



# A Team-Based Excellence Model for Innovative Educational Management Among New-Generation University Administrators in Liaoning Province

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Received 11/12/2025

Revised 11/01/2026

Accepted 30/03/2026

## Abstract

**Background and Aim:** Higher education is rapidly changing due to innovation and digitalization, which have presented new difficulties for management and governance teams at universities. Advanced competencies in collaborative leadership, digital reform, and innovative educational administration are necessary for university administrators of the new generation. The purpose of this project was to create and validate the Innovative Educational Management Excellence Team (IEMET) Model for China's Liaoning Province's newer universities.

**Materials and Methods:** A mixed-methods study design was implemented in three subsequent periods. To collect qualitative data for Phase 1, seven key informants took part in semi-structured interviews and a comprehensive literature review. After identifying five essential components—Management System Improvement (IMS), Performance Evaluation (PEN), Personnel Training (PTG), Digital Reform (DIM), and Teamwork (TEK)—the study's initial pool of 68 indicators was whittled down to 52 indicators. For Phase 2, 312 university academic leaders, faculty, and administrators supplied quantitative data through stratified random sampling. The data were assessed using descriptive statistics, reliability analysis, and second-order Confirmatory Factor Analysis (CFA) in the framework of structural equation modeling (SEM). In Phase 3, expert focus groups were conducted to develop implementation guidelines.

**Results:** The findings confirmed that the IEMET Model demonstrated strong construct validity and high reliability, with all model fit indices meeting recommended criteria. Among the five components, Digital Reform (DIM) exerted the strongest influence on innovative educational management excellence, followed by Teamwork (TEK), Performance Evaluation (PEN), Management System Improvement (IMS), and Personnel Training (PTG).

**Conclusion:** The study offers a methodical and verified framework for bolstering creative educational management teams in postsecondary educational establishments. For universities looking to improve governance effectiveness, cultivate innovative and collaborative cultures, and effectively manage digital transformation in modern higher education environments, the IEMET Model provides helpful advice.

**Keywords:** Innovative educational management, Team building, Higher education, Digital transformation, Liaoning Province

## Introduction

Higher education institutions are facing increased pressure to improve their administrative efficiency and ability for innovation in the face of the fast digital revolution, globalization, and rising societal expectations. Universities are now assessed on their capacity to manage intricate systems, incorporate digital technologies, and cultivate collaborative cultures that encourage innovation in addition to their academic performance (Sathit-Amnuay et al., 2018; Sriwiset and others, 2017). These difficulties are especially noticeable in China's Liaoning Province as institutions move toward innovation-driven and technologically advanced learning environments.

Many institutions continue to use antiquated administrative frameworks that are rigid, devoid of integrated teamwork, data-driven decision-making, and flexibility, even in the face of ongoing reforms. Sriwet (2014). Innovative management systems, digital transformation, performance evaluation, staff development, and collaboration in higher education have all been the subject of distinct studies in the past. Nevertheless, these components are frequently handled separately, leading to disjointed approaches that fall short of achieving long-term excellence in educational management (Thammajai et al., 2024).

The Innovative Educational Management Excellence Team (IEMET) Model is a comprehensive Team-Based Excellence Model for Innovative Educational Management that was developed and





validated in this study to fill this gap. The following research questions serve as the study's compass: (1) What are the essential elements of a team focused on excellence for creative educational management? (2) What structural relationships exist between these elements? and (3) How can institutions going through a digital and pedagogical change actually use the verified model? It is anticipated that the results will make a theoretical contribution by bringing disparate ideas together into a logical framework and a practical contribution by offering new university administrators in Liaoning Province useful recommendations.

## Objectives

1. To identify the key components of the Innovative Educational Management Excellence Team (IEMET) Model for new-generation university administrators in Liaoning Province.

2. To construct and empirically validate the IEMET Model using quantitative and qualitative methods, ensuring theoretical rigor, structural validity, and relevance to innovative educational management.

3. To develop evidence-based, practical implementation guidelines for the effective application and continuous improvement of the IEMET Model in universities undergoing educational innovation and digital transformation.

