

The Role of Strategic Intelligence in Enhancing Effective Talent Management: A Study on some Academic Institutions of Duhok Governorate

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ABSTRACT

This paper seeks to illustrate the role of strategic intelligence in enhancing effective talent management (TM) in academic institutions of Duhok governorate. by identifying research's major problem, which impacts strategic intelligence in enhancing talent management effectiveness in academic institutions in Duhok city? The researchers relied on its both hypotheses. The first one there is a significant relationship between strategic intelligence and effective talent management. The second is strategic intelligence has a positive impact on talent management in the academic institutions of Duhok Governorate. A questionnaire describing strategic intelligence and talent management was designed, distributed, and statistically analyzed using correlation coefficient and linear regression equation to test the research hypothesis validity. The research found that strategic intelligence affects the enhancement of talent management. The study also recommends the tested organizations to pay close and constant attention to strengthening administrative structures and teaching staff in terms of critical thinking, resourcefulness, and strategic intelligence).

KEYWORDS: : Strategic Intelligence; Talent Management; Academic Institution; Academic Staff; Duhok Governorate.

1. Introduction

The world has witnessed rapid changes in various areas, especially in the last decade of the twentieth century. Such transformations have brought about marked effects on the administrative practices in various organizations. In parallel to that, internal and external challenges, including technological and information developments, have been faced by these organizations. Therefore, this has necessitated upgrading the means to go beyond survival to go into organizational competition. Moreover, organizations have begun to pay attention to strategic leaders who can help them meet the challenges. Strategic intelligence comes at the forefront of mental factors that empower modern organizations to achieve their strategic goals (Nori, 2015) . Intelligent leaders can develop human talents to put in outstanding performance based on creativity and innovation

models, human inclusion, and awareness of its mission. Most academic institutions in the city of Duhok are newly established, requiring strategic leaders who can discover talented and distinguished human resources, administrators, and professors to keep up with the recent remarkable developments and educational competition.

1.1 Research Problem

Having visionary leadership, effective talent management, and competitive orientation are modern academic institutions' priorities. Delegation of managerial authority is a major challenge that requires adopting appropriate strategies and scenarios to solve daily and future institutional work problems. Strategic intelligence and talent management are vital in addressing these challenges, as formulated in the following question:

What is the impact of strategic intelligence on enhancing effective talent management among a sample of academic staff in some academic institutions of Duhok Governorate?

1.2 Research objectives

- Determine the level of strategic intelligence in the selected institutions.
- Know the extent of interest in talent management in the selected institutions.
- Examine the relation between strategic intelligence and talent management.
- Investigate the effect of strategic intelligence in increasing effective talent management in the selected institutions.

1.3 Significance of the Study

The study attempts to assess the correlation between strategic intelligence and talent management (TM). It regards academic institutions as means for the development of modern societies. Talent management is believed to promote academic institutions, consistent human resources performance, and personnel potentials.

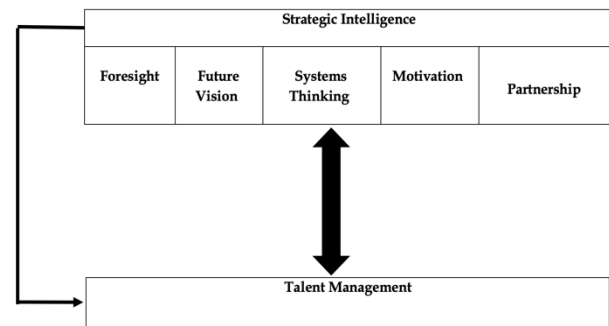
1.4 Research Hypotheses

- **H1:** There is a significant relationship between strategic intelligence and effective talent management in Academic Institutions in Duhok city.
- **H1A:** There is a significant relationship between foresight and effective talent management.
- **H1B:** There is a significant relationship between systems thinking and effective talent management.
- **H1C:** There is a significant relationship between future vision and effective talent management.
- **H1D:** There is a significant relationship between motivation and effective talent management.
- **H1E:** There is a significant relationship between partnership and effective talent management.
- **H2:** Strategic intelligence has a significant impact on effective talent management in academic

institutions in Duhok in the researched organizations.

- **H2A:** Foresight has a significant impact on effective talent management.
- **H2B:** Systems thinking has a significant impact on effective talent management.
- **H2C:** Future vision has a significant impact on effective talent management.
- **H2D:** Motivation has a significant impact on effective talent management.
- **H2E:** Partnership has a significant impact on effective talent management.

1.5 Research Framework



Source: Prepared by researchers

Figure 1: Research Framework

2.Theoretical Framework

This literature review starts to introduce the concept of strategic intelligence (SI), move down to the field of talent management, and end by combining the advantage of the two theses fields by evaluating SI's role in decision making and their influence on talent management to create a framework for the study.

