

# The Current Status of Strategic Planning at Jouf University in the Kingdom of Saudi Arabia from Teaching Staff's Perspective

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**Abstract---** *The study aimed at recognizing the current status of strategic planning at Jouf university in the Kingdom of Saudi Arabia from teaching staff's perspective. The sample consisted of 99 members. The researcher used the descriptive analytical method using the survey as a main tool for answering the research queries. The survey included two axes; "the Quality of strategic planning" which contained 23 phrases, and "the Implementation and follow up on the strategic level" which contained 12 phrases. The most important result was that the two axes of the study were of a very high degree. Also, it revealed that there are no differences attributed to the variables of the study sample.*

**Keywords---** *Planning, Quality, Strategic Planning and Universities.*

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## I. INTRODUCTION

Jouf university is one of the strongest universities in KSA which was established in 2005. The university has an ambitious strategic plan for the years (2017-2021). A lot of efforts have been endeavored inside the university to prepare a strategic plan that meets the aspirations and ambitions. The university has made it a top priority, believing in the role of strategic planning and its importance in achieving the success that is looking forward. Strategic planning is an indispensable cornerstone, especially with the increase of the challenges of this era facing both general and private sector.

Strategic planning is one of the types of planning, and it represents an important factor for the success of institutions in general and higher education institutions in particular in achieving their strategic goals, so universities are keen to develop plans to improve the level of academic performance and achieve the quality of outputs, as these plans are considered as a guideline to them that define their destination and evaluate their achievements and lead them towards achieving their goals. The universities contribute to achieving the goals of comprehensive development through preparing and providing qualified and specialized personnel in all fields.

Strategic planning achieves the quality of (inputs, operations and outputs). It is an institutional tool that assures and enhances the quality of education process. It also aimed at identifying the degree of compatibility between the prevailing practices of the educational institution and the standards in different fields in order to reach the standards of quality assurance and accreditation. (Besheer and Ammaar-2014).

The universities seek to develop their strategic plans in order to have accreditation requirements based on the increased responsibility on them. (Gerra, Zemora, Hernandez & Menchaca, 2017).

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Marzouqa (2014) referred to the impact of strategic planning for Total Quality Management with its dimensions; vision, mission and strategic objectives on improving the performance of university employees. Others see that applying quality system in universities faces great resistance as a result of changes caused by the work system.

In this context, Abd El Mageed and Abd El Mageed (2014) referred that applying total quality achieves great success in overcoming education problems. Strategic planning also became a must in the administrative process although the two processes need to be merged specially during defining the strategic plans and to take into consideration all the standards that improve the performance of the universities. (Chance 2010) emphasizes that if strategic planning is used in a good way, it will be reflected on the performance of the universities and lead to their prosperity.

Many scientists and researchers including Bryson (2003), Al Maghrabi (2015), Bani Hemdan and Idrees (2007), AlZoabi (2014) have also agreed on the importance of Strategic planning benefits. They agreed that strategic planning leads to strengthening deep thinking and group work. It provides a more systematic method of collecting information about the internal and external environment of the university as well as defining work priorities and leads to improving the way of taking administrative decisions. Strategic planning sheds light on the important issues facing the university, on taking the right decision and helps universities in formulating their strategic objectives. It helps the managers to take daily decisions in the light of the expected future results and to establish constant bases for decision making process. Strategic planning speeds up the university's response to the environmental circumstances and variables and improves performance. The university that applies the strategic planning is able to face various conditions, to wisely respond to internal and external requirements and pressures and to professionally deal with the rapidly changing circumstances. High Administration and decision makers at the university can take benefit from it as it enables them to practice their role and face their responsibilities in the right way. Strategic planning also reinforces team work and gaining experience to all those who are under the umbrella of the university. It constitutes a helping framework for identifying human and financial resources that is in line with the objectives of the university and the best investment of its resources. Strategic planning creates an interactive, participating and committed work environment among all employees of the university that leads to achieving the organizational goals. The need to strategic planning lies in the formulation and development of the mission and objectives of the university. It also guides course of action and the strategic goals in order to achieve its development and progress.

