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INSTITUTIONAL GOVERNANCE AND INDIVIDUAL ACADEMIC PERFORMANCE: TOWARD AN INTEGRATED TWO-TIER ASSESSMENT MODEL

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Abstract
Higher education systems increasingly rely on performance indicators to connect institutional strategy, academic work, and accountability. However, indicator-based evaluation can also distort academic priorities when a limited number of measurable outputs dominate assessment. This paper presents a two-tier Key Performance Indicator (KPI) framework designed for higher education reform in Uzbekistan. The study adopts a design science research strategy supported by qualitative case study, document analysis, comparative policy analysis, and expert consultation. The framework consists of an institutional tier for evaluating university leadership through strategy-linked KPIs and an individual tier for evaluating professor-teachers through a 100-point scorecard. The individual model assigns equal maximum weights to teaching and research (40 points each), with mentoring and institutional contribution accounting for the remaining 20 points. A digital evaluation lifecycle is proposed to automate data collection, calculation, verification, feedback, and periodic recalibration. The design is discussed in relation to international approaches in the United Kingdom, South Korea, and Finland. The paper contributes a theory-informed and potentially transferable design that addresses three recurring problems in performance evaluation: indicator deformation, weak links between evaluation and development, and excessive administrative burden. As the framework is at an early-pilot and draft stage, the paper presents a design contribution and evaluation agenda rather than causal evidence of impact.

Keywords: Key performance indicators; academic performance evaluation; design science research; higher education policy; digital governance; performativity; Uzbekistan; Central Asia.

Introduction

Since 2017, Uzbekistan has undertaken substantial reforms in higher education. Gross tertiary enrolment increased considerably, institutional autonomy expanded, the Ministry of Higher Education, Science and Innovation was established in 2023, and digital management systems such as HEMIS were introduced. These reforms created a need for performance evaluation instruments capable of supporting both institutional accountability and academic quality.

Traditional academic appraisal, however, has often relied heavily on teaching-hour requirements and publication counts. Such measures are relatively easy to record and verify but

do not necessarily capture the broader quality of teaching, research, mentoring, and institutional contribution.

This problem is reflected in two strands of international literature. The first identifies the dimensions and implementation challenges of higher education KPIs. The second examines the unintended consequences of metric-driven evaluation, including Goodhart's law and academic performativity. What remains less developed is the translation of these critiques into a concrete evaluation architecture that can be implemented within a reforming higher education system.

This paper addresses that gap by presenting a two-tier KPI framework developed in Uzbekistan during 2025–2026. The framework combines institutional leadership evaluation with individual academic evaluation and integrates both within a digital performance-management process.

The contribution is threefold. First, the paper links diagnosed weaknesses of traditional appraisal to explicit design principles. Second, it proposes a two-tier architecture covering institutional and individual performance. Third, it situates the design within international experience while identifying its limitations and future evaluation requirements.

2. Methodology

The study adopts a **Design Science Research (DSR)** strategy. Unlike conventional empirical research that primarily tests hypotheses, DSR focuses on designing and evaluating purposeful artifacts. In this study, the artifact is the proposed two-tier KPI framework.

Four complementary methods were used.

First, a **qualitative case study** provides the empirical setting of Uzbekistan's higher education reform. Second, **document analysis** was applied to relevant reform instruments, including draft regulations on faculty workload and evaluation, institutional KPI requirements, model KPI sets, and incentive regulations. Third, **comparative policy analysis** positioned the proposed framework against selected approaches in the United Kingdom, South Korea, and Finland. Fourth, **expert consultation** and the author's participation in the design process provided practical insight into the development of the framework.

The DSR process followed four broad stages: identification of the performance-evaluation problem, development of the framework, demonstration through early implementation, and formulation of an evaluation agenda.

The analysis is primarily interpretive. Because the institutional component was only at an early-pilot stage and the individual component remained under development, the paper does not claim causal effects on teaching quality, research productivity, staff wellbeing, or graduate outcomes.

3. Problem Diagnosis and Conceptual Framework

Three interconnected problems provide the rationale for the proposed design.

3.1. Indicator deformation

When research outputs, particularly publications, account for a disproportionate share of an academic's appraisal, measurable output can become more important than teaching, mentoring, or meaningful research quality. Such an arrangement creates incentives for quantity-oriented behaviour and illustrates the risks described by Goodhart's law and the literature on academic performativity.