2.1 Strategic Intelligence

Competitive Intelligence (CI) is defined as knowledge about the general environment of the organization. The CI aims to create the desirable business information into actionable form and making it obtainable in time to facilitate proactive decision-making (Maccoby, 2011,58). Strategic intelligence (SI) is an essential tool in involving the strategic management activities in different stages of strategy development. In short, Strategic

Intelligence can be defined as “the specific form of analysis which is required for the formulation of policy and plans at agency, corporate, national or international levels”(McDowell, 2008, 10). Strategic intelligence aims to collect and analyze data that help to make decisions on a strategic level. Also, to predict and understand where the organization will be in the upcoming years and assist them in facing future challenges. (Fernández-Villacañas, 2015, 3). the following is a table of some of the most important of these views:

Table 1: Some of the Most Important Concepts of Strategic Intelligence

No.	Author, Year, Page number	The concept
1	Kuhlmann et al., 1999:14	Creating road maps that direct decision-makers to make the right decisions promptly provides information with the required quality, accuracy, and quantity.
2	Quarmby,2003:3	It is the intelligence that a certain level of managers has to formulate the organization's long-term strategic policies and plans.
3	Sharfman, 2004:4	The process of reviewing the massive number of data comes from different sources to link a small number of these data to serve the organization's goals.
4	Service,2006: 61	It can develop appropriate strategies to address future environmental impacts, and this intelligence includes talent, understanding, knowledge, flexibility, and expansive imagination.
5	Clar et al., 2008: 2	A group of operations that seek to find and process information, then publish and protect it, in order to make it available to the right individual at the right time to enable them to make the right decision
6	Fernández-Villacañas, 2015: 3	“Organization designed to collect information transforming into a useful product for decision making

for a user to solve a current or future situation.”

Source: Prepared by the researchers based on the above references.

From the preceding, a concept of strategic intelligence can be presented as one of the components of the strategic mind that interacts with its components such as awareness, thinking, and strategic learning, and it is an intangible resource that constitutes a source of strategic strength for the leadership of the organization.

2.1.1 Dimensions of Strategic Intelligence

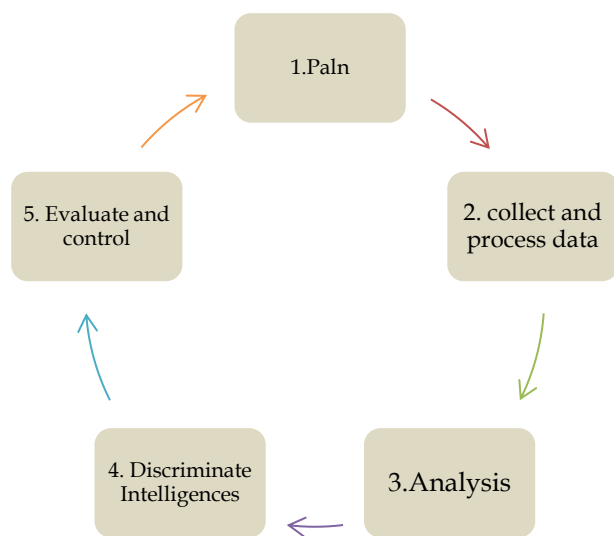
There are five dimensions to identify how thinking strategically can be beneficial to our business. (Al-Nuaimi, 2008, 173) and (Maccoby, 2001, 58-59).

- **Foresight:** it is the ability to realize current and emerging trends that introduces threats or opportunities for an organization;
- **Visioning or future vision:** the ability to design an ideal future state relying on foresight dimension and create a process to persuade others to perform it;
- **Systems thinking:** the ability to produce, synthesize, and integrate elements rather than breaking them into a part for the analysis that function as a whole to achieve a common purpose.
- **Motivation:** The ability to inspire different people to embrace a common goal, to implement a vision. Understanding what motivates people is on upon another ability, personality intelligence.
- **Partnership:** the ability to develop strategic alliances with individuals, groups, and organizations. This quality also depends on personality intelligence.

2.1.2 Strategic Intelligence Stages

According to Fleisher & Bensoussan (2015); Tham & Kim (2002); & Xu (2007) the Intelligent agent cycle consists of the following five stages:

- **Plan:** the main aims of this stage is to determine client needs, launching requirements, and developing a plan.
- **Collect and process data:** this step is responsible for collecting and processing data.
- In this stage, data is collected from inside and outside the firm, and the primary classification of the collected data and data reductions are implemented.
- **Analysis:** The analysis task is performed in this stage
- **Discriminate Intelligence:** this the stage where intelligence is disseminated. Then, the generated insights are provided to the customer.
- **Evaluate and control:** evaluating and controlling the process are done in the final stage. This can be achieved by collecting feedback and assessing whether the process has fulfilled the client’s needs and possibly restarts if it has failed to.



Source: Fleisher & Bensoussan ,2015, 11

Figure (2): Strategic Intelligence Cycle

2.2 Talent Management

Due to demographic developments, growing numbers of organizations globally, and enhancement in technology, the number of qualified career starters is declined rapidly. Therefore, it is crucial for companies to make the right decisions while selecting their

employees to be well placed in the future time. Hence, Talent Management is one of the best success criteria for private and public organizations.

