

## **The Effect of Strategic Intelligence on Enhancing the Performance of Higher Education Institutions: A Field Study of Mutah University**

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### **Abstract**

This study aims at identifying the effect of strategic intelligence on enhancing the performance of higher education institutions at Mutah University. Five aspects of strategic intelligence are examined including; future visioning, foresight, system thinking, partnership and motivation. Three aspects to institutional performance are also examined including; efficiency, effectiveness and continuity. A survey sample, which consisted of (177) academic leaders at Mutah University, was used to collect data using the descriptive and analytical approach. The study instrument includes (40) items covering the investigated variables. The results show that there is a high positive perception level of strategic intelligence among academic leaders at Mutah University. The leaders highly believe in the importance of future visioning, foresight, system thinking, partnership and motivation as the dynamics for the activation of strategic thinking. The results ensure a positive effect of strategic intelligence on institutional performance.

**Keywords:** Strategic intelligence; Institutional performance; Higher education; Mutah University.

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## أثر الذكاء الاستراتيجي في تحسين أداء مؤسسات التعليم العالي:

### دراسة ميدانية على جامعة مؤتة

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#### ملخص

تهدف هذه الدراسة إلى تحديد أثر الذكاء الإستراتيجي في تحسين أداء مؤسسات التعليم العالي في جامعة مؤتة. حيث تم قياس خمسة أبعاد للذكاء الاستراتيجي وتشمل: الرؤية المستقبلية، والاستشراف، وتفكير النظم، والشراكة، والدافعية، بالإضافة إلى ثلاثة أبعاد متعلقة بالأداء المؤسسي، وتشمل: الكفاءة، والفعالية، والاستمرارية. واعتمدت عينة المسح الشامل، والتي بلغ تعدادها (177) من القادة الأكاديميين في جامعة مؤتة. واستخدمت الدراسة المنهج الوصفي التحليلي من خلال استبانته تحتوي على (40) فقرة تم تطويرها لقياس المتغيرات قيد الدراسة. ومن خلال النتائج، تبين وجود مستوى عالٍ من الإدراك بأهمية الذكاء الاستراتيجي لدى القادة الأكاديميين في جامعة مؤتة، وأكدت النتائج من خلال عينة الدراسة وجود أثر إيجابي ذو دلالة إحصائية للذكاء الاستراتيجي في تحسين الأداء المؤسسي.

**الكلمات الدالة:** الذكاء الاستراتيجي؛ الأداء المؤسسي؛ التعليم العالي؛ جامعة مؤتة.

## **1. Introduction**

The dramatic changes and developments in the current era with the blowing revelation of information and communications have led all business and educational institutions to look for new types of leadership. The educational institutions seek strategic position and reputation through employing a strategic intelligence leadership able to improve the institution performance and excellence. Strategic intelligence seeks to confirm the improvement of very important attributes to the organizations including foresight, system thinking, future visioning, partnership and motivation. However, in the context of educational institutions, several challenges can affect the relationship between leadership and affiliated employees.

Strategic intelligence plays an important role in the organization's strategies and operations (Silas, 2013). The strategic intelligence benefits can be as follows: a) provide a secure channel in managing crises facing an organization; it assists managers in defining the organization's programs and policies; b) helps them to cope with future challenges (Zehir et al., 2020). Therefore, educational institutions need strategic intelligence to enhance and improve their performance in the current information age, where knowledge is the base of current and future strategic plans (Al-Dahhan, 2019). Current business, furthermore, has an advantage of available data that can be easily analyzed and mapped into information to build a concrete knowledge base, which is essential for strategic planning. Moreover, strategic intelligence with best utilizing of knowledge allows organizations to achieve a competitive advantage, innovation and continuous prosperity for long-term survival, as the current business environment is very dynamic and complex (Liebowitz, 2019).

The concept of institutional performance is one of the most important topics in the field of public administration, especially considering global challenges and increased competition to provide high-quality service to beneficiaries. Therefore, excellence has become a sustainable aim that educational institutions seek to achieve in a competitive environment. However, this requires the university administrative units to keep intensive efforts to achieve more excellence and uniqueness in their institutional performance (Kuosa, 2016).

