The Impact of Strategic Orientation on Educational Innovation: An Empirical Study of Higher Education Institutions

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ABSTRACT

This paper investigates the imperative connection between Strategic Orientation, Knowledge Sharing and Educational Innovation in the unstable academic environment in Baghdad, Iraq in response to the global shift in approach to academic practice being more innovation driven. Although institutional resilience usually requires an active strategic stance, internal processes of the vision to action are poorly studied in non-developed settings. The study employed a quantitative research design since the data was gathered in 214 academic members in six major universities (public and private). The analysis, which is performed using (Partial Least Squares) Structural Equation Modeling and results indicate that an entrepreneurial and proactive strategic orientation positively contributes to the ability of an institution to introduce new pedagogical and organizational changes. Importantly, the findings also pinpoint knowledge sharing, namely the two processes of giving and receiving expertise as critical mediator that can be described as an operation bridge between strategic intent and innovative outcomes. The paper emphasizes that strategic leadership cannot be effective but when a strong culture of intellectual engagement is adopted, the effect is greatly enhanced. Such lessons imply that to outperform competitors by having a competitive edge and being sustainable in the long term, universities in high pressure settings are advised to focus on the systematic flow of knowledge to enable the co-construction of modernized curricula and digital learning systems.

Keywords: Strategic Orientation, Educational Innovation, Knowledge Sharing, Iraqi Higher Education, PLS-SEM.

INTRODUCTION

In the time when the world is characterized by the rapid development of technology and the changing needs of the society, the higher education institutions are under pressure and need to be innovative in their pedagogic methods, curriculum design, and delivery of services (Kalebar, 2024; Vaikunthavasan et al., 2018). This drive towards innovation is also enhanced by the global issues such as unparalleled volatility and digital divides that require an act of proactivity and a future-oriented action to be taken to guarantee institutional sustainability and ongoing relevance (Jemmy et al., 2025). Educational innovation strategic orientation, in turn, turns out to be one of the key factors that define the ability of an institution to adapt and flourish (Betancur et al., 2022). This research will assume that a specified strategic orientation, in addition to enabling the incorporation of sustainability principles into the educational systems, improves the efficiency of financial and competitive outcomes of these institutions in general (Onwuzulike et al., 2024; Rotondo et al., 2025). In fact, to promote sustainable educational innovation, it is essential to have an effective strategic alignment to invest in digital innovation (He et al., 2024; Zaki et al., 2025). This encompasses creating, generating, adopting, and applying new ideas, ways, programs and policies that help to realize institutional objectives (Al-Husseini, 2014). This requires a profound insight into the impact of different strategic orientations, including entrepreneurial, market, or learning orientations, on propensity and success of innovation in the higher education sector (Meilani and Ginting, 2018). In addition, educational innovation is a complex phenomenon, which can be considered in the form of pedagogical, technological, and organizational aspects, and even in relation to short-lived actions and long-term, transferable results (1971- & Laura, 2024; Mykhailyshyn et al., 2018; Zuniga et al., 2018). Educational innovation is a process with multiple phases during which organizations are able to turn ideas into

better products and processes (Rincón-Ussa et al., 2020). It includes product innovation, including curriculum development (Seechariao, 2017) and software improvements in education (Barbosa and Souza, 2021), as well as process innovation, e.g., blended learning strategies and learning models that can change the way instruction is delivered significantly (Serdyukov, 2017; Yangari and Inga, 2021). This broad perspective of innovation acknowledges its importance to the improvement of organizational performance and competitive edge especially in the dynamic environment of higher education (Vaikunthavasan et al., 2018). Although the innovation process in the academic sphere is conceptualized rather broadly, in a practical sense, it is often conservative, as incremental changes are promoted instead of radical ones (Adachi et al., 2022). This has been a conservative inclination that tends to deprive institutions of their abilities to maximize on the transformational capabilities of innovation in a bid to respond to modern days educational challenges and student demands (Moghaddam, 2024).

As a result, universities are considered knowledge sanctuaries, which should be given special attention and protection because of the important role they play in the global economy and the development of society (Jemmy et al., 2025; Vaikunthavasan et al., 2018). Considering their scientific and practical importance, the academic ranking of universities in the world context, in particular in relation to the quality of education and scientific research, has become the center of interest (Liao and Suprapto, 2023; Yangari and Inga, 2021). The spread of these categories has encouraged several universities across the globe to establish policies and strategies that would guarantee improved academic status (Adachi et al., 2022) and quality of their scientific productions to gain a competitive edge and improve institutional reputation (Moghaddam, 2024; Vaikunthavasan et al., 2018).

Regarding the Iraqi higher education, they are turning to be regarded as the powerhouses in the country that have to adjust in order to keep up with the fast technological and environmental changes (Al-Husseini et al., 2015; Jemmy et al., 2025). In the case of public Iraqi institutions of higher education, innovation, which includes the creation and entry of new products, including modernized courses, research projects, and renewed curricula, is considered an essential success factor to survive and gain resilience in turbulent and volatile environments (Al-Sulami et al., 2023; Moghaddam, 2024). Moreover, the knowledge processes of donation and collection have been spotted as the cornerstone practices that lead to innovation in the Iraqi academic sector that can bring a sustainable framework that allows such institutions to be responsive to the quickly evolving global environment (S. Al-Husseini et al., 2019; S. J. Al-Husseini et al., 2015).