## **II. STUDY PROBLEM**

Strategic planning is one of the important and necessary issues that has a direct effect on achieving the goals of institutions in general and universities in particular, especially in the light of the university Administration practicing its business through a continuous rapidly changing world, in all fields (economic, social, political, cultural and technological) which have an effect on the university in different ways.

Strategic planning has a great importance for all universities and has a major effect on their performance and effectiveness in addition to the importance of the role of strategic planning process in the progress of the university. That is why this research came in an attempt to reveal the current status of strategic planning at Jouf University,

where the study problem stems from the need to determine the current status of strategic planning at Jouf University which is considered as the main step towards achieving its goals and aspirations.

### *Study Queries*

- 1-What is the current status of strategic planning at Jouf University in KSA from teaching staff's perspective?
- 2-Are there any statistically significant differences between means of the sample individual responses on the current status of strategic planning at Jouf university in KSA from teaching staff's perspective attributed to the variable of their occupation position (academic leaderships, teaching staff)?

### *Study Objectives*

1. Identifying the current status of strategic planning at Jouf university in KSA from its teaching staff's perspective.
2. Providing suggestions and solutions to improve the current status of strategic planning at Jouf University in KSA.

### *Correlated Studies*

Due to the importance of strategic planning in developing work and promoting universities and different institutions, many studies have been conducted in the framework of applying strategic planning to institutions in general and universities in particular, as shown below:

Zeabi (2014) has conducted a study aiming at recognizing the impact of strategic planning on the performance of Algerian higher education institutions according to their personal and functional characteristics. The study sample included 180 employees from the university. The researcher used the descriptive analytical methodology using the surveys as a key tool for collecting data. The study revealed the impact of strategic planning on the performance of the university as it showed statistically significant differences in the trends of the sample members towards the concept of strategic planning attributed to the variable of qualification and job field. In addition, the study revealed that there have been statistically significant differences in the trends of the sample members towards the concept of performance attributed to the variables of gender, qualification and current job field.

In a study done by Al Zoabi (2014) aiming to identify the current status of strategic planning at Jordanian universities and its relation to developing human resources, the researcher used the descriptive survey method to answer the research queries. The survey included two axes: the strategic planning and developing human resources. The study concluded that the current status of strategic planning at Jordanian universities was very high and satisfying to the academic leaders and it also concluded that there is a correlation between strategic planning and developing human resources at Jordanian universities.

Ouda's study (2017) aimed at assigning the obstacles of applying strategic planning in governmental universities at Baghdad Governorate from teaching staff's perspective. He used the descriptive analytical method using a survey to measure the obstacles of applying strategic planning. The survey consisted of 31 points applied on 336 members of teaching staff as a sample. He deduced that the obstacles of applying strategic planning in governmental

universities at Baghdad Governorate from teaching staff's perspective were highly impeding to all fields as the following order: financial obstacles, organizational obstacles, administrative obstacles and finally human obstacles. It also concluded that there are no statistically significant differences in the obstacles of applying strategic planning in governmental universities at Baghdad from teaching staff's perspective attributed to the variables of gender, qualification and years of experience, and there are statistically significant differences attributed to academic rank for the category of assistant professor.

Al Mokhalafi (2008) conducted a study aimed at identifying the current status of strategic planning at Faculty of Education in Al Qaseem University from teaching staff's perspective. The sample consisted of 83 members; the researcher used the descriptive survey method to answer the research queries. The survey included two axes: the strategic planning standards and strategic planning practice. The study concluded that the axis of the strategic planning standards had a very high degree while the axis of strategic planning practice was of a middle degree. Furthermore, it concluded that there are no differences attributed to the variables of the study sample.

### ***The Method***

The researcher used the descriptive (survey, analytical) method as it suits the nature of the study and it is considered the scientific way suitable for studying the phenomena without interfering in its happening, suitable for studying the current status and attempting to explain it.

### ***Study Population***

It consisted of 886 members of teaching staff at Jouf University in the academic year (2019-2020).

### ***Study Sample***

The study sample was selected by compatible sample way (Convenience Sample) where electronic surveys had been circulated using different electronic means on all the members of study population from teaching staff at Jouf University which consisted of 886 members. The total responses were (150). Illogical responses were excluded (which had the same response to all points), so the sample was reduced to (99) members. (51 responses were excluded), and table (1) below illustrates the sample description.