## Literature review

### Innovative Educational Management in Higher Education

Innovative educational administration strongly emphasizes flexibility, strategic governance, and the integration of digital technology to improve institutional effectiveness. Recent studies indicate that in order for universities to adjust to digital disruption and global competition, they must embrace management innovation. Weiyi and associates (2024). These studies all emphasize the necessity of comprehensive, rather than fragmented, management that is focused on innovation.

### Innovative Management Systems

The goal of contemporary management systems is to strike a balance between administrative effectiveness and academic autonomy. (Arunyakanon and Worapongpat, 2025) Previous studies show that evidence-based decision-making, efficient procedures, and transparent governance greatly improve institutional performance. There are still issues with coordinating governance change with team-based operational procedures, nevertheless.

### Digital-Driven Performance Evaluation

Competency-based and data-driven methods have become the norm for performance evaluation. (Kangpheng and Worapongpat, 2025). Although digital tools increase accountability and transparency, research shows inconsistent results when relating evaluation results to team performance and innovation goals, suggesting the need for integrated frameworks.

### Innovative Personnel Development

One of the main forces behind innovation is the growth of human capital. Administrators must possess leadership training, digital literacy, and change management skills, according to a wealth of research. Worapongpat and Yasuttamathada (2025). However, team structures and organizational systems are frequently not taken into consideration while implementing staff development.

### Digital Transformation and Technological Empowerment

Workflows and organizational culture are also altered by digital transformation, in addition to the technology infrastructure. (Zhou and others, 2024) Research highlights that in order to have a lasting effect, digital change needs to be carefully included in management processes. The absence of models elucidating how digital reform interacts with performance mechanisms and teamwork is a significant weakness in the literature.

### Collaborative and Innovation-Oriented Teamwork

Collaborative problem-solving, trust, and shared leadership are all made possible by teamwork. Worapongpat and TianShu (2023). Collaborative teams improve the ability for invention, according to empirical data. But in more general management frameworks, cooperation is rarely positioned as a mediating or integrative function.

### Research Gap and Framework Development



The synthesis identifies a glaring gap: few studies combine teamwork, digital reform, staff development, performance evaluation, and management systems into a single, empirically supported approach. Worapongpat and Xunan (2023). By developing the IEMET Model, which views innovative educational management excellence as a dependent construct influenced by five interconnected components, this study fills this gap.

### Conceptual Framework

This study's conceptual framework was created to clarify the structural connections between important factors that influence how well creative educational management teams perform in postsecondary educational establishments. The framework supports the creation of the Innovative Educational Management Excellence Team (IEMET) Model and is based on theories of innovative educational management, digital governance, human capital development, and team-based organizational performance.

Five interconnected elements make up the framework, which, when combined improves creative educational management excellence.

First, to increase institutional performance, innovative management systems prioritize evidence-based decision-making, accountability, openness, and modern governance.

Second, the use of data, analytics, and digital tools to evaluate performance outcomes, give ongoing feedback, and match organizational and individual objectives with innovation-oriented tactics is known as digital-driven performance evaluation.

Third, innovative people training emphasizes the development of leadership skills, cross-disciplinary learning, specialized training, and competencies necessary for managing organizational transformation to increase capacity.

Fourth, the fundamental enabling factor that combines digital infrastructure, intelligent technologies, and automated administrative procedures to promote creativity and effectiveness in school administration is digital transformation and technological reform.

Last but not least, collaborative teamwork emphasizes open communication, shared decision-making, fostering trust, and creating a culture of innovation within the team.

These five elements are supposed to serve as mutually supporting dimensions inside the conceptual framework, enhancing the overall efficacy of creative educational management teams. The framework serves as a theoretical underpinning for the creation of instruments, empirical validation, and model testing. It also directs the following methodological steps and facilitates the analysis of the IEMET Model using both quantitative and qualitative methods.