It is hard to identify talent management's exact meaning because of the confusion concerning definitions made by authors who write about talent management. The terms talent management, “succession management,” “talent strategy,” and “human resource planning” are often used interchangeably (Lewis & Heckman, 2006, 140)

Consider, for instance, the following statements concerning processes for requiring people in organizations: ensure right person at the right time for the right reasons (Jackson & Schuler, 1990, 235); “The implementation of integrated strategies or systems designed to increase workplace productivity by developing improved processes for attracting, developing, retaining and utilizing people with the required skills and aptitude to meet current and future business needs.” (Fegley, 2006, 1). According to (Armstrong, 2009, 168), talent management ensures that the organizations anticipate and meet their needs of talented and high qualified individuals to achieve organizational goals. TM: Focus on highly skilled people who can make a difference in their performance through their contribution. (Stredwick, 2013, 315).

The concept of talent management can be explained as a set of activities assigned to strategies that enable it to attract talented human resources with capabilities, competencies, skills, and initiatives distinct from others, in addition to enabling them to develop their talents, especially leadership, to assume sensitive positions and maintain them for as long as possible, which help them to achieve an outstanding performance that is unique to competitors (Al-Marakhi & Mahmoud 2018, 856).

Based on the above, researchers can provide a procedural concept for talent management:

It is a process of adopting a strategic vision of what the organization’s talents will be in the future and

embodying it with a clear and sincere message to the organization's human resources to foster complete faith in the importance of discovering, attracting, and maintaining talents as it is the capital of the organization capable of successfully achieving its primary goals. Moreover, talent management can be described as the methodically organized, strategic process of getting attract, retain and engage talented employees on board and helping them develop their optimum skills remaining organizational objectives in their mind.

2.2.1 Need for talents

Organizations need to announce talent management due to the several factors which are discussed in the following points:

- Globalization is one of the important factors because it is a growing interdependence of the world's economies, cultures, and populations, even in labor. For this reason, labors are no longer limited to promoting their capabilities only inside one market. Besides, Many companies are off-shoring their manufacturing, IT departments, call-centers, finance, and accounting departments to another country to take advantage of reduced labor costs (Tucker, et al., 2005, 18).
- Increasing longevity and declining fertility rates lead to a decrease in the size of the industry's working-age population (Tucker, et al., 2005, 19).
- Global competition for skilled workers is also a matter of concern; if the worker did not improve their capabilities, they would be less likely to get the job (Antonucci, 2005, 6).
- Finally, the impact on skills shortages. For example, in South Africa, employees do not have sufficient Information and Communication Technology (ICT) skills to apply for the job due to their education system (James, et al. , 2001). For this reason, the organization will continue a considerable effort to find, attract and retain talented employees in the ICT sector.

2.2.2 The process of talent management

Armstrong (2014, 267-268); Hughes & Rog (2008, 745); Grobler & Diedericks (2009, 15-16); Tetik (2017, 47).

- **Talent planning:** is the first step of the TM process, which means organizations should determine the number of talented employees and specify their skills and requirements for the present and future.
- **Resourcing:** The outcome from the previous step means the organizations should have programs for catching and getting employees inside and outside the institution. If organizations can develop existing employees, it does not need to hire new ones.
- **Talent identification:** searching for those employees who are eligible to participate in career and development programs. The performance management system can identify employees with abilities and potential.
- **Talent relationship management:** Build, create and develop a relationship with potential talent. An existing relationship is better to be built rather than creating a new one. The aim is to recognizing employee's value, treating them fairly, providing growth opportunities.
- **Talent development:** The potential components for developing talent is learning and development programs and policies. Talent development focuses on how organizations develop staff skills and competencies.
- **Talent retention:** This is all the activities and practices utilized by institutions to avoid talent turnover. Organizations should design policies and implement them to ensure that high-quality employees remain committed members of the organization.
- **Career management:** Is the process for enabling people to develop their competencies, abilities, and career skills, "and ensuring that the organization has the flow of talent it needs."

- **Management succession planning:** the aim is to know that the institution has the managers it requires to meet future needs. It focuses on identifying capable managers to fill vacant managerial positions in the future.
- **The talent pipeline:** “The processes of resourcing, talent development, and career planning that maintain the flow of talent needed to create the talent pool required by the organization.”
- **The talent pool:** Is a group of highly skilled employees within an organization who will be candidates for potential positions.

This process is shown in the below figure.

