


Teaching Service Quality Impacted by Innovation Strategy and Employee Engagement Practices: Vision 2030 Human Capital Development Tested as Moderator in Higher Education of Saudi Arabia

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Abstract:

Introduction: In this research, the authors discuss the impact of employee engagement practices and innovation strategies on the quality of teaching services in Saudi Arabian higher education and evaluate the moderating effect of Vision 2030 Human Capital Development initiatives.

Methods: It followed a quantitative design with 350 academic staff participating in the research. Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to analyse the data.

Results: The results indicate that the practice of employee engagement positively and significantly influences the quality of teaching services ($\beta = 0.184, p < 0.05$). Conversely, innovation strategy does not show any significant direct effect ($\beta = 0.076, p > 0.05$). Also, Vision 2030 Human Capital Development demonstrates a direct positive and significant impact on the quality of teaching services ($\beta = 0.487, t = 7.348, p = 0.001$). The moderation analysis shows that Vision 2030 human capital development plays a significant role in strengthening the relationship between practices of employee engagement and teaching services quality ($\beta = 0.268, t = 4.215, p = 0.001$), which supports H3. Likewise, it also has a significant moderating effect on the association between innovation strategy and teaching service quality ($\beta = 0.221, t = 2.987, p = 0.003$), and this supports H4.

Conclusion: These results suggest that engagement practices and innovation strategy effectiveness rise with alignment to Vision 2030 human capital development programs. In this way, Human capital development (Organizational in the Vision 2030 context) acts as a contextual institutional factor and enhancer of organizational practices.

Keywords: Employee engagement practices, innovation strategy, teaching service quality, vision 2030, human capital development, higher education.

1. INTRODUCTION

The increased digitalisation of education and hybrid learning formats has escalated pressures on higher education to innovate teaching practices and enhance service delivery in education. As a result of this, university-wide strategic focus has shifted towards innovation in pedagogy, curriculum design, and online classroom environments as a way to achieve sustainable competitiveness.

An increasing number of researchers note that creative pedagogical approaches increase the effectiveness of learning, interest, and performance of students at contemporary institutions of higher learning (Khadijah *et al.*, 2025). In addition to innovation, staff engagement in academic work has become one of the essential organisational variables affecting the quality of teaching and institutional performance (Gede & Huluka, 2024; Nalini *et al.*, 2026). Engaged faculty members

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are more committed, more motivated, and willing to embrace new pedagogical practices in instructional activities. Engagement practices that include professional development, empowerment, and supportive organisational climates are thus getting more attention in higher education institutions. These practices help to enhance satisfaction of academic staff, staff retention, and general teaching performance in universities working in competitive international settings (Ghamooshi *et al.*, 2023; Verma & Kaur, 2024).

Nevertheless, the challenge of aligning employee engagement programs and innovation strategies has continued to be a major issue in most institutions of higher learning across the globe. Effective interaction in universities is a difficult task since academic staff are likely to be overwhelmed with workloads, administration, and the need to keep research prolific and preserve the quality of teaching. These issues are especially noticeable in the countries that are developing mass educational transformation and economic diversification programs.

Saudi Arabia is one of the notable examples of such change with its national development program called Vision 2030. Vision 2030 focuses on building a knowledge-based economy through enhancing institutions of higher learning and workforce capacity (Abdulrahim, 2025). Human Capability Development Program (HCDP), initiated as a part of (Saudi Vision 2030, 2021), aims at empowering the population with skills that will enable their economic competitiveness in the future. According to a report published recently, the rate of Saudi graduates joining the labour market within six months rose to 44.43% in 2024 out of 13.3% in 2016 (Saudi Gazette, 2025). The level of youth employment among Saudis aged between fifteen and twenty-four years also increased to 36.2, which is the positive effect of human capital development activities (Saudi Gazette, 2024). Moreover, Vision 2030 reforms are centred on continuous learning and skill development as critical elements of national workforce transformation. (ETS, 2025) published the results of the 2025 Human Progress Report and found that over 90% of Saudis surveyed trust that lifelong learning and skill building are keys to career success. These reform initiatives can also be seen in the form of Saudi higher education, which has shown some form of measurable improvement in academic rankings around the world. For instance, twelve universities in Saudi Arabia were listed as one of the top one thousand universities in the Shanghai world ranking (SPA, 2024). These results demonstrate the growing concern with the quality of education, research, and innovation in Saudi institutions of higher learning.

Nevertheless, in spite of these promising efforts made under Vision 2030, there are a number of challenges that impede the full achievement of the educational targets of Vision 2030. Saudi culture is deeply ingrained in traditional teaching and curricula, and it is challenging to implement new methods without facing resistance (Abdulrahim, 2025). Therefore, effective organisational practices and national policies regarding human capital should be combined to achieve sustainability in the quality of education.

Despite emerging research interest, the available studies tend to study employee engagement and innovation strategies separately in a higher education setting. Moreover, the research on the impact of national human capital development initiatives on the connection between teaching service quality and organisational practices is limited.

Thus, this study aims to assess the influence of employee engagement practices, innovation strategy, and the teaching service quality in Saudi Arabian higher education institutions as well as to examine the moderating effect of Vision 2030 Human Capital Development. Theoretically, this paper is a combination of Social Exchange Theory, Resource-Based View, and Human Capital Theory in explaining how an organisation and policy have an effect on the quality of teaching services. Such an integration leads to the expansion of multi-theoretical views on the interaction of engagement practices, innovation capabilities, and human capital development within the system of higher education. Empirically, the research offers quantitative results of Saudi post-secondary education institutions by applying PLS-SEM to estimate the interdependence of engagement practices, innovation strategy, and teaching service quality.

2. LITERATURE REVIEW

2.1. Key Constructs

Employee engagement practices are the organisational programs aimed at boosting the psychological involvement, commitment, and participation of employees in their work roles. (Kahn, 1990) defines employee engagement as the process of mobilising the physical, cognitive, and emotional energies of employees into work performance. Engagement practices are a more recent literature that describes structured activities like training, empowerment, recognition, and participatory decision-making, through which the motivation of employees and organisational commitment are promoted (Omolola, 2023). These practices are especially relevant in the context of higher education because they can affect the motivation of the faculty, their teaching performance, and readiness to embrace new methods. This study views employee engagement practices as an institutional process of promoting faculty involvement and commitment, which can relate to higher-quality teaching service provision.