Universities are one of the most important organizations due to their multi visions toward academic and social developments (Liebowitz, 2019).

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Since universities shape the community image by involving human and technical elements, scientific and theoretical disciplines, research centers, resources and information systems, the current study comes to explore the level to which universities perceive strategic intelligence in their current and future strategic plans.

## **Literature Review**

### **Strategic Intelligence**

The concept of strategic intelligence has gained increasing importance in different institutional fields; it represents a complete and comprehensive system to guide the institutions towards achieving their short and long-term goals. Strategic intelligence allows leaders to build their strategic plans while ensuring a higher level of success and excellence to the institution while operating in a competitive environment. Leaders with strategic intelligence thinking can identify the opportunities available, and to successfully adapt to the changes that threaten their business (Baeietet al., 2017). Moreover, strategic intelligence provides top management with appropriate strategic direction and helps organizations make rational decisions and manage risks resulting from the organization's external environment (Coyne & Bell, 2011). However, strategic intelligence lacks an accurate definition as there is a need to address the limits and opportunities of this kind of intelligence in the business world. This relates to the fact that strategic intelligence was first used in military operations as a process of obtaining, transmitting, evaluating and analyzing information to be ready for politicians to make critical decisions (Agha, 2014).

Strategic intelligence can be considered as what the institution needs to know about its business environment to recognize its current position, manage future changes, and maintains appropriate strategies that create business value for clients, and improve its performance (Lane, 2018). According to Liebowitz (2019), strategic intelligence is a tool to provide complete and comprehensive information about the external environment to the senior leadership at the appropriate time in order to develop their business strategies. However, having a planned strategy to improve the organization strategic intelligence is a basic demand, but it can be highly linked to the personal traits that distinguish organizational leaders (Maccoby et al., 2013; Lane, 2018).

Successful strategic thinking contains several aspects including: a) foresight, which relies on the ability to predict new paths or changes effect based on current information and input ; b) system thinking: the ability to integrate all inputs and changes that guarantee only one successful output; c) future visioning, which refers to the organization vision and ambitions of what makes its present and future sustainability through a strategic future insights ; d) motivation ,whereby the leader can influence staff for more and continuous creative work ; e) partnership, which indicates the importance of having strategic alliance and collaborative programs that reward back benefits to the instigation(Agha et al., 2014 , Bae et al , 2017) .

The first component is foresight. Foresight refers to the process of thinking about the invisible image that makes the future, or the leader's vision of business environment changes by monitoring and examining factors at the present (Spaniol et al., 2019). Foresight analyzes the current conditions and their evolvement influences overtime on the future state regarding the conditions under control (Baeiet al, 2017).Saleh et al (2010) argued that foresight is the possibility of projecting the current situation on the future with a vision that the future leader can develop, distinguish what can be avoided and influence and control its evolvement. Dawood (2016) added that foresight reflects the leader's ability to think based on the perceived and unconscious powers that contribute to the future of the industry.

The second component is system thinking. System thinking expresses the ability to combine inputs rather than separating them into parts, then analyzing inputs together, to evaluate them in terms of their interactive relationship (Spaniol et al., 2019). System thinking represents the ability to structure the integration of different inputs to understand their interactions, study the inputs in terms of their relationship to the whole, and then evaluate them in terms of their success in achieving the goals of the organization (Saleh et al.,2010).However, Qasim (2011) mentioned that any system inputs should be decomposed then accurately analyzed to demonstrate its ability to synthesize the relevant variables and their interaction. Dawood (2016) pointed out that systems thinking represents the ability to combine different elements with the aim of analyzing them and understanding their interaction to form one system or image of the variables being handled.

The third component is future visioning. The future visioning is a prediction tool to conceptualize a specific image of future conditions or events related to a specific framework or context. Future visioning comes as a result of the understanding, awareness and vision as one of the key elements of strategic intelligence as it relates to the ability to seek an outlook and system thinking in designing an ideal future model (Qasim, 2011).