Table 1: Sample Description

Description		Sample size	Percentage
Category	Teaching staff	80	80.81%
	Academic leader	19	19,18%
Total		99	100%

### ***Data Collection Tools***

The following data collection tools were used:

#### ***A. Content Analysis***

The content of Jouf University strategic plan, periodical and annual follow up reports and correlated studies were analyzed.

### ***B. Questionnaire***

The survey application form was the main tool for collecting data from study sample. The application went through a lot of Construction steps as follows: -

#### ***Determination of Axes and Phrases***

The axes were determined through the interviews, reviewing references, researches and the studies related to the research topic and experts' opinion questionnaire, which helped in determining the axes. And after that, phrases under each axis have been defined and hence reached the initial establishment for the survey application form.

#### ***Survey Validity***

Validity of Arbitrators was used by presenting the survey application form to (4) members of administration and quality experts. The aim was to determine the number of axes and phrases and the relation of each phrase to its axis. The aim was also to show any notes related to formulating some phrases, adding or deleting others. The experts' response to the survey was according to a two-dimensional estimation scale (appropriate - inappropriate). The experts' opinions agreed on what is shown on the following tables (2,3).

Table 2: Experts' Opinions POLL about the Validity of Survey Axes

S	The Axes	Approval Repetition	Percentage
1	Quality of strategic planning	4	100
2	Implementation and follow-up on the strategic level	4	100
3	Strategic planning standards	1	25

Table (2) illustrated the percentage of experts' opinions poll about the validity of survey axes, as the percentage of the chosen axes ranged between (25 – 100%). The researcher was satisfied with 75% as he excluded one axis which is (strategic planning standards) and by that the survey axes became two only.

Table 3: Experts' Opinions poll About the Validity of the Phrases

The Axes	No. of phrases before being presented to experts	No. of deleted phrases	No. of added phrases	No. of phrases after being presented to experts
Quality of strategic planning	20	0	3	23
Implementation and follow-up on the strategic level	10	0	2	12
Strategic planning standards	7	7	-	-
Total	37	7	5	35

Table (3) illustrates the description of the survey application form after taking the arbitrators' opinions. Number of survey phrases before being presented to experts was (37) and after being presented to experts in its last form was (35) phrases.

The researcher also used the internal consistency method to verify the validity of the application form phrases by applying the final survey application form (attached (1) which consists of (35) phrases on (8) of study population and on people out of main sample from 1/1/2020 to 15/1/2020. And also, by finding correlation coefficients between

the phrases and the total degree of the axis, and correlation coefficients between the total degree of the axis and the total degree of the application form in order to verify its validity. It ranged between (0.717 - 0.941) which indicates the validity of the survey.

### **Survey Reliability**

The researcher calculated the reliability of the survey by Test Retest with an interval of (15) days in order to find out the score of correlation coefficient between the first and second application, and correlation coefficients ranged between (0.723 – 0.921) which indicates the reliability of all the survey phrases.

### **III. STATISTICAL ANALYSIS**

The statistical analysis appropriate for the survey nature were applied using (SPSS) Statistical Package for the Social Studies (v.20) (IBM SPSS, NY, USA).

Mean

Standard Deviation

Correlation Coefficient

Percentage

Mann Whitney U Test

### **Field Study**

The researcher applied the survey in its final form to the sample from 1/2/2020 till 15/2/2020.

### **IV. RESULTS DISPLAY AND DISCUSSION**

**First: Results related to the first query which is:** What is the current status of strategic planning at Jouf University in KSA from teaching staff's perspective?

To answer this query, the mean and standard deviation of the current status of strategic planning at Jouf University in KSA from teaching staff's perspective were calculated, as shown in the following tables (4,6).