Even though both employee engagement practices and Vision 2030 human capital development are associated with such elements as training and development, they differ in the scope, purpose, and level of operation. Employee engagement practices refer to institution-wide programs that aim to increase faculty motivation, involvement, and commitment using empowerment, recognition, and participative decision-making processes. By contrast, Vision 2030 human capital development is a macro-level policy framework that is intended to enhance the workforce capability of different sectors by making massive investments in education, skills development, and institutional capacity building. Therefore, engagement practices emphasise the expansion of psychological and behavioural participation in organisations, whereas human

capital development is based on the more extensive structural and policy-related initiatives to empower the national talent and competencies. The distinction between these two constructs guarantees that they are conceptually and analytically independent, though they have some developmental similarities.

Innovation strategy is defined as the conscious way through which an organisation creates and deploys new ideas, processes, or technologies in order to improve performance and competitiveness. The concept of innovation introduced by Joseph Schumpeter assumes the new combinations in production and organisation processes (Ziemnowicz, 2020). The modern studies describe the innovation strategy as a codified plan that determines the way new methods of teaching, digital technologies, and pedagogical advancements are introduced into the institutions (Sumathi, 2022). Curriculum redesign, digital learning integration, and interactive teaching practices are some of the innovation strategies that are applied in the context of higher education. Innovation strategy is considered in the given study as an institutional capacity that can help improve the quality of teaching services by utilising innovative teaching strategies successfully.

The quality and effectiveness of teaching performance is teaching quality, which is perceived by different stakeholders, including students. (Parasuraman *et al.* (cited in Alemu, 2023) created Servqual model, according to which teaching service quality is the expectations and perceived performance difference. In higher education teaching service quality refers to the reliability, responsiveness, instructional effectiveness, and overall learning experience. In this study, this construct is the outcome variable: the association between engagement practices and innovation strategies and perceived teaching effectiveness in the university. Additionally, in here, this construct is evaluated through the lens of faculty members and indicates their assessment of instructional performance, responsiveness, and teaching practices in general. Though students are widely regarded as being the main assessors of service quality in the education sector, the research determines the teaching service quality through the lens of the faculty since the relationship between organisational practices and the teaching process is the focus of this study. Faculty members have direct involvement in the design and delivery of teaching, so they are appropriate respondents to evaluate the extent to which engagement practices and innovation strategies affect the quality of instruction.

2.2. Theoretical Framework

This study has its basis on three complementary schools of thought, which include Social Exchange Theory, Resource-Based View, and Human Capital Theory.

The first theoretical basis is the Social Exchange Theory (SET), which was initially developed by George C. Homans and elaborated by Peter Blau (Cook *et al.*, 2014). The theory describes social relationships as the process of exchanges of gains and responsibilities between individuals and organisations. In organisations, employees are likely to have favourable attitudes and behaviours towards the organisation

when they feel that they are supported by the organisation, through recognition, empowerment, or professional development (Ajobi *et al.*, 2025; Tan *et al.*, 2025). Engagement practices adopted by the university in higher education institutions can therefore motivate the faculty to participate in the teaching processes more effectively. Using SET, (Sultana *et al.*, 2024) discovered a positive correlation between the psychological capital and the innovative work behaviour among university teaching staff, in which employee engagement was also observed to support this association. These results indicate that mutual organizational behavior may contribute to participation and beneficial work results in education settings.

The second theory is the Resource-Based View (RBV) proposed by Jay Barney. According to RBV, organisations attain sustainable advantage when they make efficient use of valuable and strategic resources, including knowledge, capabilities, and expertise (Sugiarno & Novita, 2022). Faculty knowledge, teaching skills, and new instructional methods in institutions of higher education are valuable, intangible resources that can bring quality to education. In this light, the strategies of innovation, including new teaching techniques, e-learning tools, and curricular restructuring, can be interpreted as the capabilities of the institution that make use of the resources. A recent investigation based on resource-based theory reveals that knowledge management and innovation practices are organisational capabilities that play a significant role in performance and learning outcomes across organisations (Cui, 2025). Therefore, the RBV was a suitable theoretical framework to use in the analysis how in higher education institutes innovation strategies impact teaching service quality.

The third theoretical view is the Human Capital Theory (HCT), which was created by Theodore Shultz and further advanced by Gary Becker. The HCT asserts that investments in education, skills, and training make people more productive and effective in institutions (Fix, 2021). Faculty members are one of the most important human capitals in a college or university, and their professional development can be improved to boost teaching potential and organisational performance. (Ali *et al.*, 2024) discussed the importance of human capital and intellectual capital in university performance and emphasised the significance of faculty knowledge and competencies in enhancing institutional performance. Likewise, recent studies of higher education policy show that human capital investment via education and training is one of the main sources of institutional growth and knowledge creation (Ma, 2025). Vision 2030 in the Saudi context focuses on development of human capital development initiatives to enhance skills, innovation and quality education to further fortify the relationship between organisational practices and teaching outcomes.

In order to go beyond a parallel application of the theories, this study conceptually unites Social Exchange Theory, Resource-Based View, and Human Capital Theory with an underlying mechanism of perceived policy alignment. Perceived policy alignment refers to the degree to which faculty

members perceive national-level initiatives, including the programs of Vision 2030's human capital development, as being in line with and conducive to their practices and professional roles within the institution. According to the Social Exchange Theory, in cases where the faculty members feel that the institutional practices of engagement coincide with the national policy priorities, they tend to pay back by dedicating more effort and better teaching results.

According to a Resource-Based View, this alignment helps to use innovation-related resources more effectively, as faculty are more open to using and implementing new teaching methods when they feel strategic coherence. In terms of the Human Capital Theory, investment in skills and development in the country can be converted into better teaching results only after people internalise them as useful and applicable. Therefore, Vision 2030 is not just an external moderator, but it functions via the process of shaping the faculty perceptions, which consequently impact the way in which the engagement practices and the innovation strategies influence the teaching service quality. It should be noted that the conceptual mechanism of perceived policy alignment is not empirically tested in the current study, but is introduced to explain the interaction between the macro-level policy and the micro-level behaviour.