The fourth component is motivation. Motivation plays an important role in the success of institutions, since because human resource is the key factor of success. Therefore, an organization cannot achieve its goals without motivating its leaders as an important and essential blueprint to direct the efforts of workers in the organizations and make their personal motivations align with the organization vision. Motivation maps the ability of leaders who practice strategic intelligence to push and motivate employees to work harder and raise the spirit of enthusiasm they have; it expresses the act that pushes individuals to adopt an appropriate viewpoint to accomplish the work assigned to them (Imran, 2015). Saleh et al (2010) defined motivation as the leader's ability to urge employees to implement the visions and perceptions that he has developed, and direct them toward a specific goal to advance the strategic goals of the organization.

The partnership reflects the ability of the strategic leader to maintain strategic alliances, so that the organization preserves its personality and identity. The partnership means the ability of organizations to find strategic partnerships with other organizations in the same field, and trust, commitment, and the ability of partners to solve conflicts that may arise between them (Imran, 2015). It reflects the ability to establish a joint business through trust and commitment, sharing information and product or service design (Arcos, 2016).

### **Institutional Performance**

Improving the performance of institutions is a necessary condition for survival and continuity (Agha et al., 2014; Real, 2014). Therefore, higher education institutions struggle to improve their performance for continuous development and improvement of their programs. They are responsible for offering and attracting students to join initiative programs; so, it is inevitable that they would provide the best and remain at the forefront of all

new science and knowledge that to continue feeding the national and international market with very qualified graduates. The literature has provided several definitions of the institutional performance concept; however, this study adopts an inclusive concept of institutional performance, which refers to the assessment of the integrated system of an institution in the light of its interaction with its internal and external environment. Consequentially, the performance of educational institutions has been introduced as a result of a complex set of interactions between academics, teaching, materials and equipment they use, as well as their social and cultural impact on their community. Schoolers have addressed three main components of institutional performance including: Efficiency, Effectiveness and Sustainability (Petrișor, 2013; Silas, 2013).

Efficiency is the way in which leaders handle their organizational inputs so that they reduce those inputs in relation to some of the outputs. The lower the cost, the lower the price, the higher the profits and the higher the competitive position of the organization, which indicates its high efficiency (Modell, 2019). Whereas, Byungura& et al, (2019) indicated that efficiency is the number of materials used to produce one unit of output, that is, it reflects the relationship between inputs and outputs. In addition, efficiency means the ability to compensate for the loss of resources available to the organization through the appropriate use of resources according to specific criteria for scheduling, quality and cost. Moreover, efficiency refers to the relationship between resources and their best utilization.

Institutional effectiveness refers to the result of the interaction of all performance components with the technical, administrative activities and the internal or external environment influence (Decramer et al., 2012). It demonstrates the organization's ability to achieve its operational goals or the ability to reach goals, whatever the procedures used, and therefore the issue of achieving results regardless of the efforts made to reach them (Polischuk, 2013). Thus, it reflects the institution's ability to peruse the work required to accomplish its mission. In addition, the concept of effectiveness is linked to the institution's ability to achieve its goals in a comprehensive scope of business performance, including financial and operational performance (Modell, 2019).

Finally, performance continuity refers to the ability to survive and grow to achieve the goals of the institution. However, an institution faces environmental changes and supposed to have the ability to adapt them. This can be done through the strategies adopted by the institutions that seek excellence compared to its competitors and their customers' satisfaction (Maman & Rosenhek, 2012).

In the current context , which related the study of higher educational institutions in Jordan, strategic intelligence can be defined as the ability of the university administration to insight the future and be fully aware of the importance and the impact of internal and external environment; therefore, the availability of information is vital to make the right decisions at the right time with a future visioning including the ability to predict the impact of their intended decisions.

### **Statement Problem**

The current study considers the situation of the public Jordanian universities, which suffer from persisting problems in offering some of the undergraduate and graduate stagnant programs. In addition, universities are required to attract international students and overcome obstacles to improve their national and international rank based on the quality of service standards. However, the financial crises that public universities are undergoing, especially at Mutah University are standpoint (Jordanian economic and national council, 2018). On the other hand, studies have proven that strategic intelligence for institutional leadership can be the solution (Silas, 2013, Real et al., 2014). Therefore, this study aims to reveal the reality of strategic intelligence for administrative and academic leadership at Mutah University for further investigation.

