

## Effectiveness of Strategic Planning on Developing Performance in Sudanese Higher Education Institutions from Total Quality Perspective: (Case Study Sudan University of Science and Technology)

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**Abstract:** This study aims to determine the effect of strategic planning on developing performance at the Sudan University of Science and Technology from a comprehensive quality perspective. The researcher used both the descriptive and analytical approaches in this study. The most important assumption is that there is a statistically significant relationship between the strategic vision and the performance of Sudanese higher education institutions from the perspective of total quality. There is a statistically significant relationship between mission and performance in Sudanese higher education institutions from a comprehensive quality perspective. From a comprehensive quality perspective, there is a statistically significant relationship between the goals and the performance of Sudanese higher education institutions. There is a statistically significant relationship between the level of strategic planning and the quality of institutional performance at the University of Sudan for Science and Technology. The study reached many results, including that the mission of the university is flexible and the university has a narrative announced to all employees. The study also concluded with recommendations, including adopting the quality strategy and its principles when preparing the university's strategic plan and seeking to build a vision among workers about the concept and importance of strategic planning. The necessity of optimal utilization of the university's financial resources The necessity of involving workers in setting the university's strategic goals.

**Keywords:** Strategic Planning, Quality, Performance, Mission, Vision

### اثر التخطيط الاستراتيجي على تطوير الاداء في مؤسسات التعليم العالي السودانية – دراسة حالة جامعة السودان للعلوم والتكنولوجيا

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المستخلص: تهدف هذه الدراسة إلى تحديد أثر التخطيط الاستراتيجي في تطوير الأداء بجامعة السودان للعلوم والتكنولوجيا من منظور الجودة الشاملة. استخدم الباحث كل من المنهج الوصفي والتحليلي في هذه الدراسة. وكانت أهم الفرضيات توجد علاقة ذات دلالة إحصائية بين الرؤية الاستراتيجية وأداء مؤسسات التعليم العالي السودانية من منظور الجودة الشاملة وان هناك علاقة ذات دلالة إحصائية بين الرسالة والأداء في مؤسسات التعليم العالي السودانية من منظور الجودة الشاملة. من منظور الجودة الشاملة، توجد علاقة ذات دلالة إحصائية بين أهداف وأداء مؤسسات التعليم العالي السودانية. توجد علاقة ذات دلالة إحصائية بين مستوى التخطيط الاستراتيجي وجودة الأداء المؤسسي بجامعة السودان للعلوم والتكنولوجيا. وتوصلت الدراسة إلى العديد من النتائج منها أن رسالة الجامعة مرنة ومعروفة لدى جميع الموظفين. كما توصلت الدراسة إلى توصيات منها تبني استراتيجية الجودة ومبادئها عند إعداد الخطة الاستراتيجية للجامعة والسعي لترسيخ الرؤية لدى العاملين حول مفهوم وأهمية التخطيط الاستراتيجي، ضرورة الاستغلال الأمثل لموارد الجامعة المالية و ضرورة إشراك العاملين في وضع الأهداف الاستراتيجية للجامعة. الكلمات المفتاحية: التخطيط الاستراتيجي، الجودة، الأداء، الرسالة، الرؤية.

## Framework

### Introduction:

Strategic planning is considered a necessary method and one of the important foundations for the success of any educational institution and to ensure its survival and development. In addition, it is vital for the successful adoption of standards of quality and excellence, as it sets a general framework for determining future directions, encourages the supervisory authorities of these institutions to work together as a team and to participate in the formulation of a common and unified vision for the work of the institution, and leads to clarity of vision, goals, and future goals for those in charge of higher education in universities, leading to comprehensive quality. It also raises awareness of the importance of change and the administrative efficiency required to bring about the required change. It gives the opportunity to evaluate the previous stages through a comprehensive survey, to identify the strengths and weaknesses of the system and the challenges facing higher education institutions, and to make new methods and mechanisms that improve the level of performance with high quality and comprehensiveness.

### Study questions:

The researcher noted that the institutional performance of higher education institutions in general suffers from many weaknesses, and the Sudan University of Science and Technology is not isolated from that. Perhaps this is due to the failure to apply strategic planning in a scientific manner. This research is intended to highlight the role of strategic planning in achieving the goals of these institutions, and the problem of the study can be shown more clearly by raising a number of questions:

- What is the effect of strategic planning on developing performance in Sudanese higher education institutions from the perspective of total quality?