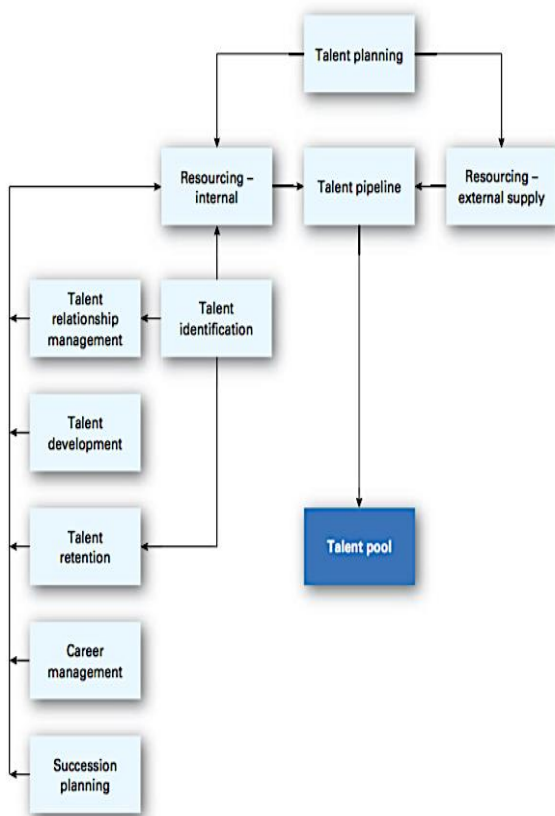


Figure (3): The Process of Talent Management

Adapted from Armstrong, 2014, 268

2.2.3 Significance of Talent Management

TM emerged in the late 1990s, which drives by the phrase “the war for talent.” It was improve the processes of attracting and developing talented individuals to be in line with the needs and requirements of organizations. (Aston & Morton 2005: 704) in their research tagged talent management to

achieve a competitive advantage indicated that talent management is an administration of strategic importance and it helps to achieve excellence in the performance of the organizations’ work, and what is noted in the importance of talent management is that it focuses on individuals with the perceived importance of intangible resources in the knowledge economy, and the remarkable lack of administrative talent and pressure for the competition had a significant impact on increasing the importance of managing talent. (Al-Jumaili 2013, 43) and (Bader & Lasprilla, 2009, 3) pointed out that talent management is the basis for organizations' success, creativity, and excellence, and the basis for their development, and organizations that seek success and interest in this rare resource must maintain it to obtain a sustainable competitive advantage and thus we can say the talent management is as follows:

- Hold positions with suitable people with unique capabilities, knowledge, and high performance.
- Promote high potentials to increase its impact on the organization's productivity.
- Work to develop employees and improve their competencies in their current and future work.
- Improve performance by preserving the talented employees.

Researchers believe that talent management plays a prominent role in making organizations with a strong competitive position and have a large market share because of the distinguished management of talented human resources and act as the market leader for the competing organizations.

2.3 Relation between Strategic Intelligence and Effective Talent Management

Strategic intelligence, with its main dimensions such as motivation, strategic vision, systems thinking, foresight, and partnership, are the basics of excellence, an essential factor for every manager in successful strategic planning. Therefore in the process of successful talent management towards attracting,

retaining, and developing talents to work on attaining the main goals, the achievement of this is based on a level of the manager's high strategic intelligence, which is the vital premise for achieving talent management, achieving its various objectives with distinction and excellence.

2.4 Previous Studies

The researchers found a need to review some studies that dealt with research variables in addressing the problems facing organizations. The requirements for their solutions are related to strategic intelligence and talent management. The best study to benefit from is (Nori, 2015) and (Freidberg & Kao, 2008). Besides, there are other studies shown in table (2).

Table (2): basic details from previous studies

The Author	Year	Research title	Research problem	Research objective	Results
Yusof	2013	The mechanism of alertness and strategic intelligence is a tool to face future challenges and one of the factors of competitiveness	What is the role of alertness and strategic intelligence in facing the future challenges of Algerian institutions?	Explaining the extent of the role that intelligence departments play in facing future challenges	Both alertness and strategic intelligence play an important role in helping the economic institutions solve their problems resulting from future environmental changes.
Nori	2015	The effect of strategic intelligence on the distinguished performance of human resources	What is the impact of strategic intelligence on the distinguished performance of human resources?	Identify the impact of strategic intelligence on the distinguished performance of human resources in the research sample	Strategic intelligence plays a significant role in achieving the outstanding performance of human resources
Freidberg & Kao	2008	The State of Talent Management: Today's Challenges, Tomorrow's Opportunities	What are the strengths of talent management practices and the challenges they face?	The study aimed to identify the strengths of talent management practices and challenges they face and the extent to which the organization's practices are sophisticated as they can be well implemented.	The development in talent management causes the innovative practices in the selected companies and that the quality of talent is a sustainable competitive advantage.

	The impact of talent management processes in entrepreneurial institutions	What is the impact of talent management processes in entrepreneurial organizations?	of Demonstrate the effect of All talent management processes in significantly entrepreneur affect entrepreneurial organizations
Al-Shamari et al. 2016			

Source: Prepared by the researchers based on the above references.