3.2. Weak connection between evaluation and development

Performance evaluation has limited developmental value when employees receive a score without a clear connection to professional development, institutional support, or transparent consequences. Evaluation can consequently be perceived primarily as an administrative control mechanism.

3.3. Administrative burden

Traditional evaluation frequently requires extensive documentation and manual verification. Excessive reporting consumes academic time and can therefore undermine the very activities that the evaluation system seeks to promote.

The conceptual response is based on three principles:

1. **Balance** — no single performance dimension should dominate evaluation.
2. **Digitalisation** — data collection and calculation should be automated wherever possible.
3. **Developmental feedback** — evaluation should lead to feedback, development, and appropriate institutional consequences.

4. The Two-Tier KPI Architecture

The proposed framework consists of two interconnected levels: **institutional** and **individual**.

Tier	Unit evaluated	Main instrument	Status
Institutional	Rector and vice-rectors	Strategy-linked KPI model and quarterly reporting	Early pilot in 8 HEIs from July 2026
Individual	Professor-teachers	Rebalanced workload model and 100-point scorecard	Draft for 2026/2027

Both tiers use the same underlying principles of strategic alignment, measurable indicators, transparent weighting, digital reporting, verification, and feedback.

4.1. Institutional tier

The institutional tier evaluates university leadership through a model KPI set covering major areas of university management. Indicators are classified as either **progressive**, where higher achievement is desirable, or **regressive**, where lower values are preferable.

Representative areas include:

Portfolio	Representative indicators	Direction
Rector	TOP-300 aligned programmes, international accreditation, scientific potential, graduate employment	Progressive
Academic affairs	Dual education, open-access textbooks, industry-linked practical classes	Progressive
Research and innovation	Scopus/WoS publications, funded start-ups, patents, PhD/DSc completion	Progressive
International cooperation	Joint programmes, academic mobility, international students	Progressive
Finance and economy	Foreign grants/investment, education-export revenue, energy savings	Progressive

The institutional results are reported periodically through the digital platform **samaradorlik.uz**, with central verification. The framework was piloted in eight higher education institutions beginning in July 2026.

The institutional model therefore shifts evaluation from isolated administrative indicators toward a broader representation of institutional strategy.

4.2. Individual faculty tier

The individual component addresses the evaluation of professor-teachers. It redefines academic work across four broad domains:

- teaching and methodological activity;
- research activity;
- moral-educational **ustoz–shogird** (mentoring) activity;
- contribution to institutional development and professional qualities.

The model also introduces a minimum annual contact-hour requirement while reducing dependence on lecture hours as the primary representation of academic work.

The proposed 100-point scorecard is:

Evaluation domain	**Maximum points**
Teaching and methodological activity	40
Research activity	40
Ustoz–shogird / mentoring activity	10
Institutional development and professional qualities	10
Total	**100**

The central design principle is the balance between teaching and research. Research is therefore capped at 40 points rather than allowing publication-oriented indicators to dominate the appraisal.

Within the two major domains, the assessment can consider several dimensions. Teaching may include course delivery, learning outcomes, observed teaching, teaching materials, student feedback, and methodological innovation. Research may include quality-adjusted publications, research grants, doctoral supervision, patents and innovation, scholarly collaboration, and the contribution of research to teaching or society.

4.3. Integral performance index

The two tiers can be represented through a common weighted performance index:

I(KPI)=\sum_{i=1}^{n}w_i k_i

where (w_i) represents the weight of indicator (i), and (k_i) represents its normalised achievement, with:

\sum w_i=1

For progressive indicators:

k_i=\min(R_i/T_i,1)

where (R_i) is the achieved result and (T_i) is the target.

For regressive indicators:

k_i=\min(T_i/R_i,1)

This bounded approach prevents a single indicator from producing an unlimited contribution to the overall score.

For faculty evaluation, the model can be expressed as:

I=0.40T+0.40R+0.10M+0.10D

where:

- (T) = teaching and methodological performance;
- (R) = research performance;
- (M) = mentoring performance;
- (D) = institutional development and professional contribution.

The formula operationalises the central design principle: **balanced evaluation rather than single-metric dominance**.

5. Digital Evaluation Lifecycle

Digitalisation is an essential component of the proposed architecture because it addresses the administrative burden associated with traditional evaluation.