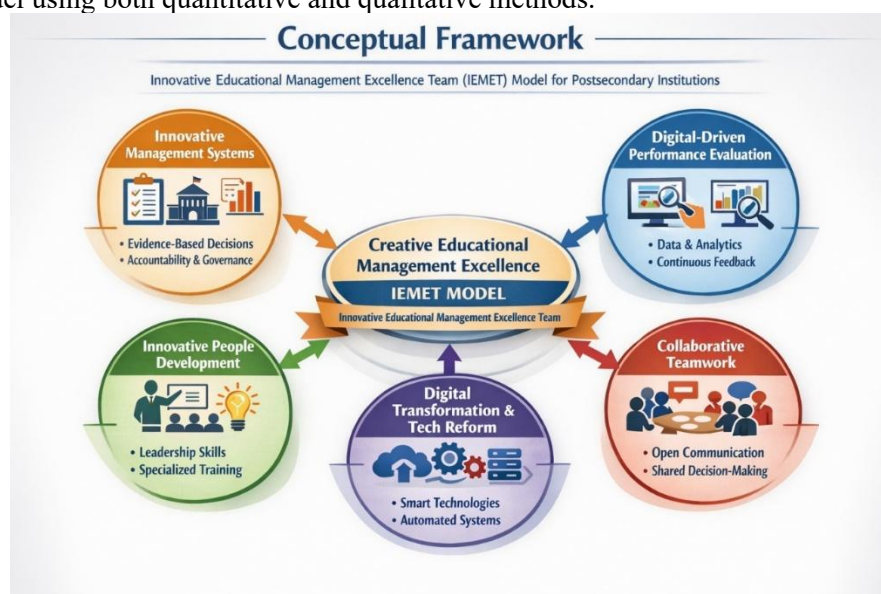


Figure 1 Research Framework



## Methodology

This study employed a mixed-methods research design to develop and validate the Innovative Educational Management Excellence Team (IEMET) Model for new-generation university administrators in Liaoning Province. The research was conducted in three sequential phases, integrating qualitative exploration and quantitative validation to ensure both conceptual rigor and empirical robustness.

### Phase 1: Identification of Model Components and Indicators (Qualitative)

A qualitative approach was used to determine the primary components and indicators of the IEMET Model. First, a comprehensive review of the literature was conducted on modern governance, digital transformation, creative educational management, and team-building theories. We analyzed twenty significant publications published between 2018 and 2024.

A series of semi-structured interviews was then conducted with seven key informants, including department heads, senior professors, specialists in educational innovation, and university administrators from several universities in Liaoning Province. Each interview lasted between 45 and 60 minutes and was conducted online.

The interview data were analyzed using categories, categorization, constant comparison, and thematic coding. Triangulation, member checking, and peer debriefing all increased the research's credibility. The investigation identified five key components of the IEMET Model:

1. Innovative management system
2. Digital-driven performance evaluation
3. Innovative personnel development
4. Digital transformation and technological reform
5. Collaborative and innovation-oriented teamwork

These components generated an initial pool of 68 indicators, which served as the basis for quantitative testing in Phase 2.

### Phase 2: Model Construction and Empirical Validation (Quantitative)

The results of the first phase were used to create a structured questionnaire. Academic leaders, instructors, and administrators from Liaoning Province's newer universities made up the study population. Out of 1,864 employees from 12 representative institutions (comprehensive, technical, and artistic universities), 312 respondents were chosen by stratified random sampling. Three sections made up the questionnaire: (1) demographic data, (2) open-ended recommendations for enhancing innovative educational management, and (3) assessments of the five IEMET components on a 5-point Likert scale.

Five specialists in innovation studies and higher education administration examined the questionnaire for content validity in order to guarantee instrument quality. To verify clarity and dependability, a pilot test including thirty respondents was carried out. SPSS was used for reliability testing, item analysis, and descriptive statistics in the data analysis process. Strong internal consistency was indicated by the results, which revealed Cronbach's alpha coefficients above 0.80 for every component (Cronbach, 1990).

AMOS was used to perform Structural Equation Modeling (SEM) for building validation. The validity and robustness of the IEMET Model were confirmed using Confirmatory Factor Analysis (CFA), which showed a strong model fit with key indices (such as CFI, GFI, NFI, and RMSEA) satisfying suggested thresholds.