The following questions derive from this main question:

### Study questions:

- To what extent does strategic planning affect the development of performance in Sudanese higher education institutions from the perspective of total quality at the Sudan University of Science and Technology?
- To what extent does the mission affect the development of performance in Sudanese higher education institutions from the perspective of total quality?
- To what extent do the goals affect the development of performance in Sudanese higher education institutions from the perspective of total quality?
- To what extent do the targets affect the development of performance in Sudanese higher education institutions from the perspective of total quality?
- What is the role of strategic planning in the quality of institutional performance at Sudan University of Science and Technology?
- To what extent does the Sudan University of Science and Technology practice comprehensive quality standards in strategic planning?

### Study hypothesis:

- There is a statistically significant correlation between the strategic vision and the whole quality performance of Sudanese higher education institutions.
- The success of Sudanese higher education institutions is statistically significantly correlated with the mission in terms of overall quality.
- From the standpoint of overall quality, there is a statistically significant correlation between the objectives and the outcomes of Sudanese higher education institutions.
- The degree of strategic planning and the caliber of institutional performance at Sudan University of Science and Technology are statistically related.
- The aims and the performance of Sudanese higher education institutions are statistically significantly correlated with each other in terms of overall quality.

**Study Objectives:**

This study aims to:

- Determining how strategic planning affects performance development in Sudanese higher education institutions from the standpoint of overall quality
- To measure the impact of vision on performance growth in Sudanese higher education institutions from the standpoint of overall quality.
- To measure the mission's impact on the growth of performance in Sudanese higher education institutions from the standpoint of overall quality.
- To determine the degree to which the objectives have affected the growth of performance in Sudanese higher education institutions from the viewpoint of overall quality.
- Outlining how Sudan University of Science and Technology adheres to thorough quality requirements when developing its strategic plans.

**Significance of the Study:****Theoretical significance**

The study is significant because it focuses on understanding a crucial and relatively new idea that serves as one of the cornerstones of development and progress. This idea is known as strategic planning, and it aims to improve and develop everything because we live in a time when intonation has become essential for survival. Globalization forced us to do this.

**Practical significance**

As a result, this study assumes unique significance because it explores this important idea to produce a collection of guidelines and suggestions that aid decision-makers in higher education in removing barriers to strategic planning.

Additionally, this study aims to spur scholars to carry out additional research on this topic in order to develop Second, theoretical framework

Strategic planning is a method for allocating an organization's resources and capabilities in order to achieve particular goals and objectives within a given timeframe, while considering the overall strategy of the organization as well as the findings of a strategic analysis of the internal and external environment. (Al-Salami, 2003, p. 35).

**The idea behind strategic planning**

Strategic planning is described as "the process of making decisions, setting objectives, strategies, and long-term plans, as well as implementing and monitoring those plans." (Ghoneim, 2001, p. 238).

A long-term plan (3-5 years) that describes the university's mission, goals and objectives that it intends to achieve, strategies to reach them, and timetables for achieving them while taking into consideration environmental hazards and opportunities, is what the researcher characterizes as strategic planning.

The importance of strategic planning: (Najm Al-Azzawi, (2009)).

- Educating and training administrative leaders in integrated and comprehensive thinking.
- It establishes the foundation for coordination between the many components of the organization by taking into account anticipated changes in the environment and its expectations.
- A comprehensive and all-encompassing perspective of the company that incorporates a constant reality that moves toward the desired goals.
- Increasing the competitiveness of the company.
- Achieving the organization's long-term objectives.

## 2/ Quality in language:

(Qualified at-) in quality denotes that a person has attained good and expert status and brings good deeds or words. (Arabic Language Academy).