### **Study Questions**

Based on the study problem, the current paper attempts to answer the followings questions:

1. How do academic leaders perceive strategic intelligence at Mutah University?
2. How do academic leaders perceive institutional performance at Mutah University?

3. What is the effect of strategic intelligence on enhancing the level of institutional performance in Mutah university?

## 5. Study Hypothesis

This paper attempts to examine the following main hypothesis:

H<sub>0</sub>: There is no statistically significant impact at the level ( $\alpha \leq 0.05$ ) of strategic intelligence on enhancing the level of institutional performance at Mutah University.

## 6. Aim and Objectives:

The current study aims at exploring the impact of strategic intelligence on institutional performance as perceived by Mutah University academic leaders. Therefore, the following objectives were considered for the study:

1. Identifying how academic leader perceives strategic intelligence at Mutah University.
2. Identifying how academic leaders perceive institutional performance at Mutah University.
3. Investigating the effect of strategic intelligence on enhancing the level of institutional performance at Mutah University.

## 7. Study Significant

The significance of the study lies on exploring the practicing level of strategic intelligence at Mutah University administration, which is generally characterized by its multi concepts and references that need assistive methods and models to improve it. This, in turn, leads to the practical importance of studying the impact of strategic intelligence and its contextual or exploratory contribution on the Mutah University vision and mission, which helps in overcoming the shortage of extra educational tools and resources.

## 8. Study Instrument and Method

This study adopts a descriptive and analytical approach to examine the impact of strategic intelligence on enhancing the level of institutional performance at Mutah university as perceived by its academic leaders.

Hence, after an extensive review, researchers developed a measurement scale designed in the form of a questionnaire, which includes (40) items measuring the investigated variables as shown in table 1. The designed measurement scale uses Five-point Likert scale including alternatives of: Strongly agree, Agree, Neutrino, Disagree and Strongly disagree.

**Table (1) Instrument Items**

<b>Variables</b>	<b>Dimensions</b>	<b>Items</b>
Strategic Intelligence	Future Visioning	(1-5)
	Foresight	(6-10)
	System Thinking	(11-15)
	Partnership	(16-20)
	Motivation	(21-25)
Institutional Performance	Efficiency	(26-30)
	Effectiveness	(31-35)
	Continuity	(36-40)

### **8.1 Instrument validity and Reliability**

To ensure the content validity of the study instrument that measures strategic intelligence, the questionnaire was sent to a number of experts in public and business administration in Jordanian universities. Their comments were considered to delete, amend, and add some paragraphs to the scale until it was finally approved. As for the internal consistency, we used the Split-Half method by splitting the scale questions into two even parts, so that the odd questions are the first part of the scale, and the even questions are the second part. Results of the Pearson coefficient between the two parts produced to find the coefficient of the whole scale, which indicated a high and acceptable reliability level ranged from (80.23 - 90.23).

### **8.2 Study Population and Sample**

The current study investigates the perception of (177) individuals at Mutah University who possess a leadership position as study

population including the presidency, faculties, unites of registration, computer center, financial, academic departments, services, and student union. However, the final valid responses to this study involve (135) cases after excluding invalid responses with a response rate of (76%).

**9.Results:**

**9.1Descriptive Analysis**

According to the Five-point Likert scale weight descriptors (5: strongly agree; 4: Agree; 3: Neutrino; 2: Disagree; 1: Strongly disagree). Responses judged to each based on three categories, including (High, Moderate and Low) based on equation 1 as shown in table 2.

$$Level\ of\ response = \frac{Strongly\ agree - Strongly\ Disagree}{No.\ of\ judgments} = \frac{5-1}{3} = 1.33 \dots\dots(Equation\ 1).$$

**Table (2) Measurement Levels**

Range	Judgment
1 – less than 2.34	Low
2.35 – 3.66	Moderate
3.67 - 5	High

Accordingly, next subsections show the sample responses to the study instrument including the dimensions of the independent variable (Future visioning, foresight, system thinking, partnership and motivation); the dependent variable dimensions (Efficiency, Effectiveness and Continuity) as follows:

**9.1.1 Strategic Intelligence:**

Statistics in table (3) show sample responses to all strategic intelligence dimensions.