### Phase 3: Development of Implementation Guidelines (Qualitative)

Nine experts, including university vice-presidents, directors of innovation centers, senior administrators, and experts in digital transformation, participated in a focus group discussion designed to convert the proven model into workable tactics. The following issues of implementation were highlighted in the discussion:

- strengthening collaborative teamwork,
- fostering an innovation-oriented management culture,
- integrating digital reform into educational management,
- enhancing data-driven performance evaluation, and
- designing innovative personnel development programs.





The creation of evidence-based implementation guidelines, which aim to assist institutions in successfully implementing and maintaining the IEMET Model in the quickly changing context of innovative higher education in Liaoning Province, resulted from a thematic synthesis of expert input.

## Results

### 1. To identify the core components and indicators of the team-building model for excellence in innovative educational management.

Based on an extensive literature review and qualitative interviews with seven key informants from new-generation universities in Liaoning Province, the study identified **five major components** of the **Innovative Educational Management Excellence Team (IEMET) Model**. The qualitative findings generated an initial pool of indicators, which were refined and validated to **52 indicators**, forming the preliminary conceptual structure. The five standardized components are presented below.

#### **Component 1: Management System Improvement (IMS) — 10 indicators**

This component reflects modernization and innovation-oriented restructuring of university governance. Representative indicators include: enhancing transparency and accountability mechanisms, streamlining administrative workflows through scientific management, balancing academic-administrative power, strengthening evidence-based decision-making, and integrating global standards into local governance.

#### **Component 2: Performance Evaluation (PEN) — 11 indicators**

Performance evaluation is treated as a foundation for sustaining innovative educational management excellence. Key indicators include ability- and outcome-based evaluation, continuous feedback systems, institutional alignment of KPIs with innovation goals, and incentive mechanisms supporting creativity, collaboration, and digital innovation.

#### **Component 3: Personnel Training (PTG) — 11 indicators**

Personnel training emphasizes human capital development to prepare administrators for innovation leadership. Indicators include specialized training in innovative educational management, cross-disciplinary professional development, leadership and emotional intelligence enhancement, data-driven decision-making competencies, and capacity building for managing change and digital transformation.

#### **Component 4: Digital Reform (DIM) — 9 indicators**

Digital reform represents the most innovation-driven dimension, emphasizing digital infrastructure and technology-enabled management. Key indicators include integrated digital platforms and data infrastructure, digital literacy for administrative innovation, analytics for educational planning, automation-enhanced administrative processes, and cloud-based knowledge management.

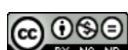
#### **Component 5: Teamwork (TEK) — 11 indicators**

Teamwork strengthens cohesion and cross-functional collaboration, enabling an innovation-oriented culture. Indicators include shared decision-making, transparent multidirectional communication, collaborative governance, trust-building and collective responsibility, and innovation-oriented team culture.

Overall, the findings establish a coherent conceptual foundation for the IEMET Model, integrating governance modernization, performance accountability, talent development, digital reform, and collaborative culture as core pillars for innovation-driven university administration in Liaoning Province.

Table 1 Standardized Components and Indicator Distribution of the IEMET Model

Component (Standardized Term)	Code	Number of Indicators	Conceptual Focus (Short)
Management System Improvement	IMS	10	Governance modernization; transparency; evidence-based management
Performance Evaluation	PEN	11	Outcome-based evaluation; feedback; innovation-aligned KPIs/incentives
Personnel Training	PTG	11	Leadership and capability development; cross-disciplinary learning





Component (Standardized Term)	Code	Number of Indicators	Conceptual Focus (Short)
Digital Reform	DIM	9	Digital infrastructure; analytics; automation; knowledge management
Teamwork	TEK	11	Collaboration; communication; trust; innovation culture
<b>Total</b>	—	<b>52</b>	—

**2. To construct and empirically validate the team-building model for excellence in innovative educational management.**

After item purification and factor-loading analysis, **47 indicators** were retained for quantitative testing. The validated dataset consisted of **312 respondents** from **representative new-generation universities** across Liaoning Province.