Language quality is the foundation of qualification, and being qualified means becoming an expert in a certain field. Qualified is the opposite of being underqualified. (Ibn Manzur, 1999 AD, p. 72)

The words for enduring something and generously giving have the same root as the letters jim, waw, and dal. A generous man is supposedly somewhere between generosity, qualification, and a generous people. Generosity is like a lot of rain. Horses, singular, are the swift and ferocious horse. God declared. (Surat sad , verse 31). Also, the source is reliable. Considering what they claim, so-and-so is proficient in such

## Quality in terms:

Quality is defined by different approaches, including:

- According to Juran (1974), quality is being appropriate for the intended use. Therefore, Mitra (1993) offers a definition that takes into account quality in both the good and the service, where quality is defined as the good or service's fit for the intended purpose in accordance with what the consumer desires. (Osman, 2006, p. 12)
- The fulfillment of current and future consumer requirements and expectations is how Edward Deming defines quality.
- Johnson (1991) defined quality as the capacity to satisfy customer needs in a way that is consistent with and meets his expectations.
- According to the American Society for Quality and the International Organization for Standardization (ISO), quality is the extent to which a set of predetermined key characteristics satisfies both the explicit and implicit demands and expectations of consumers. (Page 7 of Ali, et al., 2008)
- Quality is also known to mean a decrease in the percentage of product damage and loss, a Depreciation in failure rates and customer complaints, a reduction in costs, a shortening of time, and a diminishing in the need for tests and inspections. Quality is defined as the proper performance from the first time. (Mujahid, 2006, pg. 4).

The researcher observes that there are various methods to quality from the aforementioned definitions: The approach to the beneficiary's or service recipient's happiness is the suitability for use, ongoing improvement, proper performance from the start, and minimizing loss or harm. These methods allow us to condense the meanings of quality into the following statements:

- To fulfill the beneficiary's needs.
- To minimize waste and harm.
- To make the product better every day.
- To do the task correctly the first time.

## 3/ The concept of performance:

Performance is the level of accomplishment and accomplishment of the duties that make up a person's work. It illustrates how the person accomplishes or fulfills the demands of the position. Based on the outcomes a person achieves, performance is evaluated.. (Rawiya 2001, p. 209).

Performance refers to how well an individual performs the various activities and tasks that make up his or her line of work. The concept of performance was confined to many researchers on the contributions of human resources without other resources in achieving the goals of the institution through the degree of achievement and completion of the tasks entrusted to them. (Al-Saeed, 2011 AD).

The researcher holds that an organization's performance may be measured by how effectively it uses its resources to carry out its strategy and objectives, which includes producing high-quality work.

## Previous studies:

There are a number of studies that dealt with the impact of strategic planning on performance:

- A study by: Amira Muhammad Ali Ahmed Hassan (2012)

The problem of the study was that addressing substantive and technical education and reducing its problems needs to see a wide-ranging depth window that comes through strategic planning as a contemporary planning methodology. Hence, the statement of the problem lies in how to reach a strategic choice to develop the substantive and technical education system through the capabilities of strategic planning. The study aimed to clarify the meaning of strategic planning to develop substantive and technical education and to identify the reality of its problems and its contribution to the service of development through its objectives and to clarify the strengths, weaknesses, opportunities and threats it possesses and to highlight the proposed vision for the strategic plan for substantive and technical education. The researcher used the descriptive approach, and the study found a number of results: Prepare for change and comprehensive development for reform, bridging the gap and finding harmony between substantive and technical education and society. Strategic planning for substantive and technical education is a very important approach for its development through readiness, and great acceptance to benefit from global educational experiences and to identify priority programs. The researcher recommended the need to develop a plan to evaluate substantive and technical education in light of the principles of the philosophy of strategic planning, the need to change the culture of planners and officials in charge of substantive and technical education towards the feasibility of strategic planning as a major goal in the development process.

- A study by: Ammar Muhammad Saeed (2013)