2.3. Hypotheses Formation

In a study by (Pan *et al.*, 2025), the researchers sought to investigate the effect of professional development practices on the performance of teaching by Chinese university faculty. This study sampled 550 educators of 23 universities to investigate the associations by structural equation modelling. The results showed that teaching performance is greatly enhanced through professional development, suggesting that practices of institutional engagement support faculty effectiveness and classroom outcomes. Nevertheless, the research concentrated more on development practices and did not reflect the wider engagement practices of empowerment or reward systems.

A different study by (Chen *et al.*, 2025) at Sichuan University focused on the effects of performance management practices such as training and development, monitoring, rewards and talent management on faculty job performance in higher education. A total of 647 academic staff were sampled and the results showed that performance management practices have a great effect on job performance and it is thus important to ensure that organisational practices are effective in enhancing academic performance.

However, the focus of the study was on overall job performance and not specifically studying teaching service quality in the context of teaching in university.

On the same note, (Ahmed *et al.*, 2024) tested how training and digital enablement practices can influence the competence of employees in institutions of higher learning. The participants in the research were 541 employees from different universities, and they applied SmartPLS to determine the association between training practices, competence, and organisational outcomes. The results showed that training practices are important in improving employee competence, which leads to

better performance and organisational effectiveness in academic settings. Nonetheless, the research failed to clearly connect the engagement practices with teaching service quality as an independent variable in higher education.

In addition, a study of a public university in Zimbabwe by (Chatiza *et al.*, 2021) focused on assessing how employee engagement influences service delivery through a mixed-method case study approach with 87 academic and administrative staff. The results showed that there exists a great positive correlation between engagement and service delivery, and that the drivers of disengagement are poor remuneration, no recognition, poor communication, and low empowerment. These findings imply that the organisational engagement practices are key factors that determine the quality of services since insufficient mechanisms of institutional support negatively affect the motivation and performance of employees in service delivery. Nevertheless, the research had limitations, including a single-institution approach and a COVID-19 environment, which restricted the scope of generalisation and the necessity of more extensive and context-focused studies into higher education systems.

Despite the heavy empirical evidence on the relationship between the practices of employee engagement and performance outcomes, there is little research on its effects on the quality of teaching service. Furthermore, these relationships have never been investigated in terms of Saudi Arabian higher education, especially within the context of transformation agenda of the vision 2030. Thus, the hypothesis is the following:

H1: Teaching service quality in Saudi Arabian higher education is positively and significantly impacted by employee engagement practices.

The recent literature shows that digital transformation, pedagogical innovation, and faculty development are innovation strategies that help in improving the quality of teaching and provision of educational services in higher education. (Abdurashidova *et al.*, 2023) conducted a study to investigate the effect of digitalisation and innovation strategies on the quality of higher education in universities. The research used a mixed-methodology to gather data from 300 participants (faculty, students, and administrators) and assess the practices of innovation and education quality. The results showed that 83 per cent of the respondents believed digital technologies and innovation strategies have positively impacted the quality of education and teaching in the universities. Nevertheless, the research was based on the perceptual data and did not isolate individual dimensions of teaching service quality and test the relationships between these dimensions and causality using sophisticated quantitative methods.

The other study by (Paños-Castro *et al.*, 2024) intended to examine the strategies of digital transformation and teaching innovation in a Spanish university. The research design was a case study that concentrated on institutional practices, faculty training, and digital innovation efforts that were put in place following the COVID-19 transition. Findings showed that digital innovation and faculty training had a powerful impact

on teaching practice, use of resources, and overall teaching quality in the university. However, the research was confined to one institutional setting, so the impact on generalisation was limited in other higher educational establishments and policy environments.

In addition, (Arrieta & Avolio, 2020) also investigated the impact of factors on the quality of the higher education services in Peruvian universities, especially, curriculum design and teaching processes. The study, based on the data of students and graduates, discovered that the perceived teaching quality and the level of effectiveness of the instruction delivery methods are the determinants of the service quality. These results suggest that curriculum changes and improved teaching practices, which are viewed as innovation strategy, have a direct impact on the enhancement of the quality of teaching service in institutions of higher education. Nevertheless, the research had limitations posed by its qualitative nature and a small sample size, which limited the scope of generalisation and the quantitative validation of the relationships between innovation and quality.

Although earlier research tends to understand innovation strategy as a factor that shapes performance outcomes in an indirect way, such as organisational capabilities, faculty competence, or engagement, the direct impact of innovation strategy on teaching service quality remains to be studied. When applied to the sphere of higher education, digital learning integration, curriculum redesign, and pedagogical developments could create a direct effect on teaching practice and student learning experience. Exploring this direct relationship gives a baseline insight into whether innovation initiatives can lead to service quality independently, especially with rapidly changing educational environment, like in Saudi Arabia under Vision 2030. Thus, the following hypothesis is proposed:

H2: Teaching service quality in Saudi Arabian higher education is positively and significantly impacted by innovation strategy.

Recent literature has highlighted that human capital development programs like training, skill development, and institutional support are a major aspect in enhancing organisational results in higher education. (Al-Mekhlafi *et al.*, 2024) conducted a study that sought to investigate the moderating effect of training and development of human capital on the relationship in organisations in Saudi institutions. Data from 318 respondents were analysed through the application of PLS-SEM to examine the relationship between governance practices, development of human capital, and organisational outcomes. Results showed that human capital development is an important moderator of connections in organisational practices and performance, reinforcing the efficacy of institutional strategies. Nevertheless, the research focused on nonprofit organisations and did not include the higher education setting and teaching service quality.

(Abubakar *et al.*, 2024) conducted another study that intended to explore the major factors in human capital development in line with the objectives of Saudi Vision 2030.