The proposed lifecycle consists of six stages:

1. strategic goals are translated into indicators and weights;
2. performance data are captured digitally;
3. the integral KPI score is calculated;
4. results are verified and analysed;
5. feedback, development measures, and appropriate rewards are linked to results;
6. indicators and weights are periodically reviewed and recalibrated.

This lifecycle is intended to transform KPI evaluation from a periodic reporting exercise into a continuous management and development process.

Digital reporting also creates opportunities for integration with existing higher education information systems, reducing repeated data entry and improving transparency.

6. SWOT Analysis

Strengths	**Weaknesses**
Balanced teaching/research weights	Dependence on digital infrastructure
Transparent digital reporting	Expertise required for weighting
Strategic alignment	Possible initial staff resistance
Development-oriented evaluation	Need for continuous calibration
Opportunities	**Threats**
Integration with HEMIS and institutional autonomy	Goodhart-type metric gaming
Adaptation of international practice	Regional digital divide
Greater employer involvement	Excessive pressure from performance-linked rewards

The SWOT analysis indicates that the effectiveness of the framework depends not only on indicator design but also on implementation conditions, institutional capacity, data quality, and the way results are connected to rewards.

7. Discussion

The proposed framework contributes to performance-measurement research by moving from **diagnosis to design**. Existing literature has demonstrated that excessive reliance on measurable outputs may distort academic behaviour. The proposed model responds to this problem structurally by distributing evaluation across several dimensions and limiting the dominance of any single indicator.

The design also combines accountability with developmental evaluation. Rather than treating KPI results only as a basis for ranking or reward, the framework links results to feedback and professional development.

From a practical perspective, the two-tier structure allows different levels of the higher education system to be evaluated through related but distinct instruments. University leadership is assessed through strategic institutional indicators, while individual academics are assessed through a broader representation of academic work.

The digital component is particularly important because manual evaluation can create significant administrative costs. Automated data capture and calculation can reduce duplication and improve transparency, provided that the underlying data are reliable.

The international comparison further illustrates that no single model should be transferred without adaptation. The United Kingdom's Teaching Excellence Framework emphasises institutional accountability and student outcomes; performance-based systems in South Korea illustrate the potential benefits and risks of linking performance to rewards; while Finland provides an example of a more trust-based approach. The Uzbekistan model attempts to combine accountability with developmental elements rather than adopting any one of these approaches wholesale.

Compared with studies that primarily classify KPI dimensions or critique metric gaming, the present paper offers a **deployable design framework** and an agenda for evaluating its effectiveness.

8. Limitations

Several limitations should be recognised.

First, this is a **design case study rather than an impact evaluation**. The institutional component was at an early-pilot stage, while the faculty workload and evaluation component remained in draft form.

Second, the paper does not provide longitudinal evidence of changes in teaching quality, research productivity, graduate employment, or staff wellbeing.

Third, the author participated in the development of several instruments analysed in the study. This provides valuable practitioner insight but also creates a risk of favourable interpretation. The paper addresses this risk by explicitly distinguishing enacted, pilot, and draft components and by identifying potential weaknesses through the SWOT analysis.

Finally, the weighting structure requires empirical validation across disciplines. A weight that is appropriate for one academic field may not necessarily be appropriate for another.

9. Conclusion and Future Research

Higher education reform requires performance-evaluation systems that support institutional accountability without reducing academic quality to a small number of easily measurable outputs. The two-tier KPI framework proposed in this paper responds to this challenge by combining institutional leadership evaluation with a balanced individual academic scorecard.

Its main design principles are **balance, digitalisation, transparency, and developmental feedback**. The 40–40 distribution between teaching and research is intended to prevent research metrics from dominating individual appraisal, while the institutional tier links university leadership evaluation to strategic objectives.

The framework should nevertheless be understood as an early-stage design rather than a proven impact model. Its effectiveness requires systematic empirical testing.

Future research should therefore:

1. compare pilot and non-pilot institutions using independent quality indicators;
2. test the construct validity and weighting of the integral KPI index across academic disciplines;
3. examine the effects of performance incentives on staff wellbeing and professional behaviour;
4. assess changes in teaching quality, research productivity, and graduate outcomes;
5. investigate the transferability of the two-tier model to other higher education systems undergoing rapid reform.

The Uzbekistan case demonstrates how performance-measurement theory can be translated into a concrete institutional design. Its broader value will depend on whether subsequent implementation and empirical evaluation confirm that the proposed balance between accountability, automation, and academic development can be sustained in practice.

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