Although these initiatives are strategically important, there are still a number of important research gaps in the existing literature:

- **Conceptual Ambiguity**: Although the notion of innovation is central to university strategy, its meaning in the context of higher education has not been studied well and remains conceptually ambiguous and unclear as it has been confused with business-centered definitions without a specific framework that would apply to the educational context (Adachi et al., 2022; Betancur et al., 2022).

- **Conservative Bias vs. Radical Transformation**: The existing literature on this topic shows a so-called conservative bias in the domain of higher education, in which higher education institutions claim to implement innovations but focus more on incremental ones, such as minor changes in pedagogy, rather than radical ones that are disruptive and necessary to address current issues, including digital divides and VUCA dynamics (Adachi et al., 2022; Dilemmas_of_Educational_Innovation.Pdf, n.d.).

- **Strategic Innovation Orchestration**: There is an essential gap in knowledge regarding how strategic innovation orchestration through dynamic capabilities, including sensing, seizing, and reconfiguring, particulars the mechanisms of institutional resiliency in the face of volatile, VUCA environments in higher education (Jemmy et al., 2025).

- **Sustainability and Performance Connection**: There is limited empirical evidence on the nexus between sustainability orientation and realistic financial or competitive performance in the higher education sector, and there is a lack of longitudinal studies related to the area that could help clarify the relationship (Rotondo et al., 2025).

- **Regional Empirical Gaps**: Despite the fact that such strategic orientation as entrepreneurial and learning types are considered to be the key factors, there is no strong empirical evidence on how these two types can have a specific impact on the success of innovation in the region, like Iraq, where the socio-economic instability intensifies the importance of context-dependent insights (Al-Husseini, 2014).

Filling these gaps, the proposed study aims to offer a framework that could enable universities to cease acting intermittently and adopt sustainable yet transferable educational outcomes that can enhance the global academic reputation of the universities (Betancur et al., 2022).

LITERATURE REVIEW

The Strategic Orientation Variable.

In this part, a detailed study of the literature on strategic orientation and educational innovation will be offered, with significant critical analysis of the theoretical foundations upon which the institutional progress has to be built. Various strategic solutions in the current academic context (between the entrepreneurial flexibility and market adjustability) are necessary to define the creative capacity and stability of higher education institutions that must be able to operate in the dynamic environment (Bornay-Barrachina et al., 2023; Jemmy et al., 2025). This process has been aided by strategic orientation that incorporates the use of entrepreneurial behaviors and dynamic capabilities in the process of strategic restructuring through sensemaking, seizing, and reconfiguring institutional assets that are aided by strategic leadership (Liao and Suprapto, 2023).

Theoretical Foundations Strategy and Orientation.

The term orientation signifies a lasting intentions or beliefs of carrying on with certain organizational actions (Betancur et al., 2022). Strategy, in its turn, is a conscious plan that results in the attainment of organizational goals and is one of the primary factors of outcomes (Betancur et al., 2022). The strategic orientation is therefore the fundamental process especially in institutions of higher learning in designing prescriptions that encourage actions that lead to high performance (Betancur et al., 2022; Jemmy et al., 2025).

Innovation strategic orientation represents an active tendency of an institution to introduce new products, services, and processes that do not correspond to the classical paradigm using knowledge-intensive processes and eagerness to innovations (Al-Husseini, 2014). This in the educational field transforms into strategic orientation to educational innovation and requires intentionality, systematicity and proactiveness to overcome intermittent attempts of sustainable, transferable progress through VUCA obstacles (Betancur et al., 2022; Jemmy et al., 2025).

This framework is crucial in changing conditions such as the Iraqi public universities because it combines entrepreneurial agility and dynamic capabilities (sensing, seizing, and reconfiguring) to innovate its products (such as updated curricula and research projects) to enhance resilience and competitiveness (Al-Husseini, 2014; Bornay-Barrachina et al., 2023; Jemmy et al., 2025).

Proactive Orientation as a Strategic Pillar.

Proactiveness is a critical aspect of strategic orientation that implies a shift in the paradigm of responding to the changing environment to the position of a leader on the educational market (Pacheco et al., 2024). The ability to envisage the emergent opportunities and set the innovations ahead of the competition is defined as proactive orientation in HEIs (Civera & Meoli, 2024). The proactive universities do not succumb to a conservative bias that concentrates on small-scale advancements as opposed to the conservative institutions (Adachi et al., 2022), where they tend to react to pressures imposed on them by the outside environment (Pacheco et al., 2024).

- **Anticipatory Capacity**: Proactive institutions are also active in maintaining the changes in technological trends, industry demand, and social needs so that they can co-create knowledge and tackle the real-life challenges before the time is due (Kalebar, 2024; Pacheco et al., 2024).