The statement of the problem was that although strategic planning has become a necessity to meet the requirements of the sound administrative process in the management of institutions, the two processes still need to be paired, especially when developing strategic plans and the need to take into account all the criteria that would improve performance, organize and define it. The study aimed to shed light on the reality of strategic planning in Sudanese universities by standing on the experience of the University of Dongola. The researcher used a mixture of scientific research methods represented in the historical, deductive, inductive and descriptive analytical method. The study tested the hypotheses. There is a statistically significant relationship between the level of availability of a culture of strategic planning and the obstacles to its application at Dongola University. There is a statistically significant relationship between the degree of interest of the university administration in strategic planning and the job satisfaction of employees. There is a statistically significant relationship between the level of availability of the university administration's practice of total quality standards in strategic planning. The study reached a number of results: There is no application of the standards of the National Authority for Accreditation and Quality in the strategic plan of universities, the degree of practice of total quality standards in strategic planning is weak, especially by the higher management, there is no inclusion of goals and objectives in all axes of the National Authority for Accreditation and Quality, which leads to the failure to achieve total quality in Universities. The researcher recommended to adopt the standards of the National Authority for Accreditation and Quality in the Strategic Plan for Universities, to reconsider the practice of total quality standards in strategic planning, especially by senior management.

### Methodology and Procedures

The approach used in studying the current conditions of phenomena in terms of their characteristics, forms, relationships, and factors affecting that is the descriptive-analytical approach, as defined by Alyan and Ghoneim (2000 , p. 42). This indicates that the descriptive approach focuses on understanding phenomena and events as they are happening in the present and frequently makes predictions about how they will develop in the future.

#### Study population:

The Sudan University of Science and Technology's deans of the faculties and their delegates serve as a representative sample of the entire population because they totaled (67).

#### Study sample:

The deans and their deputies, who numbered, were the whole study population that the researcher selected. (67). A survey was given out, and 45 people responded, allowing the researcher to do her investigation.

### **Characteristics of the study population:**

Establishment of Sudan University of Science and Technology:

The founding of the University of Sudan goes back to the history of modern Sudan in the developmental stages of education in Sudan through the Khartoum Technical School and the Trade School in 1902 through the Radiology School in 1932 and the School of Arts in 1946 and the Khartoum Technical Institute in 1950 and the Shambat Agricultural Institute in 1954 and the Institute of Music and Theater and the Higher Institute of Physical Education for teachers, The great teacher.

The Institute of Colleges of Technology was established in 1975 to be one of these unique institutions, the largest technical education institution in Sudan. Then it was upgraded to the Sudan University of Science and Technology in 1990, marking the release of the energy that reached the University for a Decade and a half to tenfold in terms of study programs and student numbers. The university has cultural relations and scientific links with many institutions outside Sudan and actively participates in international scientific activities, which has earned it a prestigious global position and global recognition. The university includes 17 colleges that offer programs at the postgraduate levels (doctorate, masters and higher diploma), studies at the bachelor's and technical diploma levels, as well as training and continuing studies programs. The university graduate is distinguished, through the stages of its development, by his possession of the cornerstone of scientific knowledge, in addition to his skill of using applied knowledge, which made him desirable and preferred in the labor market.

The university has maintained this advantage through its educational traditions and components of its programs, by owning the latest laboratories, workshops, technical frameworks, training faculty members, and permanent interaction with the community. The university offers its programs through traditional methods and affiliation. It also offers programs using e-learning media. The university has the latest networks and computers in the region. The university's specializations range from well-established disciplines in engineering, commerce, agriculture, veterinary, education, science and languages to specialization such as radiology, medical laboratories, water technology, oil and forests. It is also adorned with creative disciplines such as arts, music, drama and physical education. The university crowned its scientific output by adding modern disciplines such as computer and communication sciences. The university includes many institutes and research centers that sponsor the university's connection to society, such as the Computer Center, the Peace Culture Center, the Institute for Women and Child Development, the Laser Institute, the Distance Learning Center, and the flight center. The university is constantly developing, modernizing and expanding its programs with steady and solid fortunes towards achieving its goals and achieving its mission in spreading knowledge, serving the community, preparing specialized frameworks and well-qualified assistance. (Source: Sudan University website).

### **Strategic Planning Sudan University of Science and Technology**

The university enjoys a legal and academic personality with financial and administrative independence and scientific norms and traditions in its management of its affairs. This is achieved by the presence of a council (the University Council) at its summit to draw up general policy and make major strategic decisions in which funding bodies, society, academics, institutions and personalities represented that the university can benefit from by this representation. The council has executive committees that follow up on the financial, administrative and academic performance of the university. These are the Executive and Financial Committee, the Policies and Academic Level Upgrading Committee, and the Student Affairs Advisory Committee, which is managed by the university's president, his deputy and vice-chancellor, and the Deans Council, which is considered the advisory body for the administration. The university has been meeting weekly since the establishment of the university, and participated in the development of the administrative work in it from the central computer to the decentralized computer, which improved the administrative and financial performance of the university's faculties.