Based on what is presented in Table (2), the current research can be compared to previous studies and according to the table's axes. The current research has dealt with strategic intelligence's role in enhancing effective talent management, a study on a sample of department heads in some academic institutions in Duhok city. We note that it differs from the above studies in terms of the problem. The objectives, as the problem of the current research, was to determine the relationship between strategic intelligence as an independent variable and the extent of its influence in boosting effective talent management as a dependent variable, and this is what we did not find in previous studies as most of them dealt with them separately with other variables and did not combine the two variables. The current research also differs from the studies shown in table (2) in reaching the main conclusion: the correlation between strategic intelligence and talent management is significant, and strategic intelligence has a significant impact on talent management.

3. Research Methodology

3.1 Population and Research Sample

Some academic institutions in the city of Duhok as a research population are (Duhok Polytechnic University, University of Duhok, and Cihan University). A sample of research with characteristics based on academic staff occupies a position as head of the scientific department. The online questionnaires were sent to academic staff by email and via social networks such as Viber and WhatsApp. The number of the questionnaire was distributed according to the number of scientific departments which counts 50

forms. Therefore, there is a variation in the questionnaires distributed to the research population. Fewer questionnaires were distributed to heads of scientific departments at Cihan University, while an enormous volume of questionnaires was sent to Duhok Polytechnic University and the University of Duhok.

3.2 Validity and Consistency of the Questionnaire

The researchers see the necessity of showing the extent of the validity of the questionnaire, as it is the primary source in obtaining information from the sample members, that the integrity of the questions, the quality of their formulation, their consistency with each other, and their consistency with the research variables is an indication of the reliability and consistency of the questionnaire and to be a useful tool to visualize the field reality of the research problem and provide reliable results on the validity of the research hypotheses.

Therefore, the researchers initially relied on showing the extent of consistency and correlation of the questions with each other through the use of the Pearson correlation coefficient and the correlation matrix that the indicators of the independent variable (Strategic Intelligence), which are represented by questions that start from X1 to X15 with the indicators of the depended variable (talent management), which is represented by questions that start with X16 to X24, most of them are related to a positive relationship. It is a significant indication of the validity and integrity of the internal consistency of the questionnaire questions. Additionally, researchers relied on previous studies for designing questionnaires, particularly those mentioned in section 2.4 in this paper.

The researchers also used the response index for the individuals of the sample as a second means to support the extent of validity and consistency of the questionnaire, where the questionnaire was distributed electronically to the members of the sample and the total number reached 50 forms, 47 complete

forms were retrieved from them without any deficiency despite the Coronavirus (Covid19) health crisis that everyone was suffering from. The response was strong and reached 94 %. It is another indicator that supports the validity and integrity of the questionnaire.

4.Data analysis and Results

4.1 Description of some of the personal characteristics of the research sample

The results from table (3) show that most respondents are male; from the 47 respondents, 42 are male, which represents 89.4%, and the remaining 5 are female with a percentage of 10.6%. This indicates that there is no gender balance at the head of department position in the sampled Universities. The study found out that most of the respondents were between (31-40) years and the percentage was 53.2 %, followed by the age group (41-50), which has reached 34%, those aged less than 30 and more than 51 years have equal proportion which is only 6.4% for each of them. The results illustrated that academic staff (head of departments) with a master's degree have a majority of 70%, followed by those with a PhD degree, where they accounted for 27%. In contrast, individuals with a bachelor's degree in education have attained the lowest possible degree, only 2%. This indicates that the universities rely more on academic staff with a master's degree in managing scientific departments because of the lack of PhD holders, especially in Duhok Polytechnic University. It almost does not depend much on staff with a bachelor's degree in managing that position. The results also show that individuals who have (11-20) years of experience at the university reached 57.4%, 38.3% maintained less than years of work experience. The remaining percent is 4.2 for those who have more than 21 years of experience. Finally, the results illustrate that the highest percentage of the head of departments are those who have between 2-4 years of experience at that position, which is 46.8%, academic staff which has less than 2

years of experience at managing departments reached 36.2%, and the remained proportion was to 5-8. Those exceeded 8 years, which represent 10.6 and 6.4, respectively.

Table (3): Descriptive Analysis

Descriptive	Frequency	percentage
Gender		
Male	42	89.4
Female	5	10.6
Age (years)		
less than 30 years	3	6.4
31-40	25	53.2
41-50	16	34.0
51 years and more	3	6.4
Education Level		
BSc	1	2.1
MSc	33	70.2
PhD	13	27.7
Work Experience (years)		
Less than 10 years	18	38.3
11-20 years	27	57.4
21-30 years	1	2.1
31 years and more	1	2.1
Work Experience as head of the department (years)		
less than 2 years	17	36.2
2-4	22	46.8
5-8	5	10.6
8 and more	3	6.4

Source: Prepared by the researchers using the SPSS package.

4.2 Descriptive analysis of research variables

4.2.1 Descriptive analysis of the independent variable (Strategic Intelligence)

According to the appendix (2), the mean value of strategic intelligence as an independent variable is 3.56. This means that the level of strategic intelligence among academic staff higher than the average. The variable X2 (foresight helps the organization management in making effective decisions to face challenges and future variables) was more important and positive according to the opinions of the research sample because the level of their answers within the level agreed, where the mean reached 4.09 and a standard deviation of 0.503. However, the mean value of the variable X11 (The management of the organization is keen to stimulate competition among individuals to provide great and distinguished achievements) is 3.21, which is the last statement.