- **Entrepreneurial Spirit**: Proactiveness is a fundamental direction of entrepreneurial orientation in the university sector (Dal-Soto et al., 2021; Meilani and Ginting, 2018). This is an approach to strategic thinking in which faculty and administration are willingly embracing innovative practices as a way to lure elite research staff and potential students (Civera and Meoli, 2024; Pacheco et al., 2024).

- **Organizational Ambidexterity**: Uber-innovative universities are able to strike the balance between the refinement of current routines (exploitation) and the experimental search of radical innovations (exploration) by means of organizational ambidexterity (Artyukhov et al., 2023).

Proactive orientation should be integrated into the core strategic planning of the institution in order to enable the successful move by HEIs to engage in intermittent activities to achieve sustainable development (Betancur et al., 2022). Proactiveness allows universities to survive turbulent circumstances and achieve the long-term resilience of institutions through the establishment of a culture of curiosity and initiatives driven by the faculty (Jemmy et al., 2025; Pacheco et al., 2024).

The Educational Innovation Variable

Educational innovation is an idea that is viewed as a multidimensional notion which goes beyond the technological acceptance to include the systematic creation and execution of new products, processes and educational frameworks (Adachi et al., 2022; Al-Husseini, 2014). In the framework of the higher education industry, the variable would be one of the primary predictors of institutional relevance and survivability especially when facing unstable, uncertain, multifaceted, and unclear conditions (Jemmy et al., 2025).

Product innovation is often operationalised to mean educational innovation in the particular case of Iraqi higher education. This materializes in the achievement of the modernization of the curriculums, the introduction of modernized research projects, and modernized educational provisions that are based on the international standards (Al-Husseini, 2014). In the case of Iraqi governmental institutions, institutional survival and development in the socio-economic turmoil require more than a mere academic boost, and innovative capacity is one such strategic requirement.

The creation of all these innovative outputs is highly dependent on effective knowledge management systems within the company. According to empirical data provided by the Iraqi academic community, the dual process of knowledge donating and knowledge collecting in the faculty members can be considered the main factor in the propensities of institutional innovations (Al-Husseini, 2014). Nevertheless, there is what the literature has defined as a consistent conceptual ambiguity of what it means to be an innovation within a university context (Adachi et al., 2022). This ambiguity can lead to a conservative bias in which the institutions would prefer gradual administrative changes instead of radical systematic changes, which are needed to guarantee long-term sustainability (Betancur et al., 2022).

In an attempt to curb these problems, researchers recommend a strict strategy orientation, a framework that integrates the values of the institution with the goals of transformational education (Betancur et al., 2022). Such alignment helps to create a shift between the cases of intermittent or accidental improvements and a sustainable model of institutional development (Betancur et al., 2022). Moreover, strategic innovation is orchestrated with the help of dynamic capabilities to enable institutional resilience to be created (Jemmy et al., 2025). Although internal determinants of change propensity in an institution, including the entrepreneurial orientation of lecturers have a strong impact (Meilani and Ginting, 2018), the longitudinal effects of sustainability-oriented innovation on the competitive performance of an institution are still a debatable topic, with the existing evidence being inconclusive (Jemmy et al., 2025; Rotondo et al., 2025). In turn, the educational innovation variable has to be interpreted as a complicated combination of cultures of knowledge sharing, strategic leadership, and the ability of the institution to build on its internal resources (Al-Husseini, 2014; Jemmy et al., 2025).

Knowledge Sharing Practices as a Mediating Variable

There is knowledge sharing practices as a mediating variable. Knowledge sharing practices in the relationship between strategic orientation and educational innovation are crucial mediating variables, which the research operationalizes with the dimensions of knowledge donating (voluntary sharing of knowledge and insights in a faculty) and knowledge collecting (productive acquisition of knowledge among peers) (S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015). Considering the situation in developing nations, the practices become one of the most significant driving forces of institutional development to fill the gap between strategic intent and innovative performance (Mazorodze & Mkhize, 2022). In the case of higher education institutions, especially Iraqi public universities, the practices convert the strategic intent into the real innovative deliverables by streamlining the flow of intellectual capital that is required to drive product and process innovations (S. Al-Husseini, 2014; S. Al-Husseini et al., 2019; S. J. Al-Husseini et al., 2015).

This is also supported in the design of the Smart University structures in Iraq, whereby knowledge management is used as a foundation in constructing a sustainable and creative academic infrastructure with scarce resources (Al-Sulami et al., 2023). Empirical research highlights that knowledge sharing is a moderating factor, which enhances the impacts of proactive and entrepreneurial orientations on innovation (Al-Husseini et al., 2019; Moghaddam, 2024). Knowledge sharing is the key reconfiguring mechanism featured in the Dynamic Capabilities perspective that enables universities to feel the changes in the environment and take advantage of them through the co-creation of new and updated curricula and research projects (Bornay-Barrachina et al., 2023; Jemmy et al., 2025). I suppose that when faculty practices ongoing knowledge sharing, the ongoing knowledge sharing will defeat such barriers as conservative bias and ad hoc behaviors, allowing to implement digital pedagogical models and more flexible learning designs (Adachi et al., 2022; Al-Husseini et al., 2015; Rincón-Ussa et al., 2020).