**2.1 Reliability and Validity of the Measurement Model**

The measurement model demonstrated strong psychometric properties: Cronbach’s alpha indicated high internal consistency ( $\alpha = 0.889$ ); all standardized factor loadings exceeded the minimum threshold ( $> 0.60$ ); Composite Reliability values were strong ( $CR > 0.85$ ); and Average Variance Extracted supported convergent validity ( $AVE > 0.50$ ). These results confirm that the measurement model is statistically robust and appropriate for further model testing.

**2.2 Second-Order Confirmatory Factor Analysis (CFA)**

A second-order CFA was conducted to verify whether the first five-order components (IMS, PEN, PTG, DIM, TEK) collectively represent the higher-order construct of IEMET. The model demonstrated excellent goodness-of-fit, confirming that the five-component structure appropriately represents innovative educational management excellence teams.

Table 2 Goodness-of-Fit Indices for the Second-Order CFA Model

Fit Index	Value	Recommended Criterion	Interpretation
$\chi^2/df$	1.260	$< 2.00$	Excellent fit
RMSEA	0.026	$< 0.05$	Excellent fit
CFI	0.987	$> 0.95$	Excellent fit
GFI	0.952	$> 0.90$	High goodness of fit

**2.3 Key Indicator Evidence (Factor Loading Highlights)**

Within each component, several indicators showed particularly strong standardized loadings. For example, **IMS5 (0.860)** was the strongest indicator in Management System Improvement; **DIM4 (0.849)** was the strongest indicator in Digital Reform; and **TEK3 (0.829)** was the highest indicator in Teamwork. Performance Evaluation and Personnel Training also demonstrated strong item contributions (e.g., PEN3–PEN4; PTG4–PTG5), supporting the internal structure of each component.

**2.4 Relative Influence of Components**

The explanatory power of each component was assessed using  $R^2$ , indicating the relative contribution of each dimension to innovative educational management excellence. Digital Reform demonstrated the strongest influence, followed by Teamwork and Performance Evaluation.

Table 3 Ranking of Component Influence in the IEMET Model

Rank	Component (Standardized Term)	Code	$R^2$	Interpretation
1	Digital Reform	DIM	0.749	Strongest driver of innovative educational management excellence
2	Teamwork	TEK	0.690	Critical for collaborative innovation
3	Performance Evaluation	PEN	0.683	Strengthens accountability and innovation alignment
4	Management System Improvement	IMS	0.595	Foundational governance mechanism
5	Personnel Training	PTG	0.565	Essential capability base, indirectly influential





The results confirm that the IEMET Model is reliable and valid, with excellent second-order CFA fit. **Digital Reform (DIM)** is the most influential dimension, while **Teamwork (TEK)** and **Performance Evaluation (PEN)** play substantial supporting roles. All components contribute meaningfully to the model structure.

**3. To develop implementation guidelines for the team-building model.**

A qualitative synthesis from a focus group of nine educational leaders generated five practical, evidence-based implementation guidelines aligned with the five components of the IEMET Model.

**1. Strengthen Management System Improvement (IMS):** promote transparent authority distribution, redesign administrative processes to reduce redundancy, and develop governance structures that support experimentation and innovation.

**2. Enhance Performance Evaluation (PEN):** adopt criteria reflecting digital competencies, teamwork, and creativity; ensure fairness through data-informed appraisal; and link performance outcomes to professional growth and rewards.

**3. Advance Personnel Training (PTG):** provide training in change management, digital literacy, and innovation strategy; promote interdisciplinary learning; and strengthen emotional intelligence and human relations skills.

**4. Accelerate Digital Reform (DIM):** invest in integrated digital platforms (including AI-enabled administration), apply analytics in decision-making and planning, and develop secure digital ecosystems.

**5. Promote Teamwork (TEK):** encourage shared values and collective responsibility, create cross-departmental innovation teams, and foster open communication and continuous learning.

**Conclusion:** Building excellence teams for innovative educational management in new-generation universities requires a synergistic integration of **IMS, PEN, PTG, DIM, and TEK**. The validated IEMET Model provides a reliable framework for strengthening administrative capability and supporting universities in Liaoning Province to respond effectively to rapid educational, technological, and societal change.