The university seeks to provide an advanced information computer that serves the university's strategy and supports it and ensures the flow of information to the concerned departments in the fastest and easiest way. It also seeks to provide advanced systems for records and academic, administrative, financial and student affairs records and documents through the Information and Documentation Center, the Computer Center and the various administrative units.

**University vision, mission and goals:**

The university's motto is (perfection, quality of education, research creativity, excellence in community service), for these reasons:

Because we need to master any work we do, in accordance with the noble hadith, "Allah loves someone who when works, he performs it in perfect manner."

To clearly indicate the university's mission and summarize its main mission, which is education, scientific research and community service.

## 1- University vision:

Sudan University of Science and Technology will become a beacon of applied science and a global center of excellence in scientific research and commitment to community service.

## 2- University mission:

- Sudan University of Science and Technology offers educational programs in applied knowledge in the fields of basic sciences, engineering, humanities and natural resources and keeps pace with modern programs.
- The university carries out a great deal of original scientific research that leads to sustainable development and keeps pace with modern technology, to stand out in it distinguished scholars of a high level and high fame.
- The university performs the following in the scientific, technological, industrial development and public services in Sudan in the service of the community.

## 3- University goals: (Abdul-Rahman al-Zubayr et al., p. 23)

- Acquisition of knowledge, its teaching, the development of its curricula, and its dissemination to the nation.
- Confirming the identity of the nation and rooting it through curricula and its application.
- Qualifying students and granting them academic degrees.
- Conducting scientific and applied research related to the needs of society.
- Innovating technology and employing it to serve the Sudanese society
- Achieving the requirements of public development plans and training in all fields in cooperation and coordination with universities, higher education institutions and other scientific research in the country.
- Paying attention to issues of thought, development and technology at the local, regional and international levels.
- Providing advice and counseling on technical issues for production establishments within the limits of the university's material and human capabilities.
- Contribute to upgrading the performance of state employees in various fields covered by the university.
- Follow the evaluation and accreditation in all areas of the university.

**Statistical methods used in the study:**

The statistical methods used in the study can be summarized as follows:

- Descriptive statistics: To describe the characteristics of the sample.
- Cronbach Alpha: Measuring the reliability and internal consistency of the main study variables.
- Exploratory factor analysis: To measure the differences between the statements that measure each of the variables of the study.
- Confirmatory factor analysis: To reach the quality of matching the variables of the study model, where changes are made in the model and modifications in the hypotheses based on the results of the factor analysis.
- Arithmetic averages and standard deviations: To determine the relative significance of the response of the sample members towards the axes and dimensions of the study tool.
- Pearson link: To find out the degree of correlation between the main variables.

**Table No. (1) Shows the distribution of the sample by type**

Ratio	Repetition	Statement
Male	38	84.4
Female	7	15.6
Total	45	100.0

**The source: Prepared by researchers based on SPSS.V21**

From the above table, it is clear that the majority of the respondents were males, at a rate of 84.4%, while the percentage of females was 15.6%.

**Table No. (2) shows the distribution of the sample by educational qualification:**

Statement	Repetition	Ratio
PhD	28	62.2
Master	17	37.8
Total	45	100.0

**The source: Prepared by researchers based on SPSS.V21**

From the above table, we find that the majority of respondents had a doctorate qualification with a percentage of 62.2%, followed by those with a master's degree with a percentage of 37.8%.

**Table No. (3) Number of years of scientific experience:**

Statement	Repetition	Ratio
Less than 5 years old	4	8.9
5-10	9	20.0
More than 10 years	32	71.1
Total	45	100.0

**The source: Prepared by researchers based on SPSS.V21**

From the above table, we find that the majority of respondents had years of experience in the category more than 10 years with a percentage of 71.1%, followed by those with experience in the category 5-10 with a rate of 20.0%, while we find those with less than 5 years of experience were the least respondents, with a percentage of 8.9%.