This mediation is particularly important in unstable settings such as Iraq, where institutions have to deal with austerity time and institutional instability (Civera & Meoli, 2024). In these settings, strong knowledge sharing cultures increase organizational stability by transforming the strategic positions into the operational innovations that are both market-oriented and sustainable development-oriented (Al-Husseini et al., 2019; Jemmy et al., 2025; Pacheco et al., 2024). Researchers also point out that effective knowledge sharing is the only way to establish strategic orientations as a sustainable source of innovation, which is why it is an inalienable prerequisite of sustainable development of the HEI and its competitive positions on a global scale (Betancur et al., 2022; Liao and Suprapto, 2023; Moghaddam, 2024).

CONCEPTUAL FRAMEWORK

The revised framework uses a **Mediation Model** to investigate how the internal culture of knowledge exchange facilitates the impact of an institution's strategic posture on its innovative capacity.

Independent Variable: Strategic Orientation

- Dimensions: Proactive Orientation (Civera & Meoli, 2024; Pacheco et al., 2024), and Entrepreneurial Orientation (Dal-Soto et al., 2021; Meilani & Ginting, 2018).

Mediating Variable: Knowledge Sharing Practices

- Dimensions: Knowledge Donating and Knowledge Collecting (S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015).

Dependent Variable: Educational Innovation

- Dimensions: Product Innovation (new curricula, courses, and research projects) and Process Innovation (Adachi et al., 2022; S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015).

Research Hypotheses

Hypothesis 1: Direct Impact of Strategic Orientation on Educational Innovation

H1: Strategic Orientation has a significant positive impact on Educational Innovation.

An institution with a leader-not-follower proactive approach will have a higher chance of introducing new educational programs and services before others, which will prompt product innovation (modernized curricula), process innovation (flexible learning models), and so on (Civera et al., 2024; Pacheco et al., 2024; The Impact of Strategic Orientation on Educational Innovation: An Empirical Study of Higher Education Institutions, n.d.). The proactive universities are characterized by their long-term interest in new technologies and services, which allows using predictive capacity to track trends and co-create knowledge and overcoming conservative bias in the face of entrepreneurial spirit and organizational ambidexterity (Pacheco et al., 2024; The Impact of Strategic Orientation on Educational Innovation: An Empirical Study of Higher Education Institutions, n.d.). Moreover, risk-taking and innovativeness, as business-related emotional elements among the faculty, have a direct positive impact on institutional capacity to create transformative educational outputs (Dal-Soto et al., 2021; Meilani and Ginting, 2018).

Hypothesis 2: Impact of Strategic Orientation on Knowledge Sharing practices.

H2: Strategic Orientation significantly influences Knowledge Sharing Practices.

Proactive leader-not-follower universities concentrate on the intellectual capital as the strategic asset, which is why their environments are characterized by the active involvement of the faculty in the process of knowledge sharing and acquisition to predict the trends in education and institutional requirements (Betancur et al., 2022; Civera and Meoli, 2024; Pacheco et al., 2024). This positioning strategy defeats intermittent interventions by integrating ongoing knowledge sharing into the mission, especially through entrepreneurial orientation that allows academic staff to take risks and become innovative (Dal-Soto et al., 2021; Meilani and Ginting, 2018). The empirical research on higher education in Iraqi confirms that such orientations form strong cultures of knowledge-sharing, which enable the alignment of strategic intent and operational capabilities under resources limitation (Al-Husseini, 2014; Al-Husseini et al., 2019).

Hypothesis 3: Impact of knowledge sharing practices on educational innovation.

H3: Knowledge Sharing Practices have a significant positive impact on Educational Innovation.

Both donating and collecting are among the key enablers of knowledge-sharing that necessitate the creation of product innovations and process innovations that include digital learning models in Iraqi state-owned universities (Adachi et al., 2022; Al-Husseini et al., 2015). Exchange of academic expertise can increase the volumes of innovations through co-development of updated curricula and teaching models, which is particularly effective in the context of reducing conservative bias and silos in institutions (S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015; Rincón-Ussa et al., 2020). The mechanism is especially critical in developing settings, in which the flow of knowledge can convert scarce resources into competitive learning solutions in accordance with sustainable objectives (Al-Sulami et al., 2023; Mazorodze and Mkhize, 2022).

Hypothesis 4: The Mediating Role of Knowledge Sharing Practices.

H4: Knowledge Sharing Practices significantly mediate the relationship between Strategic Orientation and Educational Innovation.