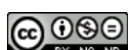
Table 4 Alignment between Model Components and Implementation Guidelines (Objective 3)

Model Component	Code	Implementation Guideline Focus
Management System Improvement	IMS	Transparent authority; process redesign; governance for innovation
Performance Evaluation	PEN	Digital/innovation-aligned criteria; fair appraisal; reward linkage
Personnel Training	PTG	Change management; interdisciplinary learning; emotional intelligence
Digital Reform	DIM	Integrated platforms, analytics, and a secure digital ecosystem
Teamwork	TEK	Shared values; cross-unit teams; open communication culture

**Discussion**

The findings of this study confirm that excellence in innovative educational management is a multidimensional construct that requires the systematic integration of governance structures, digital technology, human capital development, performance mechanisms, and collaborative teamwork. Rather than functioning independently, these elements interact dynamically to strengthen administrative capacity and institutional innovation within higher education contexts.

Among the five components of the IEMET Model, digital reform emerged as the strongest driving force. This finding supports previous research emphasizing that digital governance, data-driven decision-making, and smart administrative systems are central to modern university management. The results suggest that digital transformation functions not merely as a technical support mechanism but as a strategic catalyst that reshapes organizational processes, enhances transparency, and enables





innovation-oriented management practices. This aligns with studies highlighting the transformative role of digital technologies in higher education administration.

Teamwork demonstrated a substantial influence on innovative educational management excellence, reinforcing theories of shared leadership and collaborative governance. This result extends prior research by empirically confirming that teamwork acts as a critical mechanism linking digital reform with effective administrative outcomes. Collaborative teams facilitate communication, trust, and shared responsibility, thereby increasing an institution's ability to translate digital initiatives into practical improvements. Performance evaluation also played a significant role by promoting accountability, motivation, and continuous improvement, consistent with competency-based and results-oriented management theories.

Although improvement of the management system and personnel training showed comparatively lower direct effects, they remain foundational components of the model. Their indirect influence indicates that without clear governance structures, transparent policies, and sustained capacity building, digital transformation and teamwork initiatives may lack long-term sustainability. This finding underscores the importance of viewing administrative innovation as a systemic process rather than a collection of isolated reforms.

A key limitation of this study lies in its focus on universities within a single province, which may limit the generalizability of the findings. Future research should apply the IEMET Model across diverse regional and institutional contexts and employ longitudinal designs to examine its long-term impact on organizational performance and innovation outcomes.

#### Results from Research Objective 1: Identifying the Key Components of the IEMET Model

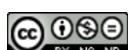
The analysis identified five essential components of the Innovative Educational Management Excellence Team (IEMET) Model for new-generation university administrators in Liaoning Province: (1) Improvement of the Management System, (2) Performance Evaluation, (3) Personnel Training, (4) Digital Reform, and (5) Teamwork. These findings indicate that universities undergoing educational innovation require integrated structural reforms to respond effectively to rapid technological change and evolving academic expectations.

The emphasis on management system improvement highlights the need for flexibility, transparency, and strategic alignment within university governance. This result is consistent with Bass (1997), who emphasized that refined governance structures are fundamental to innovation-driven organizational development. The importance of performance evaluation reflects both regional and global trends toward accountability and quality assurance. In particular, multi-level and competency-based evaluation frameworks are essential for capturing both individual contributions and collective team effectiveness, as suggested by Chayboonkrong and Worapongpat (2024).

Findings related to personnel training emphasize the necessity of continuous and specialized professional development, especially for administrators responsible for leading innovation. This supports the argument of Puangsamit (2017, who highlighted discipline-specific capacity building as a means of enhancing adaptability and strategic thinking. Digital reform emerged as a critical requirement, as universities increasingly depend on digital platforms for governance, instructional delivery, and institutional monitoring. This finding aligns with Dongling and Worapongpat (2023), who argued that digital transformation must be strategic, deeply integrated, and aligned with institutional missions. Finally, teamwork was confirmed as a foundational component, reinforcing the role of shared leadership, mutual trust, and team cohesion in enhancing administrative effectiveness.

Results from Research Objective 2. Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) results indicate that the IEMET Model demonstrates strong construct validity and an acceptable overall model fit. Among the five components, Digital Reform (DIM), Teamwork (TEK), and Performance Evaluation (PEN) emerged as the most influential factors, serving as the central pillars of innovative educational management within universities in Liaoning Province.