**Study tools:**

The researcher used the questionnaire as a tool for collecting data and information.

The researcher designed the questionnaire which consisted of the primary data: (name, gender, job grade, academic qualifications, practical experience), then three axes. The first axis answers the first hypothesis: there is a clear organizational culture that university employees are committed to, and the second axis answers the second hypothesis: There is a statistically significant relationship between the degree of interest of the Sudan University of Science and Technology in strategic planning and employee job satisfaction. The third axis answers the third hypothesis: There is a statistically significant relationship between the level of strategic planning and the quality of performance at Sudan University of Science and Technology.

**Validity and reliability of the questionnaire:**

Apparent validity: The questionnaire was presented in its initial form to 5 arbitrators (at the rank of assistant professor or above). They expressed their observations that the researcher was restricted to in order to produce the questionnaire in its final form. This is the apparent validity of the questionnaire.

Find out the validity of the internal consistency of the paragraphs (phrases) with the total scores of the axes when applied in the current study community. The correlation coefficient was calculated between the scores of each phrase with the total score for the axis. The following table shows:



**Findings:****Table (4) Correlation coefficient of all axis phrases to measure the subjective validity of the paragraphs:**

The first axis: vision			
Sr.	Phrase	Correlation coefficient	Indicative level
1	The university has a public vision known for all employees.	.585	Function
2	The university's strategic vision is realistic.	.610	Function
3	The strategic vision of the university is understandable to the employees.	.508	Function
4	University employees participate in formulating the vision.	.252	Function
5	The vision is reviewed from time to time.	.361	Function
6	The strategic vision of the university is ambitious.	.220	Function
The second axis: goals			
1	The university has public goals known for all employees.	.400	Function
2	The goals declared by the university are understandable to the employees	.184	Function
3	The university's goals are flexible	.184	Function
4	The university's short-term goals serve the university's long-term orientation.	.246	Function
5	The university's medium-term goals serve the university's long-term orientation	.172	Function
6	The employees participate in setting the strategic goals of the university.	.121	Function
7	The declared goals are measurable	.416	Function
The third axis: mission			
1	The mission of the university includes identifying the target customers.	.262	Function
2	The university's mission includes clear values.	.185	Function
3	The university has a clear mission for employees.	.210	Function
4	The university's mission is flexible	.033	Function
5	The mission of the university stands as a guide to it.	.298	Function
6	The university has a strategic mission that is understandable to the employees.	-.020	Function

The source: Prepared by researchers based on SPSS.V21

It is noticed from the above table that all the correlation coefficients between each statement with the axis are good. Therefore, it is a statistical function, which confirms the validity of the internal consistency of the questionnaire. Except for some weak statements in the second and third axis and some statements that carry the negative sign that we will remove from the analysis.

The correlation coefficient for the axis was also calculated with the questionnaire as a whole and the stability of the axis, as in the following table Table No. (5)

No.	Axis	Stability coefficient	Validity coefficient	Indicative level
1	First	.685	.827	Function
2	Second	.430	.655	Function
3	Third	.327	.571	Function

It is noticed from the above table that the correlation coefficient and the stability coefficient of the axis are statistically significant, which confirms the validity and reliability of the questionnaire.

The researcher also used the (Cronbach's alpha) coefficient in order to verify the reliability of the questionnaire as a whole. The reliability value was equal to (0.67) and the validity value was equal to (0.81), which are high values and indicate that the tool has a high degree of validity and reliability and achieves the objectives of the study.

Table (5) Interpretation of the scale results

Opinion	Percentage	Phrase mean (theoretical mean)
Strongly Disagree	1	3
Do not agree	2	
No opinion	3	
Agree	4	
Totally agree	5	

The source: Prepared by researchers based on SPSS.V21

**The compare between previous studies:**

The first hypothesis states the following: There is a clear vision that the university employees are committed to.