4.2.2 Descriptive analysis of dependent variable (Talent Management)

As shown in appendix (3), the mean value of talent

management as a dependent variable is 3.354. This indicates that the level of talent management among academic staff greater than the average. The variable X16 (The management of the organization believes that human talent is the starting point for the organization's success in the present and the future at all levels.) is more important according to the research sample's opinion because the mean value is 3.74. While the mean for variable X18 is the lowest, which represents 3.11.

Based on the results from the appendix (2 and 3), we conclude that the mean value for the research variables (strategic intelligence and talent management) is above the average, and that the general average for the standard deviation for them reflects that the dispersion of indicators is not very far apart and this reflects the positive relationship between the two variables according to calculations the sample of the research because the values of the general average for the mean approximate the level of the answer agreed and as in the following table:

Table (4): comparison between both variables according to the sample responses and according to the mean value and the standard deviation

Variable	Total average	Total averages of means	Total average of standard deviation
Strategic intelligence		3.56	0.938
The level of positivity and dispersion in the answers		The biggest positive	Less dispersion
Talent management		3.354	1.076
The level of positivity and the level of dispersion		Less positive	The dispersion is greater

Source: Prepared by the researchers using the SPSS package.

Table (4) also explains that the independent variable (strategic intelligence) was more favorable compared to the dependent variable according to the responses of the sample members because the value of the general average for the mean was 3.354, which is greater than the value of the general average for the

dependent variable (talent management). The general standard deviation rate for strategic intelligence was less than the general average for standard deviations for talent management, and it was 0.938.

4.3 Proof of the validity of the research hypotheses

4.3.1 Correlation between strategic intelligence and talent management

Table (5): Correlation analysis

Variables	Correlation	Strategic intelligence	Talent management
Strategic intelligence	Pearson Correlation	1	.465**
	Sig. (2-tailed)		.001
	N	47	47
Talent management	Pearson Correlation	.465**	1
	Sig. (2-tailed)	.001	
	N	47	47

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Prepared by the researchers using the SPSS package.

Table (5) reflects that the correlation coefficient value between the search variables is 0.465. This indicates a positive correlation between strategic intelligence and talent management, proving the first primary research hypothesis's validity.

4.3.1.1 Correlation between dimensions of strategic intelligence and talent management

Table (6): Correlation analysis

Dimensions of Strategic Intelligence	Foresight	Systems thinking	Future vision	Motivation	Partnership	Total Index
Talent Management	.097	.287	.545**	.511**	.283	.465**

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Prepared by the researchers using the SPSS package.

The outcomes of Pearson’s correlation analysis are obtained for the sample and shown in table (6), there is no significant correlation between foresight and talent management (r = .097). As a result, the first sub-hypothesis, **H1A**, has been rejected.

According to Pearson’s correlation coefficient, as

presented in the above table, the correlation between systems thinking is not significant .287. For that reason, the second sub-hypothesis, **H1B**, has been rejected.

The table (6) illustrates that future vision has the strongest relationship among strategic intelligence dimensions with talent management, representing .545. As a result, the third sub-hypothesis, **H1C**, has been accepted.

Besides, the correlation between motivation and talent management is significant, which reached .511. Therefore, the fourth sub-hypothesis, **H1D**, has been accepted.

Finally, based on the table's results (6), there is no significant relationship between partnership and talent management (r = .283). As a result, the fifth sub-hypothesis, **H1E**, has been refused.

4.3.2 The extent of the effect of strategic intelligence on talent management

The researchers adopted in showing the degree of influence of the independent variable in the dependent variable on ANOVA analysis, as shown in table (7) as follows:

Table (7): the impact of strategic intelligence on talent management

Independent variable	Strategic intelligence					
Dependent variable	Beta	R ²	df	F Calculated	F Tabular	Sig.
Talent management	.456	.217	1,45	12.433	4.06	.001

Source: Prepared by the researchers using the SPSS package. N=47

The results from the table (7) show that the **F** value is (12.433) in **df** (1,45) at the **Sig.** level (.001), and the **R²** is (.217), which means strategic intelligence explains 21.7% of the change in talent management and that the remaining 78.3% is due to other factors not included in the current research model. Therefore, we conclude that strategic intelligence has a significant impact on talent management because the calculated **F** value

(12.433) is more significant than its tabular value (4.06). This proves the validity of the second main research hypothesis.

4.3.2.1 The impact of each dimension of strategic intelligence on talent management

To determine the effect of each dimension of strategic intelligence on talent management and test the sub hypotheses of the second main one in some academic institutions in Duhok, the researchers relied on (F) value and (Sig). As shown in table (8).