**Table (3) Strategic Intelligence Responses**

N	Dim	Item	Mean	St. d	Rank
1	Future Visioning	I can develop university strategies in line with the requirements for change in the future.	4.02	0.76	High
2		I have a clear vision to unify the efforts of university employees towards its future goals.	4.07	0.69	High
3		We define the future directions of the university according to high-quality standards.	3.99	0.76	High
4		We adopt the university's strategic options for promising future university leadership.	3.94	0.73	High
5		I have a clear vision on how to deal with the challenges affecting the future of the university.	3.95	0.78	High
		Mean		3.97	0.56
6	Foresight	The university administration looks ahead to the future when developing its strategies.	3.74	0.80	High
7		The university generates alternative future paths based on information from the external environment.	3.76	0.82	High
8		Predicting the future helps the university exploit potential opportunities.	3.64	0.83	Moderate
9		Foresight helps the university face complexities and future changes in strategic decision-making.	3.81	0.78	High
10		The university administration monitors changes in the environment when making strategic decisions.	3.79	0.77	High
		Mean		3.75	0.61
11	System Thinking	The university administration collectively considers new ideas to achieve long-term value.	3.96	0.82	High
12		The university administration views the problem as one package when trying to solve it.	4.11	0.70	High

N	Dim	Item	Mean	St. d	Rank
13		System thinking helps to enhance the capabilities of workers to adopt potential future changes.	4.07	0.72	High
14		We set our strategic plans based on accurate information when defining the university's strategic goals.	4.06	0.00	High
15		Our executive strategies build on a coherent and holistic system.	4.08	0.73	High
		Mean	4.05	0.57	High
16	Partnership	Partnership with other universities is an effective solution to overcome the potential crisis facing the university.	3.96	0.71	High
17		The University is integrated through its vision of partnering with other universities.	4.03	0.74	High
18		The university administration adopts strategic alliances to take advantage of its capabilities.	4.10	0.74	High
19		Strategic partnerships contribute to developing the capabilities of workers.	4.01	0.70	High
20		Participation provides the university with a collaborative framework with other universities to obtain scarce resources.	4.02	0.74	High
		Mean	4.02	0.59	High
21	Motivation	The university provides an incentive system linked to the level of performance.	3.68	0.87	High
22		The University motivates its employees to implement its vision.	3.64	0.85	Moderate
23		The University involves workers in the strategic decision-making process.	3.84	0.79	High
24		The university's success drives employees towards a high level of performance.	3.72	0.84	High
25		The university administration is keen to raise employees' morale to show their best.	3.72	0.70	High
		Mean	3.68	0.87	High

Table (3) shows all sample responses to the strategic intelligence dimensions. First, it shows a high perception of academic leaders on the level of future visioning (Mean=3.97; St.d=0.56). Second, the result confirms that academic leaders highly evaluate the level of foresight (Mean=3.75; St.d=0.61). Third, academic leaders perceived system thinking as an important dimension of strategic intelligence with (Mean=4.05; Std.d=0.57) due to its ability to compromise all inputs to the sought output. Fourth, academic leaders perceived partnership as an important opportunity to be utilized (Mean=4.02; Std.d=0.59). Finally results indicate that academic leaders highly keen to motivate their employees to enhance their productivity and performance (Mean=3.68; St.d=0.836). Therefore, academic leaders at Mutah University emphasize the importance of strategic intelligence as a key experience for enhancing the performance and achieving the Mutah University vision and mission .

### 9.1.2 Institutional Performance:

In the table (4), all responses to the institutional performance dimensions analyzed and ranked as follows:

**Table (4) Institutional Performance Responses**

N	Dim.	Item	Mean	St. d	Rank
26	Efficiency	The university administration ensures effective investment of available resources.	4.02	0.76	High
27		The highly skilled staff greatly contributes to improving the services provided to its students.	4.07	0.69	High
28		The allocated budget to support the university services increases when we feel such business shortage.	3.99	0.76	High
29		The university supports creative activities recommended by involved leaders.	3.94	0.73	High
30		The university is keen to complete the work in a shorter time than planned.	3.95	0.78	High
			Mean	3.97	0.56
31	Effectiveness	University employees clearly understand the goals and keen towards their successful implementation.	3.74	0.80	High
32		The university administration understands the importance of adapting to environmental changes to provide high-quality services.	3.76	0.82	High
33		The university keeps increasing its ability to provide good services.	3.64	0.83	Moderate
34		The university administration keeps harmonic interaction between the activities and tasks of various	3.81	0.78	High