To answer this hypothesis, the chi-square test and the one-sample t-test were used to find out the differences between the mean of the sample members and the mean of the axis phrases, as follows:

Table No. (6) shows the frequencies, the chi-square test, and the level of significance of the axis (there is a clear vision that university employees are committed to)

Paragraph	Opinion					Chi 2	Indication	Phrase tendency
	Strongly Disagree	Do not agree	No opinion	Agree	Totally agree			
The university has a public vision known for all employees.	1	2	6	20	16	32.4	.000	Agree
The university's strategic vision is realistic.	2	3	5	27	8	47.3	.000	Agree
The strategic vision of the university is understandable to the employees.	5	12	11	10	7	3.7	.437	Disagree
University employees participate in formulating the vision.	1	1	5	23	15	41.7	.000	Agree
The vision is reviewed from time to time.	3	24	19	3	5	34.8	.000	Disagree
The strategic vision of the university is ambitious.	2	5	10	23	5	30.8	.000	Agree

The source: Prepared by researchers based on SPSS.V21

It is noted from the above table that there is a clear vision that the university employees are committed to, which the respondents answered with approval about the majority of the axis statements. To test the presence of statistically significant differences between the numbers of agreeing, no opinion and disagreeing, a chi-square test was used to indicate the differences between the answers for each of these statements separately. The values of chi-square for all questions in a row were greater than the tabular chi-square value for each phrase and level of significance (5%). It is also clear through the value of the level of statistical significance in the above table that all values are significant, i.e. less than (0.05). This indicates that there are statistically significant differences at the level of significance (5%) between the answers of the sample members and in favor of those who agree to these questions, except for the following statement, which is not statistically significant.

**Table (7) shows the arithmetic averages, standard deviations, and the results of the t-test for the axis as a whole (there is a clear vision that university employees adhere to)**

Theoretical average axis	Arithmetic average	Standard deviation	Value (t)	Indicative level	Interpretation	Opinion
18	21.1	3.8	5.5	.000	Function	Agree

The above table shows, through the part of the axis test as a whole, that there are statistically significant differences between the mean of the sample members and the average scale in favor of the sample members, where the average of the sample members was (21.1), while the average axis (18) "the mean of the axis equals 6 \* 3" where the value of (T), which amounted to (5.5) that difference as it was statistically significant in front of the morale level (0.00) in favor of the sample members. This means that most of them answered the axis statements (there is a clear vision to which the university employees are committed) with approval.

#### The compare between previous studies:

The Second hypothesis states the following: There is a statistically significant relationship between goals and performance at Sudan University of Science and Technology.

To answer this hypothesis, the chi-square test and the one-sample t-test were used to find out the differences between the mean of the sample members and the mean of the axis phrases, as follows:

**Table No. (8) shows the frequencies, chi-square test, and significance level for the axis (there is a statistically significant relationship between goals and performance at Sudan University of Science and Technology in Strategic Planning).**

Paragraph	Opinion					Chi 2	Indication	Phrase tendency
	Strongly Disagree	Do not agree	No opinion	Agree	Totally agree			
The university has public goals known for all employees.	-	5	4	28	8	34.0	.000	Agree
The goals declared by the university are understandable to the employees	-	6	21	13	5	14.6	.000	Agree
The university's goals are flexible	2	2	4	7	30	63.1	.000	Totally agree
The university's short-term goals serve the university's long-term orientation.	3	17	14	8	3	18.0	.000	Disagree
The university's medium-term goals serve the university's long-term orientation	1	3	4	13	24	40.6	.000	Totally agree
The employees participate in setting the strategic goals of the university.	8	16	11	7	3	10.4	.000	Agree
The declared goals are measurable	2	5	10	19	9	18.4	.000	Agree

It is noticed from the above table that there is a statistically significant relationship between the goals and performance at the Sudan University of Science and Technology for Strategic Planning, which respondents answered with approval about the majority of the axis statements. To test for the presence of statistically significant differences between the numbers of agreeing, no opinion and disagreeing, a chi-square test was used to indicate the differences between the answers for each statement separately. The chi-square values for all questions in a row were greater than the tabular chi-square value for each statement and the level of significance (5%). It is also clear through the value of the level of statistical significance in the table above that all values are significant, i.e. less than (0.05). This indicates that there are statistically significant differences at the level of significance (5%) between the answers of the sample members and in favor of those who agree to these questions.