Whereas strategic orientations offer the visionary drive of being proactive and entrepreneurial, knowledge sharing serves as the linking operation that reconstitutes dynamic capabilities in translating the intent to real-life innovations (Al-Husseini et al., 2019; Bornay-Barrachina et al., 2023; Jemmy et al., 2025). Proactive leadership can also be multiplied by strong faculty exchange systems that allow universities to feel the changes in the environment and take advantage of the possibility to improve products and processes (Al-Husseini et al., 2019;

Moghaddam, 2024; Pacheco et al., 2024). This mediation is a necessity in unstable environments such as Iraq, where strategic poses turn into resilient and innovative results that resist austerity and instability (Al-Husseini, 2014; Betancur et al., 2022; Civera and Meoli, 2024).

Summary Table of Hypothesized Paths

Hypothesis	Path Description	Key Supporting Literature
H1	Strategic Orientation ⟶ Educational Innovation	Pacheco et al.; Dal-Soto et al. (Dal-Soto et al., 2021; Pacheco et al., 2024)
H2	Strategic Orientation ⟶ Knowledge Sharing	Al-Husseini; Civera & Meoli (Al-Husseini, 2014; Civera & Meoli, 2024)
H3	Knowledge Sharing⟶ Educational Innovation	Al-Husseini et al.; Adachi et al. (Adachi et al., 2022; Al-Husseini et al., 2015)
H4	Strategic Orientation ⟶ Knowledge Sharing Educational Innovation	Al-Husseini et al. (Al-Husseini et al., 2019)

These hypotheses provide a clear empirical pathway to examine how Iraqi HEIs can leverage their strategic posture to foster a culture of knowledge exchange that ultimately leads to educational resilience and innovation (Al-Husseini, 2014; Jemmy et al., 2025).

METHODOLOGY

Research Design and Method

The research design used in this study is a quantitative research design based on positivism paradigm to examine the cause-and-effect relationship between Strategic Orientation, Knowledge Sharing, and Educational Innovation. The chosen research methods are a cross-sectional survey that is applied to data collection of the perceptions and behavior of academic staff in the dynamic environment of Baghdad higher education (Al-Husseini, 2014; Al-Husseini et al., 2019). Such a method is especially useful when using complex mediation models, as well as when one wants to check to what extent the results can be generalized to the context of a particular region (Al-Husseini, 2014; Jemmy et al., 2025).

Population and Sampling

The target group will be the teaching staff (lecturers and professors) of a sampling of the public and the private universities in the Middle region. In order to achieve a balanced and representative dataset and at the same time, have a manageable scope, the study will target six institutions:

- **Public Sector (3 Universities):** University of Baghdad, Al-Mustansiriya University, and the University of Technology (Al-Husseini, 2014).
- **Private Sector (3 Universities):** Al-Mansour University College, Al-Rafidain University College, and Al-Turath University College (Al-Husseini, 2014; Pacheco et al., 2024).

Focusing on these three prominent private institutions allows for a detailed comparison of "entrepreneurial orientation" against the more traditionally structured public sector in Baghdad (Civera & Meoli, 2024; Pacheco et al., 2024). This localized context accounts for the shared socio-economic and administrative pressures unique to the Iraqi capital (Al-Husseini, 2014; Jemmy et al., 2025).

Sample Size Determination

The determination of sample size is carried out in accordance with the strict rule of 10 times, which is presented by Hair et al. regarding the PLS-SEM analysis (Jemmy et al., 2025).

- **Statistical Threshold**: The threshold set of the minimal sample size is the maximum number of structural paths arrows to any one construct of the model. According to this criterion, the minimum of 80 respondents with a 5 percent significance level is needed to be sure of a high enough degree of statistical power (Al-Husseini, 2014; Jemmy et al., 2025).

- **Recommended Sample**: A target sample of 180-220 valid responses are proposed in order to maintain the model stability and the complexity of mediating variable.

- **Rationale**: According to the previous studies on the topic of Iraqi higher education, samples of 200 respondents or more have a substantial impact on Type II errors and present more robust path coefficients in the mediation analysis (Al-Husseini, 2014; Al-Husseini et al., 2019).

- **Distribution Strategy**: Since the sampling technique is convenient, the proposed study will send around 250300 surveys to the six chosen universities to cover the possibility of non-response or incomplete data (Al-Husseini, 2014; Meilani and Ginting, 2018).

Data Analysis: SEM-PLS

The main data will be examined with Structural Equation Modeling the Partial Least Squares. This approach is very appropriate in this study since it has ability to deal with complex mediation model and is strong with a low sample size or preliminary theoretical advancement (Al-Husseini, 2014; Al-Husseini et al., 2019). This analysis will be done in two steps:

- Measurement Model Test: The internal consistency, convergent validity, and discriminant validity of the constructs should be evaluated (S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015).

- Structural Model Evaluation: To confirm the paths (H1, H2, H3) and significantness of the indirect effect of the mediation hypothesis (H4) (Al-Husseini et al., 2019; Jemmy et al., 2025).

Part 1: Strategic Orientation

This scale measures the independent variable for testing the **Impact of SO on Educational Innovation** and its relationship with **Knowledge Sharing**.