The prominence of Digital Reform reflects current trends in educational modernization, in which institutional effectiveness increasingly relies on data-driven decision-making, smart governance systems, and digitally integrated administrative processes. This finding is consistent with Tangkut et al. (2022), who emphasized the transformative role of digital governance in enhancing efficiency, transparency, and strategic coordination in higher education institutions.





Teamwork also exhibited a strong and significant influence, underscoring the importance of collaborative administrative culture in fostering innovation. This result aligns with Jianfeng and Worapongpat (2024), who found that teamwork, shared responsibility, and collective leadership substantially enhance organizational resilience and innovation capacity. Effective teamwork enables institutions to translate strategic initiatives, particularly digital reforms, into sustainable administrative outcomes.

Similarly, the significant impact of Performance Evaluation supports the argument that development-oriented and competency-based assessment systems play a crucial role in improving accountability, motivation, and strategic alignment. This finding corresponds with Songwittaya (2019), who highlighted that modern educational management requires evaluation mechanisms that promote continuous improvement at both individual and organizational levels.

Taken together, these validated relationships confirm that the IEMET Model reflects broader global shifts toward digitally enabled, team-driven, and performance-centered management frameworks. Such frameworks are increasingly essential for universities undergoing innovation and transformation in response to technological advancement and changing educational demands.

Results from Research Objective 3: Developing implementation guidelines. The study translated the IEMET Model into five practical implementation guidelines, each consisting of detailed sub-strategies to support real-world adoption within universities. This step ensures that the model goes beyond theoretical contribution and offers clear pathways for operationalization. The guidelines for Digital Reform (9 sub-strategies) align with (Makjod et. al., 2025). who demonstrated that integrated digital systems enhance policy execution, administrative intelligence, and organizational coherence. The Teamwork guidelines (9 sub-strategies) emphasize trust-building, shared leadership, emotional incentives, and cross-functional collaboration, consistent with (Min and Worapongpat, 2023). Performance Evaluation guidelines draw on principles from Worapongpat and Kangpheng (2025), emphasizing feedback-rich, competency-driven frameworks to enhance both individual and team performance. Guidelines for Improvement of the Management System correspond to (Ning et al., 2023). underscoring the importance of structural clarity, standardized policies, and organizational resilience. Finally, Personnel Training guidelines reflect insights from (Lertyosanan et al., 2018). emphasizing individualized development programs, skill enhancement, and future-oriented training to prepare administrators for rapid educational changes. Overall, the developed guidelines strengthen the practical value of the IEMET Model by enabling universities to implement innovation-focused management strategies systematically and sustainably.

## Summary

The validation of the IEMET Model using CFA and SEM confirms that innovative educational management excellence in universities is primarily driven by three key components: Digital Reform, Teamwork, and Performance Evaluation. Digital Reform emerged as the most influential factor, highlighting the critical role of data-driven governance, smart administrative systems, and digital integration in modern higher education management. Teamwork functions as a vital collaborative mechanism that strengthens organizational resilience and enables the effective implementation of digital initiatives. Performance Evaluation serves as a quality control and motivational system, ensuring accountability, continuous improvement, and strategic alignment. Together, these findings demonstrate that the IEMET Model reflects contemporary global trends toward digitally enabled, team-oriented, and performance-centered management, making it a robust framework for universities undergoing educational innovation and transformation.

## New Knowledge Derived from the Study

From the study of “Team Building Model for Excellence in Innovative Educational Management for New-Generation University Administrators in Liaoning Province”, new knowledge has emerged and can be synthesized into a conceptual model as illustrated in the following diagram. The findings contribute to the field of innovative educational management by revealing the structural relationships and influence pathways among the five core components of the IEMET Model—Management System Improvement, Performance Evaluation, Personnel Training, Digital Reform, and Teamwork.



This knowledge constitutes a newly established framework showing how digital transformation, collaborative team structures, and performance-based strategies interact to enhance administrative excellence in universities undergoing innovation and reform.