Table (8): the effect of each dimension of strategic intelligence on talent management

Independent Variable	Depended Variable	Beta	R ²	F		Sub-Hypotheses	Decision
				Calculated	Tabular		
Foresight	Talent Management	.097	.009	4.29	4.06	.516	The first sub-hypothesis H2A Rejected
Systems thinking	Talent Management	.287	.082	4.033	4.06	.051	The second sub-hypothesis H2B Rejected
Future vision	Talent Management	.545	.297	19.009	4.06	.000	The third sub-hypothesis H2C Accepted
Motivation	Talent Management	.511	.261	15.866	4.06	.000	The forth sub-hypothesis H2D Accepted
Partnership	Talent Management	.283	.080	3.919	4.06	.054	The fifth sub-hypothesis H2E Rejected

Source: Prepared by the researchers using the SPSS package. df=1,45 N=47

According to table (8), both sub hypotheses H2C & H2D, have been accepted because the value of calculated F is greater than tabular F value. However, the H2A, H2B, and H2E hypotheses are rejected because the calculated F value is lower than its tabular value.

5. Conclusion and recommendations

5.1 Conclusion

The study has reached the following conclusion:

- Strategic intelligence is an essential starting point for supporting the talent management activities in academic institutions in Duhok city.
- The statistical analysis results indicate that the administration of academic institutions in Duhok city has an above-average level of strategic intelligence, which would enhance its ability to advance its competitive position in the future to

the stage of competitive excellence in the field of higher education.

- The results show a slight weakness for the administration of academic institutions in adopting systems thinking in dealing with their immediate and future problems.
- According to the results, the future vision dimension is of great concern from the researched organizations' management in enhancing talent management.
- The researched organizations' management has an effective incentive system to support human resources towards presenting new ideas and talents.
- Educational institutions in Duhok are very interested in providing a suitable work-life to attract and maintain talents.
- The researched institutions need to develop alliance and partnership strategies with institutions working in their field to be a factor for attracting talented employees.
- The management of the academic institutions in Duhok lacks foresight and perception of what the organization will be like in the future. Therefore, it is difficult for their managers to project the present reality on what it will be in the future.

5.2 Recommendations

Based on the conclusions set out above, the following suggestions and recommendations can be presented:

- Paying serious and continuous attention towards strengthening and supporting administrative leaders and teaching staff from a mental perspective, such as awareness of invisible things, strategic thinking, horizon, and strategic intelligence.
- Extreme decisiveness and audacity towards the provision of human resources that possess excellent performance dimensions in terms of technical, humanitarian, and cultural terms.

- Paying more attention to the alliance and partnership strategy to enhance expertise, expand knowledge of what to do again, and see what competitors think.
- The necessity of adopting systems thinking in analyzing phenomena and understanding their causes with holistic thought to overcome its negative consequences if they occurred or before they occurred.
- Urging, encouraging, and honoring human resources with scientific competencies and giving them a significant role in contacting customers (lecturers and students) because they are better able to influence them.
- We recommend that specialists continue to research and study in the areas of strategic intelligence and talent management, and we suggest research in:
 - Analyze the relationship between strategic intelligence and new product innovation strategies.
 - The role of talent management processes in organizational success.

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Appendix (1)
Questionnaire

Dear respected respondent

Greetings,

The questionnaire in your hands is part of the requirements for preparing the tagged research, " The Role of Strategic Intelligence in Enhancing Effective Talent Management: A Study on some Academic Institutions of Duhok Governorate," and that your favorable response contributes to obtaining accurate results to enhance achieving the research objectives, knowing that the answer is used for scientific research purposes only.

Thanks for your efforts and cooperation.

Researchers:

Araz Majeed Albarwari Sheri

Nazar Rasheed Nori

Sandeep Kumar Gupta

Note: Please put a mark (√) in the appropriate field under the answer that expresses your opinion with sincerity and confidence.

First: Personal information:

- 1- Gender: Male Female
- 2- Age: less than 30 years 31 to 40 years 41 to 50 years 51 years and more
- 3- Education level: Bachelor Higher diploma Master PhD.
- 4- Work Experience at the university: less than 10 years 11 to 20 years 21 to 30 years 31 years and more
- 5- Work Experience as head of the department: Less than 2 years 2 to 4 years 5 to 8 years 8 years and more

Second: Describe the independent variable strategic intelligence

		Weight and level of answer				
		5	4	3	2	1
variable	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
	Foresight					
1	The organization's administration is exploring the future towards developing college strategies in the long term					
2	Foresight helps the organization's management make effective decisions to meet future challenges and changes.					
3	The management of the organization identifies substantial opportunities in which it can invest to achieve its goals.					
	Systems thinking					
4	The adoption of systems thinking helps the college administration to see the events surrounding the college more clearly.					