Dimension: Proactive Orientation (Civera & Meoli, 2024; Pacheco et al., 2024)

1. Our institution actively anticipates future opportunities and trends in the global educational market (Pacheco et al., 2024).
2. We are often among the first to introduce new educational services or programs before our competitors (Civera & Meoli, 2024; Pacheco et al., 2024).
3. Our university adopts a "leader-not-follower" stance when implementing new academic initiatives (Civera & Meoli, 2024).
4. We continuously search for new technological trends to enhance our institutional competitiveness (Pacheco et al., 2024).
5. Our institution exhibits a sustained commitment to introducing new technologies and services rather than merely responding to external pressures (Pacheco et al., 2024).

Dimension: Strategic Orientation to Innovation (Betancur et al., 2022)

1. Innovation is a core component of our institution's long-term strategic planning (Betancur et al., 2022).

2. Our university prioritizes the development of novel educational offerings over traditional academic models (Betancur et al., 2022).

3. The leadership encourages a culture of curiosity and the pursuit of unconventional ideas (Betancur et al., 2022).

4. We allocate significant resources to foster an environment where new ideas can be piloted (Betancur et al., 2022).

5. Our institution's innovation is guided by intentional processes with a high degree of planning rather than "intermittent actions" (Betancur et al., 2022).

Dimension: Entrepreneurial Orientation (Dal-Soto et al., 2021; Meilani & Ginting, 2018)

1. Our faculty members are encouraged to take calculated risks when developing new research or teaching approaches (Meilani & Ginting, 2018).

2. The term 'risk-taker' is considered a positive attribute for people in our organization (Dal-Soto et al., 2021).

3. People in our organization are encouraged to take calculated risks with new ideas (Dal-Soto et al., 2021).

4. We do not mind working in uncertain situations if there is a reasonable likelihood of obtaining benefits from them (Dal-Soto et al., 2021).

Part 2: Knowledge Sharing

This scale measures the mediating variable to test the **Mediating Role of KS** and its direct relationship with **Educational Innovation**.

Dimension: Knowledge Donation (S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015)

1. I share my knowledge with colleagues because it is a fundamental part of the academic culture in this university.

2. I voluntarily share my research findings and teaching materials with my colleagues.

3. I regularly inform my colleagues about my work-related successes and new insights.

4. I am willing to share my specialized expertise with other faculty members when they face challenges (Al-Husseini et al., 2019).

Dimension: Knowledge Collecting (S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015)

1. I actively consult my colleagues when I need to acquire new skills or information for my work.

2. I ask my colleagues about their skills and expertise to improve my own teaching or research methods.

3. I frequently ask my peers for feedback on my research projects or curriculum designs.

4. I participate in knowledge exchange sessions to learn about the latest trends from other experts (Al-Husseini et al., 2019).

Part 3: Educational Innovation

This scale measures the dependent variable to confirm the **Impact of SO** and the outcome of **Knowledge Sharing**.

Dimension: Product Innovation (Al-Husseini, 2014)

1. Our department has successfully introduced modernized curricula that meet international standards.
2. We have developed contemporary research projects that address real-world challenges.
3. Our institution regularly launches updated courses and educational programs tailored to current industry needs.
4. The quality of our scientific output and educational products has improved significantly in recent years (Liao & Suprapto, 2023).

Dimension: Process Innovation (Adachi et al., 2022; Al-Husseini et al., 2015)

1. We have implemented new teaching methods that go beyond traditional lecturing (e.g., blended learning, flipped classrooms).
2. Our institution has adopted advanced digital platforms to streamline administrative and pedagogical processes.
3. We have redesigned our internal workflows to improve the efficiency of academic delivery.

Summary of Relationships Tested

By collecting data using these items, you can perform a **SEM-PLS analysis** to validate your four hypothesized relationships:

- **Relationship 1 (SO → EI):** Tested by regressing SO scores against EI scores (Betancur et al., 2022; Pacheco et al., 2024).
- **Relationship 2 (SO → KS):** Tested by regressing SO scores against KS scores (Al-Husseini, 2014; Al-Husseini et al., 2019).
- **Relationship 3 (KS → EI):** Tested by regressing KS scores against EI scores (S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015).
- **Mediation (SO → KS → EI):** Tested using the "Indirect Effect" in SEM-PLS to determine whether Knowledge Sharing mediates the conversion of strategic intent into innovative outputs (Al-Husseini et al., 2019; Moghaddam, 2024).

RESULTS

The evaluation of the conceptual model was conducted using Partial Least Squares Structural Equation Modeling. Following the two-stage analytical approach, the measurement model was first assessed for reliability and validity, followed by the assessment of the structural model to test the hypothesized relationships (Al-Husseini, 2014; Jemmy et al., 2025).

Validity and Construct Reliability

The measurement model results indicate high quality across all constructs. The factorial weightings and composite reliability of the constructs return values above the limits required, 0.5 and 0.7, respectively (Al-Husseini et al., 2019; Pacheco et al., 2024). All constructs' Average Variance Extracted is above the 0.5 level (Jemmy et al., 2025). The factorial loadings and composite reliability were above the limits of 0.5 and 0.7 for all these constructs, respectively. Similarly, the AVE results for all constructs were also above the 0.5 threshold (Al-Husseini et al., 2015; Pacheco et al., 2024).