The sample included 203 participants in the public sector, and PLS-SEM was used to examine the links between the training, institutional support, and development of the workforce capability. Findings revealed that training, institutional support, and integration of technology play a great role in enhancing the development of human capital and organisational effectiveness. These results imply that the influence of organisational practices can be enhanced by means of human capital programs, which enhance the adaptability and capabilities of employees. However, the moderating effects in the context of higher education teaching or service quality were not directly tested in the study. Likewise, (Mohiuddin *et al.*, 2023) also conducted a study that aimed to investigate higher education reform initiatives as part of the Vision 2030 and their outcomes on institutional development. The analysis discussed the practice and policy reform in higher education, and the importance of the fact that innovation, training, and human capital programs could contribute to the enhancement of institutional performance. The evidence indicated that the Vision 2030 initiatives enable universities to gain abilities to advance teaching, innovation, and the general level of education. Nevertheless, it was conceptual rather than empirical in that it did not test moderating relationships between the development of human capital and organisational practices.

Although much evidence is accumulating in favour of the significance of human capital development in reinforcing organisational performance, little literature has investigated its moderating effect in higher education. Moreover, Vision 2030 human capital development can be viewed as moderating through the prism of perceived policy alignment. Particularly, the effectiveness of engagement practices and innovation strategies is likely to increase when faculty members feel a good fit between national human capital initiatives and institutional practices. On the other hand, poor alignment can reduce the transfer of policy efforts into better teaching performance. Hence, a positive moderating effect is hypothetically postulated, but its practical implementation may differ across settings. Thus, the following hypotheses are proposed:

H3: Vision 2030 Human Capital Development has positive and significant moderating impact on employee engagement practices and teaching service quality relationship in Saudi Arabian higher education.

H4: Vision 2030 Human Capital Development has positive and significant moderating impact on Innovation strategy and teaching service quality relationship in Saudi Arabian higher education.

2.4. Conceptual Framework

Fig. (1) displays the hypothesized relationships between the study variables and gives a graphical representation of the hypothesized effects and moderating relationships to be tested in this study. The independent variable is represented by this conceptual framework as employee engagement practices and innovation strategy, affecting the teaching service quality as the dependent variable. Vision 2030 human capital development is

incorporated as a moderating variable that is expected to influence the strength of these relationships. The model is contextualized test of established relationships within a national reform setting as it represents a synthesis of organisational practices and national policy initiatives to explain differences in the quality of teaching services (Fig. 1). Social Exchange Theory, Resource-Based View, and Human Capital Theory found the basis of the model, wherein their combined understanding facilitate comprehension of the relationship n between institutional and policy-level factors that can impact educational outcomes in higher education.

2.5. Literature Gap

The existing literature supports the idea that pedagogical and digital learning innovation positively affects learning outcomes and organisational performance (Bhuttah *et al.*, 2024; Khadijah *et al.*, 2025), whereas engagement practices have a positive impact on faculty motivation and teaching performance (Gede & Huluka, 2024; Verma & Kaur, 2024). Nonetheless, the studies mostly look at these constructs as independent ones, and little attention is paid to their joint impact on service quality as a particular service-oriented outcome in teaching. Moreover, the engagement literature focuses on individual psychological engagement instead of engagement practices by an organisation (Ghamooshi *et al.*, 2023). This restricts understanding of on how institutional mechanisms can be translated to better teaching quality. Similarly, in innovation strategies focused literature these strategies are viewed independently, rather than linking them with a bigger framework of a service quality in a higher education institution (Abdurashidova *et al.*, 2023).

Moreover, there are reports of substantial improvements, including rising university rankings and greater graduate employability (Saudi Gazette, 2025; SPA, 2024), which indicate the greater significance of the concept of human capital growth in determining the outcomes of educational quality. The increased focus on continuous learning, skills improvement, and institutional performance enhancement is also facilitated through Vision 2030 (especially the Human Capability

Development Program) (Abdulrahim, 2025). Nevertheless, empirical studies that verify the moderating effect of human capital development in enhancing the relationships among engagement practices, innovation strategy, and the quality of teaching services are scarce. Since Saudi higher education is undergoing a policy-based change, it is critical to study these interactions.

3. METHODOLOGY

The current research project used a quantitative research design to examine the connections among employee engagement practices, innovation strategy, and teaching service quality with the moderating effect of Vision 2030 human capital development. Quantitative research is the method that allows testing the hypothesized relationships in a systematic way based on numerical data and statistical procedures (Thomas & Zubkov, 2023). It is an explanatory study, aimed at determining relationships between constructs, as opposed to determining causal consequences, which is consistent with prediction-oriented modeling strategies typical of organisational and educational research.

The study adopted purposive sampling as it is suitable when the research seeks individuals with specialized knowledge or familiarity with the context of the research goals (Obilor, 2023). The target population was academic staff working in the higher education institutes in Saudi Arabia. The faculty members were chosen due to their direct engagement with the teaching process, the implementation of the curriculum, and the incorporation of innovative teaching methods. The study included universities that fall within the scope of the transformation agenda of Vision 2030. This is to make sure that the respondents are exposed to organisational practices and national-level initiatives that are relevant. Specific inclusion criteria were used to sample the participants into a purposive sample. The respondents had to be full-time academic employees and had to have one year of teaching experience. In this manner, the participants, equipped with adequate knowledge and experience on the practices and innovation strategies related to institutional engagement, were included.

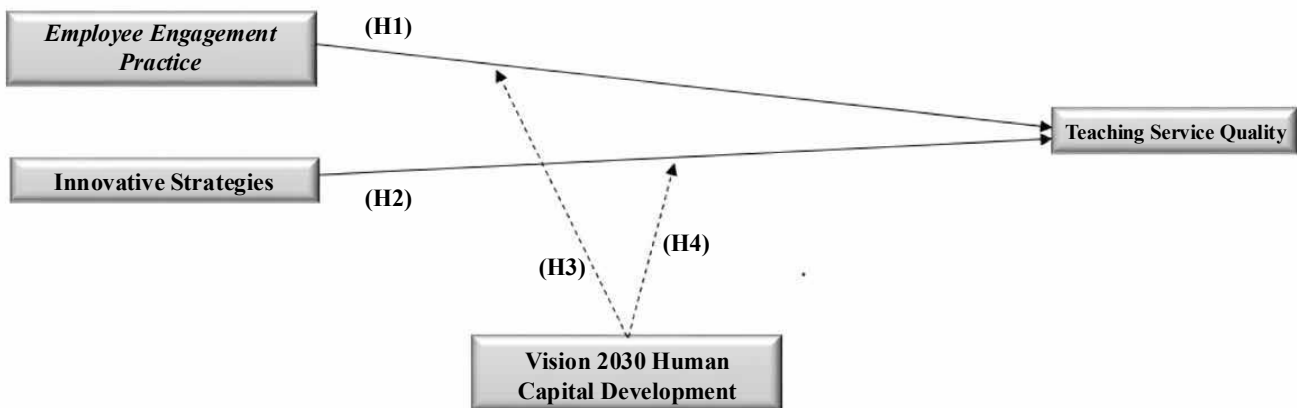


Fig. (1). Conceptual framework.