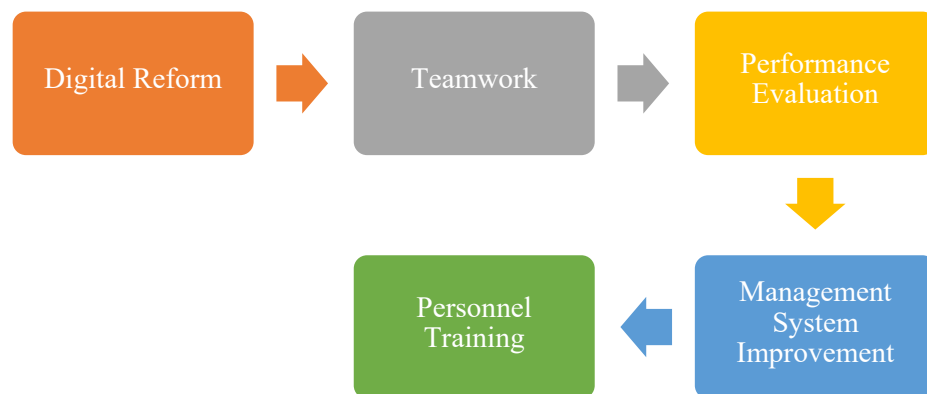


Figure 2: The Impact Pathways of the Five Components of the IEMET Model on Excellence in Innovative Educational Management

From Figure 2, it can be seen that Digital Reform functions as the primary driver, exerting the strongest and most direct influence on excellence in innovative educational management. Teamwork plays the role of a mediator, linking the success of digital system development with enhanced administrative effectiveness. Performance Evaluation serves as a quality control mechanism, influencing the adaptability and continuous improvement of both teams and the organization. Management System Improvement acts as a supportive structure, laying the foundation for coherence, integration, and overall system efficiency. Personnel Training operates as a capacity-building element, strengthening the competencies of new-generation university administrators in the digital era.

### Recommendation

Based on the findings of the study and the structural relationships illustrated in Figure 2, several key recommendations are proposed to strengthen innovative educational management and enhance the effectiveness of the IEMET (Innovative Educational Management Excellence Team) Model for new-generation university administrators in Liaoning Province.

#### 1. Prioritize Strategic Investment in Digital Reform

Given its role as the primary driver of innovative educational management, universities should: Allocate sufficient resources for upgrading digital infrastructure, data platforms, and intelligent administrative systems. Implement institution-wide digital governance policies to ensure seamless integration of technology into academic and administrative operations. Promote digital literacy and encourage a culture of technological adaptability among staff and administrators.

#### 2. Strengthen Teamwork as a Mediating Mechanism

Since teamwork significantly enhances the effectiveness of digital transformation, Universities should adopt collaborative management practices, encourage cross-departmental teamwork, and cultivate a culture of mutual trust. Leadership development programs should emphasize team leadership, shared decision-making, and communication skills. Mechanisms for team reflection, cross-functional collaboration, and co-creation of solutions should be institutionalized.

#### 3. Reinforce Performance Evaluation as a Quality Control System

To ensure continuous improvement: Develop comprehensive, competency-based evaluation frameworks aligned with the goals of innovative educational management. Integrate multi-source feedback, data-driven assessment tools, and transparent monitoring systems. Link evaluation results with incentives, professional development pathways, and organizational improvement strategies.



#### 4. Enhance Management System Improvement as a Structural Foundation

As the supportive structure of the model, Universities should reform governance frameworks to ensure clarity of roles, streamlined processes, and evidence-based decision-making. Policies should promote administrative agility, responsiveness, and resilience to external changes in higher education. Continuous system review and quality assurance processes should be implemented to maintain alignment with institutional goals.

#### 5. Promote Personnel Training as a Capacity-Building Element

To strengthen the competencies of administrators in the digital era: Design specialized training programs tailored to the unique needs of creative and innovative educational environments. Emphasize digital governance, emotional intelligence, leadership, cross-cultural communication, and interdisciplinary capabilities. Provide long-term professional development pathways, mentorship systems, and opportunities for international collaboration and benchmarking.

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