Move away from standardized training programs toward personalized development plans, using competency assessments and performance data to tailor learning paths and career progression for each individual.
- Employee well-being: Implement comprehensive well-being programs that cover both physical health and mental wellness, including specific support for managing digital workloads and technology-related stress, in order to build a resilient and sustainable work environment.
- Organizational culture: Reinforce shared values of adaptability, responsibility, and continuous improvement, ensuring that the transition to HRM 5.0 benefits both the organization and its personnel.

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