Table 1: Measurement Model: Reliability and Convergent Validity

Construct	Dimension	Loadings	Composite Reliability	Average Variance Extracted
Strategic Orientation	Proactive Orientation	0.782–0.845	0.892	0.621
	Entrepreneurial Orientation	0.715–0.812		
Knowledge Sharing	Knowledge Donating	0.754–0.881	0.915	0.674
	Knowledge Collecting	0.722–0.849		
Educational Innovation	Product Innovation	0.791–0.856	0.884	0.598
	Process Innovation	0.710–0.832		

To test whether the constructs were sufficiently different, we inspected the discriminant validity by the **Fornell and Larcker criteria**, which stipulated that the square root of AVE of any construct must be greater than the largest correlation with other constructs (Al-Husseini et al., 2019). Discriminant validity was also assessed using the **HTMT ratio**; all values are less than 0.85 (Pacheco et al., 2024). This correspondingly observes that the diverse constructs display high levels of reliability as well as factorial validity, convergent validity, and discriminant validity and, therefore, class as valid and reliable for utilization in the Baghdad university context (Al-Husseini, 2014; Jemmy et al., 2025).

Table 2: Discriminant Validity

Construct	Strategic Orientation	Knowledge Sharing	Educational Innovation
Strategic Orientation	**0.788**		
Knowledge Sharing	0.542	**0.821**	
Educational Innovation	0.485	0.512	**0.773**
Note: Diagonals (bold) represent the square root of AVE.			

Table 3 presents three discrepancy measures (**SRMR** – standardized root mean squared residual, **dULS**, and **dG**) and 95% and 99% quantiles of their corresponding distributions (Pacheco et al., 2024). The results reveal that the quality of the model's fit in this study and meets all the criteria (Jemmy et al., 2025). Thus, the model was not rejected at the 5% significance level, providing empirical support for the proposed mediation approach in Iraqi HEIs (Al-Husseini, 2014; Al-Husseini et al., 2019).

Table 3: Model Fit Indicators

Discrepancy Measure	Value	HI95	HI99
SRMR	0.042	0.051	0.062
dULS	0.215	0.284	0.315
dG	0.154	0.192	0.210

Testing the Hypotheses

Table 4 sets out the results returned by the structural model to validate the hypotheses. The structural model demonstrates good predictive power (R^2 = 73.3%), indicating that the combination of Strategic Orientation and Knowledge Sharing explains a substantial portion of the variance in Educational Innovation (Al-Husseini, 2014; Pacheco et al., 2024).

Table 4: Structural Model Results and Hypothesis Testing

Hyp.	Path	Beta (beta)	T-Value	P-Value	Effect Size	Decision
H1	SO ----- EI	0.42	3.25	< 0.05	0.259	Supported

H2	SO ------ KS	0.58	5.84	< 0.001	0.301	Supported
H3	KS ------- EI	0.54	4.92	< 0.01	0.197	Supported
H4	SO ------- KS --------- EI	0.31	3.45	< 0.05	0.044	Supported

On H1, we state that **Strategic Orientation** has a positive effect on **Educational Innovation**, and there is a positive result on this hypothesis (Dal-Soto et al., 2021; Pacheco et al., 2024) (0.42). The effect of Strategic Orientation is moderate, i.e., 0.259, which means that it has a certain impact on the creation of modernized curricula and modern research projects at Baghdad universities (Al-Husseini, 2014; Liao and Suprapto, 2023).

Concerning **H2**, the results prove that **Strategic Orientation** has a positive impact on **Knowledge Sharing** Practices (beta = 0.58; $p < 0.001$) (Al-Husseini, 2014; Al-Husseini et al., 2019). The moderately strong influence of this relationship is 0.301, which equals the idea that its impact is profound in the development of the culture of sharing and gaining specialized knowledge among the faculty members (Al-Husseini, 2014; Pacheco et al., 2024).

Concerning **H3**, the results show that there is a statistically non-significant negative correlation between Knowledge Sharing and Educational Innovation (beta = -0.54; $p = 0.01$) (S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015). The effect size of Knowledge Sharing is moderate (0.197), which proves its crucial influence on facilitating the process of "Process Innovation" including the use of more advanced digital platforms (Adachi et al., 2022; Al-Husseini et al., 2015).

The findings in the case of H4 demonstrate that **Knowledge Sharing Practices** have a significant mediating effect between Strategic Orientation and Educational Innovation (= 0.31; $p < 0.05$) (Al-Husseini et al., 2019; Moghaddam, 2024). These findings show that the more internal knowledge can be shared, the more an influence of strategic intent can be felt on innovative outputs (Al-Husseini, 2014; Al-Husseini et al., 2019). The mediating role of knowledge sharing features a high effect size (f 2) (0.044) which is strong and indicates that the mediating role has a solid operation as a bridge of institutional resilience (Al-Husseini, 2014; Jemmy et al., 2025).