Table 4: Mean and Standard Deviation of Survey Axes

S	Axis	Mean	Standard Deviation	Level
1	Quality of strategic planning	4.38	0.488	Very high
2	Implementation and follow-up on the strategic level	4.50	0.573	Very high

Table 5: Mean and Standard Deviation for Sample Individuals' Responses to the Phrases of the First Axis (Strategic Planning Quality)

S	Phrases	Mean	Standard Deviation	Level
1	The university has a comprehensive and specific strategic plan consistent with its mission.	4.64	0.490	Very high
2	The university's strategic plan is in line with national development plans (like: Kingdom Vision 2030, National Transformation programs).	4.64	0.490	Very high
3	Strategic plan was prepared according to SWOT analysis that affects the university.	4.40	0.764	Very high
4	Different beneficiaries participated in preparing the strategic plan.	4.32	0.748	Very high

5	The university's strategic plan has clear, measurable and achievable objectives.	4.56	0.507	Very high
6	The strategic plan estimates the potential risks and procedures of dealing with them.	4.16	0.624	Very high
7	Strategic planning includes performance indicators to accurately measure the range of objectives achievement.	4.52	0.586	Very high
8	The university works to publicize strategic plan and to publish it widely.	4.04	0.935	Very high
9	Strategic planning represents frame of reference to operational and implementing plans to all university sectors.	4.64	0.569	Very high
10	I'm aware of the university mission and objectives.	4.72	0.542	Very high
11	I've participated in formulating university mission and objectives (in any way)	3.68	1.108	high
12	Mission matches with nature of the university.	4.36	0.700	Very high
13	Mission reflects Islamic beliefs and values.	4.52	0.653	Very high
14	Mission reflects the needs of university population.	4.36	0.638	Very high
15	Mission complies with the economic and cultural needs of KSA	4.40	0.816	Very high
16	Mission draws the necessary outlines for guiding decision-making process and choosing the appropriate development policies from among other alternative policies.	4.12	0.726	Very high
17	There is a close relationship between mission and all-important university activities.	4.36	0.860	Very high
18	Mission clearly displays the necessary standards to evaluate university performance in achieving its objectives.	4.16	0.800	Very high
19	I feel satisfied with the university mission and objectives.	4.32	0.627	Very high
20	The objectives are related to the mission of the university.	4.44	0.583	Very high
21	University objectives are clear and realistic.	4.44	0.583	Very high
22	Mission and objectives to be accredited by University Council and to be clearly announced.	4.44	0.768	Very high
23	The University has a clear vision that guides its strategic plan and complies with the national trends.	4.44	0.651	Very high
Axis Degree		4.38	0.488	Very high

Table (5) illustrates that the mean of sample individual responses to the phrases of the first axis (Quality of strategic planning) had a very high degree as a whole, as it was (4.38) out of (5) and the standard deviation was (0.488). The means of the phrases ranged between (3.68-4.72) and all of them were either high or very high. The phrase "I'm aware of the university mission and objectives" had the first rank among other phrases with (4.72) as a mean and (0.542) as a standard deviation. The phrase "I've participated in formulating university mission and objectives (in any way)" had the last rank among the axis phrases with (3.68) as a mean and (1.108) as a standard deviation. It's also obvious that all phrases of this axis had a very high degree, more than (4) degrees out of (5). This indicates that Jouf University pays a great importance to the process of strategic planning, and that its strategic plan is in line with national development plans, and it has clear measurable objectives as well as performance indicators to measure the range of objectives achievement. The plan also represents a frame of reference to operational and implementing plans to all university sectors. This is consistent with the findings of both Al Zoabi (2014) which concluded that strategic planning is an indispensable option for advancing the level of universities, and Hegazi and two others (2019) which concluded to the clarity of the visions, strategies and objectives inside the educational institution and adopting strategic planning as an entrance to continuous development. On the other hand, this is inconsistent with the findings of (Seniwoliba & Yakubu, 2015) study which showed that there are challenges in applying the quality assurance represented in the absence of strategic planning.