The data was collected through an online survey using closed-ended Likert-scale questions delivered through Google Forms. It is a free, popular, and fast distribution system that enables the efficient delivery of information and automatic assembly of data (Kumar, 2021). Close-ended questions provide structured response options resulting in measurable data to be statistically analysed to enhance reliability and comparability across the respondents to supplement quantitative research principles (Misner & Carr, 2020).

The process of recruitment was carried out via academic networks, university mailing lists, and professional networks, including LinkedIn. Invitations were emailed to about 600 faculty members in several universities in Saudi Arabia. A total of 420 responses were obtained, out of which 350 were used after the screening on completeness, consistency, and elimination of outliers. This is a reasonable size that is deemed to be sufficient to facilitate a structural equation modeling as well as offer adequate statistical power to test the hypothesis. Further to support the sufficiency of the sample size, G*Power analysis was used. The research followed the recommendation of (Kang, 2021), who states that a minimum sample size of over 100 respondents is needed to identify medium effect sizes with a statistical power of 0.80 and a significance level of 0.05. The 350 final samples meet the threshold and thus improve the strength and credibility of the analysis.

The questionnaire had two major sections (Appendix A). The initial section captured demographics, such as gender, age, academic rank, years of experience, and educational background. The significance of these variables is that they can impact the teaching practice, the level of engagement, and innovation readiness. The second section was a measure of the study constructs: employee engagement, innovative strategy, Vision 2030 human capital development, and teaching service quality. The measurement items were all evaluated on a five-point Likert scale (strongly disagree, strongly agree). Importantly, although the conceptual description of the study talks about the perceived policy alignment as an explanatory construct, it is not operationalized as a measurable construct in the empirical model.

The data obtained were processed with Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS software. PLS-SEM is a prediction method that can be used in a complex predictive research model with moderating effects and relationships (Hair *et al.*, 2021). It is especially suitable in cases where the aim of research is to describe variance in dependent constructs, and in case data distributions are not categorical. All measures in the given study were designed as reflective constructs since the indicators are manifestations of the latent variables. The analysis was conducted in two steps, which were measurement model assessment and structural model assessment. Composite reliability and Cronbach's alpha were checked using recommended threshold values (>0.70). Convergent validity was evaluated by Average Variance Extracted (AVE) with a value of above 0.50 signifying satisfactory validity. The Heterotrait-Monotrait ratio (HTMT) was used to evaluate discriminant validity as it is regarded as one of the most

effective measures of construct distinctiveness (Afthanorhan *et al.*, 2021).

Harman's Single-factor test was done to control the possible common method bias. The former explained less than half the total variance, which means that the common method bias will not greatly affect the findings (Howard *et al.*, 2024). Moreover, the full collinearity Variance Inflation Factor (VIF) values were used to check CMB and found values below 5 for all of the constructs, which confirmed that the structural model estimation did not have CMB issue. As per (Jeng, 2023), VIF values less than 5 are ideal to assess CMB. The non-response bias was evaluated through an early and late response evaluation, and there were no significant differences.

The study was conducted with high ethical standards to promote responsible research conduct. The survey was completely voluntary, and the respondents were made fully aware of the aim and scope of the study before they could fill out the questionnaire. Electronic informed consent was obtained, and the participant was free to pull out at any point without any repercussions. There were complete confidentiality and anonymity, and no personally identifiable information was gathered. All the data were kept safe and with great caution, and used only to conduct academic research as per the ethical codes.

4. RESULTS

4.1. Descriptive Analysis

Table 1 shows the demographic data of 350 respondents. The findings reveal that there is a moderate gender imbalance in the sample, as there are more males (60% than females (40%). The majority of the participants are aged between 25 and 44, implying that they have a fairly young and middle-aged academic workforce. Regarding the qualification, most of them have a master's degree (45.7%), followed by bachelor's and doctorate degrees. The biggest occupational groups are assistant professors (37.1%) and lecturers (34.3%), which is an active involvement of the teaching staff. The distribution of the experience indicates that a majority of the respondents have the experience of 3-10 years, and their responses are informed in relation to service quality and practice in the teaching institution.

4.2. Measurement Model

Table 2 affirms the high reliability and validity of the measurement model. The factor loadings are all greater than the recommended value of 0.70, with a value between 0.825 and 0.932, indicating a high level of reliability of the indicators. Values of Cronbach's alpha of all the constructs (0.832-0.902) indicate high internal consistency. Construct reliability is also supported by composite reliability values (0.900-0.939). Also, the values of AVE are between 0.749 and 0.837, which is above the minimum value of 0.50, showing a high level of convergent validity. These findings affirm that the employee engagement practices, the innovation strategies, the quality of teaching services, and the human capital development of Vision 2030 are measured with high reliability and can be analysed in structural models.

Table 1. Descriptive analysis of 350 respondents.

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	210	60.0
	Female	140	40.0
Age	Below 25	35	10.0
	25–34	120	34.3
	35–44	110	31.4
	45–54	60	17.1
	55+	25	7.2
Qualification	Bachelor’s	90	25.7
	Master’s	160	45.7
	Doctorate	90	25.7
	Post-doctoral	10	2.9
Position	Lecturer	120	34.3
	Assistant Professor	130	37.1
	Associate Professor	70	20.0
	Professor	30	8.6
Experience	<3 years	60	17.1
	3–5 years	95	27.1
	6–10 years	110	31.4
	>10 years	85	24.3

Table 1. Measurement model.