N	Dim.	Item	Mean	St. d	Rank
		facilities.			
35		The university administration provides training programs to increase the ability of its employees to perform work effectively.	3.79	0.77	High
		Mean	3.75	0.61	High
36		The university has the ability to adapt to environmental changes to achieve new change demands.	3.96	0.823	High
37	Continuity	The university administration constantly monitors work reports to ensure the continuity of provided services.	4.11	0.702	High
38		The university develops indicators to ensure effective performance.	4.07	0.724	High
39		The government agencies constantly support the university.	4.06	0.698	High
40		The University archives a quality performance witnessed by its board console.	4.08	0.727	High
		Mean	4.05	0.57	High

Table (4) shows all sample responses to the institutional performance dimensions at Mutah University. First, results show that the academic leaders pointed to a high level of efficiency as an important attribute of the institutional performance at Mutah University (Mean=3.97; St.d=0.56). Second, it similarly addresses a high perception of academic leaders on the level of effectiveness (Mean=3.75; St.d=0.61). Finally, Results show that the academic leaders perceived continuity as an important dimension of institutional performance (Mean=4.05; Std.d=0.57) due to its ability to sustain a concrete reputation to Mutah University.

## 9.2 Hypothesis Testing

In order to test the proposed hypothesis, which states “There is no statistically significant impact at the level ( $\alpha \leq 0.05$ ) of strategic intelligence on enhancing the level of institutional performance at Mutah university”, a linear regression analysis is applied to map the relationship between strategic intelligence and institutional performance as shown in Table (5).

**Table (5) Regression Coefficient**

Model	R	R <sup>2</sup>	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
1	0.463	0.215	1.889	.157	.463	12.023	.000
			.456	.038		11.962	.000
Differentiate between dependent and independent variables							

Table (5) shows a significant impact at the level ( $\alpha \leq 0.05$ ) of strategic intelligence on enhancing the level of institutional performance at Mutah University. Therefore, we reject the null hypothesis and accept the alternative that ensures a significant impact of strategic intelligence on enhancing the level of institutional performance at Mutah University. Moreover, regression analysis shows that strategic intelligence can explain (21.5%) of the variance in institutional performance as  $R^2$  is (0.215). This means that strategic intelligence is a significant indicator of the level of institutional performance being investigated. Therefore, assessing educational institution performance (Efficiency, Effectiveness and Continuity) highly articulate on the adopted strategic intelligence attributes (Future visioning, foresight, system thinking, partnership and motivation).

## 10. Conclusion

The current study aims to explore the impact of strategic intelligence on institutional performance as perceived by Mutah University academic leaders. A survey sample, which consisted of all academic leaders at Mutah University was used to collect data using the descriptive and analytical approach. Results revealed that there is a high perception level of strategic intelligence among academic leaders at Mutah University. Academic leaders highly believe in the importance of future visioning, foresight, system thinking, partnership and motivation as the dynamics for activating strategic intelligence. In addition, academic leaders at Mutah University highly relate the institutional performance of efficiency, effectiveness and continuity to the degree of strategic intelligence adopted by its administration. Hence, strategic intelligence can contribute to explaining a large portion of the variance in institutional performance. This means that strategic intelligence

provides an important indicator of the level of institutional performance; therefore, assessing and enhancing educational institution performance are significantly influenced by the adoption of strategic intelligence indicators.

### **11. Recommendations:**

Based on the study results, which assure that the academic leaders at Mutah University highly believe in the importance of strategic intelligence and its impact on the institutional performance, it is recommended to:

1. Clearly introducing strategic intelligence into the university's vision and mission.
2. Establishing a unit for strategic intelligence aimed at foresight in future and defining the internal and external indicators of the educational environment and interacting with its variables before they occur or employ them for the benefit of the university.
3. Conducting new studies on the requirements for enhancing the institutional performance in higher education through identifying the role of some potential moderate and intermediate variables in the impact of strategic intelligence.

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