Table 6: Mean and Standard Deviation for Sample Individuals' Responses to the Phrases of the Second Axis  
(Implementation and Follow-up on the Strategic Level)

S	Phrases	Mean	Standard Deviation	Level
1	University implements the approved strategic plan	4.40	0.707	Very high
2	University pays a great importance to the follow up of implementing strategic plan	4.64	0.569	Very high
3	University has an entity responsible for following up the implementation of the strategic plan.	4.72	0.891	Very high
4	University uses the modern technology in following up the implementation of strategic plan	4.20	0.957	Very high
5	There are specific mechanisms for following up the implementation of strategic plan	4.52	0.714	Very high
6	University prepares periodical reports about strategic plan	4.72	0.542	Very high
7	University continuously measures performance indicators	4,64	0.569	Very high
8	University prepares annual reports about strategic plan	4.84	0.473	Very high
9	University has mechanisms to review and develop the plans	4.60	0.645	Very high
10	Plans to be reviewed, developed and modified as necessary in response to the results of reviewing, modifying and changing circumstances.	4.48	0.714	Very high
11	University periodically reviews its mission and objectives with participation of beneficiaries inside and outside the university	4.12	0.881	Very high
12	Beneficiaries from inside and outside the university participate in reviewing the mission and objectives.	4.12	0.881	Very high
Axis Degree		4.50	0.573	Very high

Table (6) illustrates that the mean of sample individual responses to the phrases of the second axis (Implementation and follow-up on the strategic level) had a very high degree on the overall level, as it was (4.50) out of (5) and the standard deviation was (0.573). The means of the phrases ranged between (4.12 – 4.84) and all of them were very high. The phrase "University prepares annual reports about strategic plan" had the first rank among other phrases with (4.84) as a mean and (0.473) as a standard deviation. The phrase "Beneficiaries from inside and outside the university participate in reviewing the mission and objectives." had the last rank among the axis phrases with (4.12) as a mean and (0.881) as a standard deviation. So it's obvious that all phases of this axis had a very high degree, more than (4.12) degrees out of (5). This indicates that Jouf University pays a great importance to the process of implementation and follow-up of the strategic plan, the university has an entity responsible for following up the implementation of the strategic plan, has specific mechanisms for following up the implementation of strategic plan, prepares periodical and annual reports about the strategic plan and it also has mechanisms to review and develop the plans. This is consistent with the findings of both Al Zoabi study (2014) which concluded that strategic planning is an indispensable option for advancing the level of universities, and Hegazi and two others' study (2019) which concluded to the clarity of the visions, strategies and objectives inside the educational institution and adopting strategic planning as an entrance to continuous development. On the other hand, this is inconsistent with the findings of (Seniwoliba & Yakubu, 2015) study which showed that there are challenges in applying the quality assurance represented in the absence of strategic planning. By that we have finished answering the first query of the study.



**Second: Displaying and discussing results related to the second query which is:** Are there any statistically significant differences between means of the sample individual responses attributed to the variable of their occupation position?

To answer this query, the statistical differences between means of sample individual responses attributed to their position were calculated, and compared using Mann-Whitney U Test, as shown in the following tables (7,8).

Table 7: Mean, Standard Deviation and Mann-Whitney U Test of survey Axes According to the Variable of Occupation

s.No	The Axis	The leadership	Teaching Staff	Mann-Whitney U test	P
		Mean ±SD	Mean ±SD		
1	Quality of strategic planning	4.34±0.535	4.50±0.293	7.00	0.29
2	Implementation and follow-up on the strategic level	4.47±0.642	4.61±0.272	8.00	0.40

Table 8: Calculation of differences Significance between Means of Sample Individuals' Responses According to the Variable of Occupation Using (Mann-Whitney U Test) for the whole survey

Statistical Significance	U	P
Leaderships	7.00	0.298
Teaching staff		

Table (8) indicates that there are no statistically significant differences between means of responses in each axis of the study, and table 8 indicates that there are no statistically significant differences between means of responses in both axis of the study

This indicates that both leadership and faculty members agree that Jouf University pays a great importance to the process of strategic planning and implementation and follow-up of the strategic plan, and that the university also had most leaderships and teaching staff participated in preparing the strategic plan of the university, then preparing strategic plans for faculties and deanships derives from the university plan. It also formed committees to prepare and follow up implementing these plans from those categories. In addition, the university received institutional accreditation from National Centre for Academic Accreditation and Evaluation last year. These results are consistent with the findings of both Al Zoabi study(2014) which concluded that teaching staff gained good experience in strategic planning as a result of letting them participate in the committees which leads them to having high degrees,, and also with the findings of Hegazi and two others' study (2019) from clarity of the visions, strategies and objectives inside the educational institution and adopting strategic planning as an entrance to continuous development.