Latent Construct	Indicators	Factor Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Employee Engagement Practices	EEP1	0.877	0.84	0.904	0.758
	EEP2	0.892			
	EEP3	0.841			
Innovative Strategies	IS1	0.825	0.832	0.900	0.749
	IS2	0.914			
	IS3	0.855			
Teaching Service Quality	TSQ1	0.907	0.902	0.939	0.837
	TSQ2	0.932			
	TSQ3	0.905			
Vision 2030 Human Capital Development	VH1	0.894	0.89	0.932	0.819
	VH2	0.931			
	VH3	0.890			

Note: Thresholds; Factor Loadings ≥ 0.70 ; CR ≥ 0.70 ; AVE ≥ 0.50 (Hair et al., 2021)

4.3. Discriminant Validity

Table 3 shows the results of the HTMT-based discriminant validity, which establishes that all the constructs are empirically different. The HTMT values among constructs are lower than the conservative level of 0.85, suggesting satisfactory discriminant validity. As an example, employee engagement practices and Vision 2030 human capital development demonstrate moderate relations, but they are still different constructs. Likewise, innovation strategies and teaching service quality show low-to-moderate correlations, which validates conceptual segregation. Altogether, these findings prove that every construct is the measure of a distinct dimension of the model, and the subsequent analysis of structure can be considered as valid.

4.4. Path Coefficient

Table 4 gives the structural relationships between the variables of the study. Employee engagement practices play a significant role in teaching service quality ($\beta = 0.184, t = 2.755, p = 0.006$), which helps to confirm H1 and shows that engagement practices play a positive role in teaching effectiveness. Nonetheless, its effect size is low ($f^2 = 0.033$), which means it has a modest practical influence. There is a positive but insignificant relationship between innovation strategies and teaching service quality ($\beta = 0.076, t = 1.343, p = 0.179$), resulting in the rejection of H 2. This demonstrates that in the current study sample using innovation separately is not likely provide benefiting direct impact for improving teaching service quality. Conversely, the positive impact of Vision 2030 human capital development on teaching service quality is central and highly significant ($\beta = 0.487, t = 7.348, p = 0.001$), relevant to enhancing the quality of educational outcomes with a medium effect size ($f^2 = 0.229$).

Moderation analysis indicates that Vision 2030 human capital development plays a significant role in enhancing the relationship between employee engagement practices and teaching service quality ($\beta = 0.268, t = 4.215, p = 0.001$), which supports H3. In the same way, it has a significant moderating effect between innovation strategy and teaching service quality ($\beta = 0.221, t = 2.987, p = 0.003$) and it supports H4. It is suggested from these results that innovation strategies as well as engagement practices have more effectiveness when they are aligned with the Vision 2030 human capital development initiatives. Therefore, Vision 2030 is not only a direct predictor, but also contextual enricher of organisation practices.

4.5. Explanatory Power and Predictive Relevance

Table 5 represents the explanatory power of the model. R2 values of 0.25, 0.5, and 0.75 are considered weak, moderate, and substantial, respectively (Wijaya et al., 2022). As per Table 5, the R2 of 0.455 suggests that teaching service quality can be explained by employee engagement practices, innovation strategies, and Vision 2030 human capital development by 45.5%, which depicts a moderate level of explanatory power. The adjusted R2 of 0.447 is a confirmation of model stability when predictors are taken into consideration. Moreover, Q2 values 0.02, 0.15, and 0.35 are small, medium, and large, respectively. Q2 value of 0.418 in Table 5 shows large predictive relevance, i.e., the model has excellent out-of-sample predictive accuracy. In general, these findings indicate that the specified theoretical framework offers a decent and marginally effective explanation of teaching service quality in Saudi higher education establishments.

Table 2. Discriminant validity.

-	Employee Engagement Practices	Innovative Strategies	Teaching Service Quality
Innovative Strategies	0.602	-	-
Teaching service quality	0.612	0.453	-
Vision 2030 human capital development	0.713	0.521	0.724

Note: HTMT values < 0.85 (Cheung et al., 2023)

Table 3. Path Coefficient.

I	Coefficient	T-Statistics	P-Values	f-Square
Employee Engagement Practices → Teaching service quality	0.184**	2.755	0.006	0.033
Innovative Strategies → Teaching service quality	0.076	1.343	0.179	0.007
Vision 2030 human capital development → Teaching service quality	0.487***	7.348	0.001	0.229
Vision 2030 × Employee Engagement Practices → Teaching service quality	0.268***	4.215	0.001	0.182
Vision 2030 × Innovative Strategies → Teaching service quality	0.221***	2.987	0.003	0.156

Note: Asterisks show significant paths: ** for $p < 0.05$ (5%), and *** for $p < 0.01$ (1%)

Table 4. Explanatory power of the model.

-	R-square	R-Square Adjusted	Q-Square
Teaching service quality	0.455	0.447	0.418

5. DISCUSSION

The results of the present research offer valuable information about the role of organisational practices and national policy frameworks in determining the teaching service quality in Saudi Arabian higher education. The outcomes partially confirm the proposed model, indicating the difference in the impact of the employee engagement practices, innovation strategies, and Vision 2030 human capital development. The finding suggests that innovation strategy may operate indirectly rather than as a direct predictor.

The findings demonstrated a positive and statistically significant contribution of employee engagement practices on teaching service quality, which supports H1, however, the effect size was small ($\beta = 0.184$, $t = 2.755$, $p = 0.006$). This observation implies that institutional programs like training, professional growth, empowerment, and work favourable conditions help to improve teaching effectiveness. In higher education settings, this means that in situations where faculty members feel organisational support they tend to display dedication and hard work in the teaching profession, which can enhance student learning experiences. The result is consistent with previous research, which notes that engagement practices are valuable in enhancing service outcomes and faculty performance (Chatiza *et al.*, 2021; Chen *et al.*, 2025; Pan *et al.*, 2025). Nevertheless, the small effect size suggests that engagement practices by themselves might not be effective in increasing the quality of teaching services significantly. This means that, as much as such practices are required, they must be supplemented with other institutional mechanisms in order to create more effective improvements in teaching outcomes.