**Table No. (9) shows the arithmetic averages, standard deviations, and the results of the t-test for the axis as a whole (there is a statistically significant relationship between the goals and institutional performance at Sudan University of Science and Technology)**

Theoretical average axis	Arithmetic average	Standard deviation	Value (t)	Level of Indication	Interpretation	Opinion
21	24.0	3.6	7.0	.000	Function	Agree

The above table shows, through the part of the axis test as a whole, that there are statistically significant differences between the mean of the sample members and the average scale in favor of the sample members, where the average of the sample members was (24.0), while the average axis (21) "the mean of the axis equals 7 \* 3" where the value of (T), which amounted to (7.0) that difference as it was statistically significant in front of the morale level (0.00) in favor of the sample members. This means that most of them answered the axis statements (There is a statistically significant relationship between the objectives and institutional performance of the Sudan University of Science and Technology with approval

**the compare between previous studies:**

The Third hypothesis states the following: There is a statistically significant relationship between the mission and the quality of performance at the Sudan University of Science and Technology.

To answer this hypothesis, the chi-square test and the one-sample t-test were used to find out the differences between the mean of the sample members and the mean of the axis phrases, as follows:

**Table No. (10) shows the frequencies, chi-square test, and significance level for the axis (there is a statistically significant relationship between mission and the quality of performance at Sudan University of Science and Technology)**

Paragraph	Opinion					Chi 2	Indication	Phrase tendency
	Strongly Disagree	Do not agree	No opinion	Agree	Totally agree			
The mission of the university includes identifying the target customers.	1	5	6	19	14	23.7	.000	Agree
The university's mission includes clear values.	1	9	10	18	7	16.6	.000	Agree
The university has a clear mission for employees.	1	9	15	16	4	19.3	.000	Agree
The university's mission is flexible	1	10	15	12	7	12.6	.000	No opinion
The mission of the university stands as a guide to it.	1	2	5	19	18	34.4	.000	Agree

It is noticed from the above table that there is a statistically significant relationship between the mission and the quality of performance at the Sudan University of Science and Technology, which respondents answered with approval about the majority of the axis statements. To test for the presence of statistically significant differences between the numbers of agreeing, no opinion and disagreeing, a chi-square test was used to indicate the differences between the answers for each statement separately. The chi-square values for all questions in a row were greater than the tabular chi-square value for each statement and the level of significance (5%). It is also clear through the value of the level of statistical significance in the table above that all values are significant, i.e. less than (0.05). This indicates that there are statistically significant differences at the level of significance (5%) between the answers of the sample members and in favor of those who agree to these questions.

Table (11) shows the arithmetic averages, standard deviations, and the results of the t-test for the axis as a whole (there is a statistically significant relationship between the mission and the quality of performance at Sudan University of Science and Technology)

Theoretical average axis	Arithmetic average	Standard deviation	Value (t)	Level of Indication	Interpretation	Opinion
15	18.0	2.8	7.3	.000	Function	Agree

The above table shows, through the part of the axis test as a whole, that there are statistically significant differences between the mean of the sample members and the average scale in favor of the sample members, where the average of the sample members was (18.10), while the average axis (15) "the mean of the axis equals 5 \* 3" where the value of (T), which amounted to (7.3) that difference as it was statistically significant in front of the morale level (0.00) in favor of the sample members. This means that most of them answered the axis statements (There is a statistically significant relationship between the efficiency of strategic planning and the quality of performance of Sudan University of Science and Technology) with strong agreement.

### Conclusion:

The study reached the following most important Conclusions:

- The university's mission is flexible
- The university has a public vision known for all employees.
- The university's strategic vision is realistic.
- The university has a clear mission for employees.
- The university has public goals known for all employees.
- The university's goals are flexible

### Recommendation:

The most important recommendations that the study concluded:

- Adopting the quality strategy and its principles, when preparing the university's strategic plan, and seeking to build a vision among employees of the concept and importance of strategic planning.
- The necessity of optimizing the use of the university's financial resources.
- The necessity of involving employees in setting the strategic goals of the university.
- The necessity of involving employees in setting the mission of the university.
- The vision shall be reviewed from time to time.
- The necessity of involving university employees in formulating the vision.
- The mission of the university determines the desired future features of the work.
- The university shall train, rehabilitate and develop faculty members according to specific programs.
- The strategic plan of the university takes into account the development of academic programs.

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