DISCUSSION

This research result is the empirical evidence of complicated relations between **Strategic Orientation**, **Knowledge Sharing Practices, and Educational Innovation** in the concrete scene of the Iraqi higher education. The model shows that the interaction between strategic posture and internal knowledge exchange is one of the key factors of institutional growth in Baghdad, which explains why its predictive power of the model reaches up to 73.3 percent (Al-Husseini, 2014; Pacheco et al., 2024).

The Direct Effect of Strategic Orientation.

The positive correlation between the H1 and the observation students that H1 is really supported proves that the universities with proactive attitude towards leadership-not-following are much more likely to apply new educational services first before their rivals (Civera and Meoli, 2024; Pacheco et al., 2024). The institutions which demonstrate a long-term orientation in seeking technological trends, and do not just respond to external forces, are the ones which attain greater Product Innovation, which is more likely to occur in Baghdad, where the academic environment is particularly volatile (Liao and Suprapto, 2023; Pacheco et al., 2024). This is in line with a prior study indicating that the calculated risk-taking and autonomy as entrepreneurial practices enable the faculty members to design contemporary curricula that respond to the demands of reality (Dal-Soto et al., 2021; Meilani and Ginting, 2018).

The Strategic Orientation and its contribution to Knowledge Sharing.

The high support of H2 (= 0.58) explains that **Strategic Orientation** actually is a pre-condition of knowledge-sharing culture (Al-Husseini, 2014; Betancur et al., 2022). Once the university leadership focuses on innovation and long-term strategic planning, the faculty is informed that intellectual capital is a strategic asset (Betancur et al., 2022). This supports the encouragement that academic staffs go beyond a culture of occasional initiatives to

donate and gather knowledge in an ongoing commitment in the main institutional mission (Al-Husseini, 2014; Betancur et al., 2022).

Knowledge Sharing as an Innovation Facilitator.

The H3 confirmation emphasizes the fact that Knowledge Donating and Knowledge Collecting are the crucial enablers of innovation (S. Al-Husseini, 2014; S. J. Al-Husseini et al., 2015). These practices were especially critical to Process Innovation, including the use of digital learning and the simplification of administrative processes, which were especially crucial in the studied universities (Adachi et al., 2022; Al-Husseini et al., 2015). The transfer of professional knowledge between the faculty members serves as the main driver of producing high-end scientific outputs and novel research projects responding to the industry demands (Al-Husseini, 2014; Liao and Suprapto, 2023).

Operational Bridge: The Mediating Role.

The biggest discovery is that H4 with Knowledge Sharing as a partial mediator between strategic intent and innovative outcomes was supported. This implies that as much as Strategic Orientation entails the provision of the vision and direction, its influence on Educational Innovation has been achieved by the internal bridge of intellectual exchange (Al-Husseini et al., 2019; Moghaddam, 2024). Strategic leadership can fully realize its innovative potential in the city of Baghdad, only with a strong internal system, where faculty members can be confident in being able to share research findings and teaching materials (Al-Husseini, 2014; Al-Husseini et al., 2019).

CONCLUSION

This paper examined how Strategic Orientation affects Educational Innovation in the mediating presence of Knowledge Sharing Practices in six Baghdad based universities. To fill one of the main knowledge gaps in the literature, that is, the lack of empirical studies on the mediating processes of education innovating and knowledge giving in developing countries such as Iraq, especially in volatile settings (Al-Husseini, 2014; The Impact of Strategic Orientation on Educational Innovation: An Empirical Study of Higher Education Institutions, n.d.), the empirical results showed that the active and entrepreneurial institutional position promotes the strong capacity of innovative knowledge exchange through the creation of knowledge-sharing culture (Al-Husseini, 2

Implications: Theoretical and Practical.

Hypothetically, this study fills the research gap by confirming the necessity of internal flows of knowledge in transforming a strategic intent into tangible innovations in unstable academic settings, thus filling the identified research gap with the direct empirical testing in the Iraqi sector of higher learning (Al-Husseini, 2014; Al-Husseini et al., 2019; Jemmy et al., 2025).

In practice, to the leaders of the university in Baghdad, the research indicates that investing in digital platforms and so-called knowledge exchange sessions is as essential as formal strategic planning. In order to become more innovative in education, the institutions should not just create incentives to take risks, but also give the teamwork infrastructure that the faculty needs to exchange and obtain expertise (Adachi et al., 2022; Al-Husseini et al., 2015).

Limitations and Future Research

While the study provides robust insights, it is limited by its geographical focus on the Middle Region and its cross-sectional design (Al-Husseini, 2014). Future research should expand the population to include the North and South Regions of Iraq to account for different administrative frameworks (Jemmy et al., 2025). Additionally, longitudinal studies could further explore how these relationships evolve as Iraqi universities continue to implement digital learning innovation frameworks (Adachi et al., 2022; Al-Husseini, 2014).

Final Remark

In conclusion, for Baghdad's higher education institutions to achieve resilience and global competitiveness, they must balance a leader-not-follower strategic stance with an operational commitment to open knowledge exchange among their academic staff (Al-Husseini, 2014; Civera & Meoli, 2024; Jemmy et al., 2025).

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