Conversely, the innovation strategy does not impact the quality of teaching service significantly ($\beta = 0.076$, $t = 1.343$, $p = 0.179$), which means the rejection of H2. Even though the relation is positive, it is rather weak and insignificant, which means that the existence of innovation initiatives in the form of digital tools, curriculum redesign, or new teaching methods might not directly correlate with the quality of teaching services. This finding is contrary to most of the available literature that tends to show a positive relationship between innovation and the quality of education (Abdurashidova *et al.*, 2023; Arrieta & Avolio, 2020). A possible answer is that innovation strategies applied in higher education might take time, resources, and adequate implementation before producing significant results. In other instances, when new technologies or methods of teaching are introduced without proper training or institutional backing, this could bring further complexity instead of enhancing the effectiveness of teaching. Moreover, faculty resistance to change or dependence on traditional teaching methods might be a limiting factor to the efficacy of the innovation strategy. The other possible explanation is that innovation can act in an indirect way and does not have a direct impact on the quality of teaching services. This indicates that the relationship between innovation initiatives and teaching outcomes may be mediated by factors like faculty competence, engagement, or institutional support. Consequently, future studies ought to investigate these possible pathways of

mediation in order to understand the exact way innovation strategies can be translated into a higher quality of education. Consequently, the results imply that innovation strategies are not effective in isolation but should be well adopted into institutional practices to bring about a realistic change in the quality of teaching.

The results provide a more refined insight into the Vision 2030 human capital development as they indicate that it can serve as a powerful direct predictor, yet a powerful moderating factor. It is found that its direct impact on teaching service quality ($\beta = 0.487$, $t = 7.348$, $p = 0.001$) is significant and thus it plays a central role as a macro-level determinant of educational outcomes. More importantly, both employee engagement practices ($\beta = 0.268$, $t = 4.215$, $p = 0.001$) and innovation strategy ($\beta = 0.221$, $t = 2.987$, $p = 0.003$) have statistically significant moderation effects, which support H3 and H4. This changes the meaning of Vision 2030 as a background enabling factor to a contextual force, and influences the manner in which organisational practices become teaching outcomes.

Critically, the moderation of the employee engagement practices suggests that engagement in itself cannot create significant changes in teaching service quality unless supported by policy congruence. Although engagement shows a direct positive effect ($\beta = 0.184$, $p = 0.006$), its impact becomes stronger under conditions of high human capital development. This implies that organisational practices are more legitimized and effective when integrated in a consistent national structure. In line with previous works (Chen *et al.*, 2025; Pan *et al.*, 2025), engagement improves faculty performance, but this study goes further to demonstrate that its efficacy is contingent and not omnipresent. This is in line with the Social Exchange Theory in which reciprocal behaviour is reinforced because of multi-level support.

The most important insight is connected with innovation strategy. Although its direct impact is quite small ($\beta = 0.076$, $p = 0.179$), the moderation effect ($\beta = 0.221$, $p = 0.003$) is significant, which means that innovation can be effective only in case of favourable policy conditions. This is indicative of a conditionalizing effect in that innovation does not necessarily enhance the quality of teaching, but must be enabled in an environment to do so. This observation can serve to clarify discrepancies in the previous bodies of literature, where innovation is believed to be a direct influence (Abdurashidova *et al.*, 2023; Arrieta & Avolio, 2020), but the empirical data is ambivalent.

One of the possible reasons is that innovation strategies are resource-sensitive and implementation-dependent. Innovation initiatives can be superficial without adequate training, institutional support and alignment with the overall development agendas. The structural support, which is skills development and capacity building, required to operationalize innovation effectively, is offered by Vision 2030 human capital development. This confirms claims that human capital programs increase organisational flexibility (Abubakar *et al.*, 2024). Therefore, innovation must be considered as situational-dependent, but not as ineffectiveness.

Moreover, the results are empirical demonstration of policy-practice alignment. The large moderation effects imply that engagement and innovation become more effective when faculty see that the institutions practices are aligned with national initiatives. This provides a sophisticated understanding of conflicting results in earlier research (Al-Mekhlafi *et al.*, 2024; Mohiuddin *et al.*, 2023), where consistency of implementation and alignment is crucial.

Overall, the results challenge the assumption that macro-level policies operate independently. Rather, Vision 2030 is dynamically engaged with organisational practices, moving the framework to a contingency-shaped framework in which success is contingent on favourable macro-level conditions.

THEORETICAL CONTRIBUTION

This research adds to the literature on higher education and organisational literature by offering a contextualized test of established relationships within a national reform setting to teaching service quality that integrates both national policy factors and institutional practices. The study shows that the three theories (Social Exchange Theory, Resource-Based View, and Human Capital Theory) are not only complementary, but also contextually dependent in a policy-influenced setting. The results add to the Social Exchange Theory by proposing that the efficiency of employee engagement practices is enhanced when underpinned by more general human capital programs, showing that perceived organisational support can be external to institutional levels. With respect to the Resource-Based View, the study provides a subtle explanation in that the innovation strategies do not always translate to direct performance, but can need enabling conditions to be effective. This underscores the relevance of contextual factors of utilizing organisational capabilities. Additionally, the study supports Human Capital Theory through the significant role of national-level investments, while also indicating that such investments can shape the effectiveness of organisational practices. The study does not present generalizable assertions but instead offers context-specific considerations and highlights the contingency of these relationships in Saudi higher education.

LIMITATIONS

There are a number of limitations to this study that must be considered during the interpretation of findings. First, the cross-sectional design does not provide the opportunity to make conclusions regarding causality, and, therefore, further studies should use longitudinal methods to reveal long-term changes. Second, the research concentrates on a few variables, and other variables, such as leadership, organisational culture, or mediating variables, can be incorporated in future studies for a more in-depth understanding. Third, the use of quantitative data limits the contextual interpretations; hence, qualitative or mixed studies are suggested to investigate the underlying mechanisms.

Moreover, since purposive sampling was used, the results of the research are to be taken with caution regarding generalizability. The findings are specific to the context of Saudi Arabian institutions of higher learning, and they might not be entirely applicable to other systems and areas of education. One more limitation is connected to the quality of teaching services measured by faculty perceptions instead of student ratings. Even though faculty offer knowledgeable accounts of teaching practices, the research in the future ought to include student-based measures to reflect a more detailed evaluation of the quality of service in higher education. Lastly, despite the fact that the study presents perceived policy alignment as a theoretical tool connecting macro-level policy to individual behaviour, the latter was not measured in an empirical way. It is advised that future studies should operationalize and test this construct to have a better understanding of its mediating or moderating role.