5	The management of the organization can integrate the various dimensions in the college to analyze them and understand how they interact					
6	The organization's management tends to analyze any problem by looking at its causes together rather than separating them from each other.					
	Future vision					
7	The management of the organization has a vision with holistic dimensions, through which it defines the direction of the business.					
8	The organization's management has the ability and talent to see invisible things and deal with them with distinction.					
9	The organization can be managed with confidence and determination to transform its vision into a reality that can be applied successfully and within its mission and goals.					
	Motivation					
10	The organization's management can empower individuals towards implementing the college vision and perceptions that have been developed.					
11	The management of the organization is keen to stimulate competition among individuals to provide great and distinguished achievements.					
12	The organization encourages interaction between individuals to form effective and efficient work teams.					
	Partnership					
13	The partnership is an approach that benefits the organization's management in implementing its vision and achieving its goals.					
14	Decisions are strengthened when made in alliance with other organizations.					
15	The management of the organization is interested in establishing a strategic partnership with analog organizations locally and externally.					

Third: Description of the dependent variable (talent management)

		Weight and level of answer				
		5	4	3	2	1
variable	Description	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	The management of the organization believes that human talent is the starting point for the organization's					

	success in the present and the future at all levels.					
2	The organization's management is very interested in adopting a strategic vision to visualize what talent management will be in the long run.					
3	The organization's management seeks to adopt the right man in the right place to assign the director of talent management in her organization.					
4	The organization's administration is keen on strategic planning to implement talent management activities in its organization.					
5	Talent Management is doing its best to identify the human resources that possess rare talents from within the organization.					
6	The Talent Department is concerned with providing adequate quality of work-life to embrace and nurture human talent.					
7	Talent management uses the latest ideas and methods to develop and develop existing talents, not to shake the resolve of human talent.					
8	The organization's management believes that human talent is the organization's most vital capital and that it must provide the best incentives for it to maintain it.					
9	The organization's management adopts a fundamental principle in all its concerns and priorities that the source of competitive advantage and superiority over competitors is to generate human talents frequently within the organization.					

Appendix (2)

Descriptive analysis of the independent variable (strategic intelligence)

Variables	Evaluation Levels										Mean	Standard deviation
	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree			
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%		
Xa	Foresight											
X1	5	10.6%	33	70.2%	5	10.6%	4	8.5%	0	0	3.83	.732
x2	8	17%	35	74.5%	4	8.5%	0	0	0	0	4.09	.503
X3	6	12.8%	22	46.8%	12	25.5%	7	14.9%	0	0	3.57	.903
Average											3.83	0.712
Xb	Systems thinking											
X4	10	21.3%	24	51.1%	8	17%	5	10.6%	0	0	3.83	.892
X5	5	10.6%	18	38.3%	12	25.5%	12	25.5%	0	0	3,34	.984
X6	6	12.8%	21	44.7%	7	14.9%	13	27.7%	0	0	3.43	1.037
Average											3.53	0.971
Xc	Future vision											
X7	5	10.6%	22	46.8%	7	14.9%	11	23.4%	2	4.3%	3.36	1.092
X8	2	4.3%	22	46.8%	10	21.3%	11	23.4%	2	4.3%	3.23	1.005
X9	5	10.6%	16	34%	15	31.9%	8	17%	3	6.4%	3.26	1.073
Average											3.28	1.056
Xd	Motivation											
X10	4	8.5%	24	51.1%	11	23.4%	6	12.8%	2	4.3	3.47	.975
X11	6	12.8%	16	34%	10	21.3%	12	25.5%	3	6.4%	3.21	1.160
X12	7	14.9%	23	48.9%	8	17%	7	14.9%	2	4.3%	3.55	1.059
Average											3.41	1.064
Xe	Partnership											
X13	11	23.4%	27	57.4%	4	8.5%	4	8.5%	1	2.1%	3.91	.929
X14	15	31.9%	23	48.9%	7	14.9%	2	4.3%	0	0	4.09	.803
X15	2	4.3%	18	38.3%	17	36.2%	8	17%	2	4.3%	3.26	.931
Average											3.75	0.887
Total Average											3.56	0.938

Source: Prepared by the researchers using the SPSS package.

Appendix (3)

Descriptive analysis of dependent variable (talent management)

Variables	Evaluation Levels										Mean	Standard deviation
	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree			
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%		
X16	12	25.5%	21	44.7%	7	14.9%	4	8.5%	3	6.4%	3.74	1.132
X17	3	6.4%	21	44.7%	12	25.5%	7	14.9%	4	8.5%	3.26	1.073
X18	5	10.6	13	27.7	17	36.2	6	12.8	6	12.8	3.11	1.165
X19	3	6.4	17	36.2	17	36.2	8	17	2	4.3	3.23	0.960
X20	6	12.8	19	40.4	9	19.1	11	23.4	2	4.3	3.34	1.109
X21	7	14.9	12	25.5	19	40.4	5	10.6	4	8.5	3.28	1.117
X22	6	12.8	19	40.4	16	34	5	10.6	1	2.1	3.51	0.930
X23	6	12.8	19	40.4	11	23.4	7	14.9	4	8.5	3.34	1.147
X24	5	10.6	20	42.6	13	27.7	6	12.8	3	6.4	3.38	1.054
Total Average											3.354	1.076

Source: Prepared by the researchers using the SPSS package.