CONCLUSION

This study has demonstrated that both the institutional practices and the general policy contexts are vital to the comprehension of the teaching service quality. Although employee engagement has positive effects, it is enhanced when there are supportive human capital programs. Under such conditions, innovation strategies, which are not directly significant, become relevant. These results indicate that organisational initiatives can be effective based on how much they are aligned to national development frameworks, which provides a more comprehensive approach to enhancing teaching outcomes in higher education.

PRACTICAL AND POLICY IMPLICATION

The results indicated that policymakers in higher education in Saudi Arabia should focus on systematic alignment of Vision 2030 human capital programs with university practices. An example is the creation of standardized faculty development models that are directly connected to the Human Capability Development Program, which will help to achieve the consistency of the implementation in different universities. Employee engagement practices should be operationalized by institutions by integrating formal training activities, mentoring activities, and performance-based incentives that are specifically linked to teaching quality indicators like student feedback and student learning outcomes. On the institutional level, higher education must go beyond taking the facade of innovation and offer specific university training on digital pedagogy, curriculum redesign, and the use of technology to make proper use of it. This can be facilitated by setting up teaching innovation labs and ongoing professional development workshops. Also, higher education institutes must develop an internal surveillance infrastructure to measure the effectiveness of the engagement and innovation practices in the long-term regarding teaching service quality. In general, policy instructions and institutional implementation require collaborative action to help convert strategic initiatives into quantifiable teaching changes.

LIST OF ABBREVIATIONS

AVE	=	Average Variance Extracted
CMB	=	Common Method Bias
HCT	=	Human Capital Theory
HCDP	=	Human Capability Development Program
HTMT	=	Heterotrait-Monotrait ratio
PLS-SEM	=	Partial Least Squares Structural Equation Modelling
RBV	=	Resource-Based View
SET	=	Social Exchange Theory
VIF	=	Variance Inflation Factor

AUTHOR'S CONTRIBUTION

B.A. contributed to the design and implementation of the study. S.A, B.M., F.A. contributed to the analysis of the results and the writing of the manuscript.

ETHICAL APPROVAL & INFORMED CONSENT

All procedures were carried out in accordance with institutional research ethics committee guidelines and Declaration of Helsinki. Informed consent was obtained from all participants. To ensure participant protection, all data were fully anonymized at the point of collection, and no personal or identifiable data was recorded.

AVAILABILITY OF DATA AND MATERIALS

The data will be made available on reasonable request by contacting the corresponding author [B.A.].

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CONFLICT OF INTEREST

The author declares that there is no conflict of interest regarding the publication of this article.

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DECLARATION OF AI

During the preparation of this work the authors used ChatGPT for editing purposes. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

APPENDIX A

Study Title: Employee Engagement Practices and Innovation Strategy on Teaching Service Quality: Moderating Role of Vision 2030 Human Capital Development

Research Team: [Student names]

Introduction

Thank you for considering participation in this research study. We, a group of students, are conducting a study on the relationship between employee engagement practices, innovation strategy, and teaching service quality, with a particular focus on the moderating role of Vision 2030 human capital development. Your participation is valuable and will significantly contribute to the completion of this research.

Purpose of the Study

The aim of this study is to explore how employee engagement practices and innovation strategies influence teaching service quality, and how Vision 2030 human capital development initiatives act as a moderator in this relationship. By participating, you will help us understand the role of engagement and innovation in improving service quality in teaching, as well as how the Vision 2030 reforms in human capital development are shaping these practices within educational institutions. Your responses will provide valuable insights into the effectiveness of these strategies and the impact of Vision 2030 on education quality.

What will I be asked to do?

You will be asked to complete a questionnaire that will take approximately 5-15 minutes to complete. The questions will focus on your experiences and views regarding employee engagement practices, innovation strategies in teaching, and the impact of Vision 2030 human capital development on teaching service quality. Your participation will help us collect essential data to support our research findings.

Confidentiality

Your responses will be kept strictly confidential. The information you provide will only be used for research purposes. No personally identifiable information will be collected, and your participation will remain anonymous.

Voluntary Participation

Participation in this study is entirely voluntary. You can choose not to participate, or withdraw from the study at any time without any consequences. If you decide to withdraw, your responses will be excluded from the final analysis.

Potential Risks

There are no anticipated risks involved in participating in this study. The questions are non-invasive and do not require sensitive personal information. If you feel uncomfortable at any point, you are free to skip any questions or withdraw.

Thank you for taking the time to consider participating in this study. Your involvement is greatly appreciated.

Section 1: Demographics

1. What is your gender?

- Male
- Female
- Prefer not to say

2. What is your age group?

- Below 25
- 25–34
- 35–44
- 45–54
- 55 and above

3. What is your highest educational qualification?

- Bachelor’s
- Master’s

- Doctorate
- Post-doctoral qualification

4. What is your current academic position?

- Lecturer
- Assistant Professor
- Associate Professor
- Professor

5. How many years of total experience do you have in this industry?

- Less than 3 years
- 3–5 years
- 6–10 years
- More than 10 years

Section 2: Questionnaire

Variable	Question Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Employee Engagement Practices	My institution provides strong engagement practices for faculty development.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Training and empowerment opportunities enhance my teaching effectiveness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Engagement practices increase my commitment to teaching responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innovation Strategy	Innovation is actively promoted within my institution to enhance teaching quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Encouraged to integrate innovative methods and technology in teaching.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Innovation in teaching practices contributes to improved service quality for students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vision 2030 Human Capital Development	Vision 2030’s human capital development strategy has improved the quality of education at my institution.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Vision 2030’s human capital development initiatives support the growth and development of teaching staff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The human capital development focus of Vision 2030 has motivated me to improve my teaching performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teaching Service Quality	I consistently deliver high-quality teaching to students.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	My teaching creates effective and engaging learning experiences.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Teaching quality contributes to student satisfaction and academic success.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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