By that we have finished answering the second query of the study.

## V. RECOMMENDATIONS

1. Jouf University has to continue supporting strategic planning processes and following up its strategic plans.
2. To increase the effort to publicize the strategic plan and publish it widely.
3. The necessity of participation of various beneficiaries in formulating the university mission and objectives.

4. The necessity of periodically reviewing the university mission and objectives by the university and with the participation of beneficiaries from inside and outside the university.
5. Conducting similar studies on administrators and students.

## REFERENCES

- [1] Abd Al Mageed, Yasser Mohamed, and Abd Al Mageed, Ammar Mohamed (2014). Quality Standards for Strategic Planning at Sudanese Universities (A Case Study at Dongola University from 2005 to 2013). *Fourth Arab International Conference on Quality Assurance in Higher Education, Zarqa Private University Jordan*, 1-3/April 2014.
- [2] Al Mokhalafi, Turki Monawar (2018). The Reality of Strategic Planning at Faculty of Education in Al Qaseem University from Teaching Staff Perspective, *The Islamic University Journal of Educational and Psychology Sciences*, Volume 28 (1) 181-162.
- [3] Al Zoabi, Attaf Shafeeq (2014). The Reality of Strategic Planning at Jordanian Universities, and its relationship with Human Resources Development. *Jordan Journal of Applied Sciences "Humanities Series"*, Volume 16, Issue 2, (2014).
- [4] Aref, Osama Bin Hasan, Hegazi, Ahmed Abul Fadl and Abd Al Hameed, Mohamed Hamza (2018). Quality of Education Outputs at Saudi Universities and Its Role in Meeting the Requirements of Saudi Labor Market according to Vision 2030. *Journal of Scientific Research in Education 19, (Forth part)*, 741-683. doi: 10.21608/jsre.2018.22979.
- [5] A Maghrebi, Kamel Mohamed (2015). "Management is the Originality of Principles and Functions of the Facility with the Novelty and Challenges of the Twenty- First Century", *Edition 1, Amman, Dar Al Fiker Publishers and Distributers*.
- [6] Bani Hemdan, Khaled Mohamed and Idrees, Wael Mohamed (2007). Strategy and Strategic planning: a contemporary approach, ed. 1, *Amman, Al-Yazori Scientific House for Publishing and Distribution*.
- [7] Basheer, Bin Ayshi and Ammar, Bin Ayshi (2014). Role of Strategic Planning in Quality Assurance in Algerian Universities: Exploratory study from Teaching Staff Perspective at University of Mohamed Khider Biskra. *Fourth Arab International Conference on Quality Assurance in Higher Education, Zarqa Private University Jordan*, 1-3/April 2014.
- [8] Bryson, John (2003). Strategic Planning for General and Non-Profit institutions, Translated by Mohamed Ezzat Abd Al Mawgood. *Beirut, Librairie du Liban Publishers and Dis tributers*.
- [9] Chance, S. (2010). Strategic by design: Iterative approaches to educational planning. *Planning for Higher Education*, 38(2), 40-54.
- [10] Guerra, F., Zamora, R., Hernandez, R., & Menchaca, V. (2017). University Strategic Planning: A Process for Change in a Principal Preparation Program. *International Journal of Educational Leadership Preparation*, 12 (1). 1-32.
- [11] Hegazy, A. A. (2012). Total Quality Management in Saudi Arabia Judo and Taekwondo Federation. *World Journal of Sport Sciences*, 6(4), 473-477.
- [12] Marzouqa, Hani (2014). The Impact of Strategic Planning of Total Quality Management on Employees' Performance Improvement at Private Universities in Jordan. (*Unpublished Master Thesis*), *Middle East University, Jordan*.
- [13] Ouda, Alaa Khaled (2017). The Obstacles of Applying Strategic Planning at Public Universities in Baghdad, from Faculty Staff Members' point of view, (*Unpublished Master Thesis*), *Middle East University, Jordan*.
- [14] Seniwoliba, J. & Yakubu, R. (2015). An analysis of the quality assurance policies in a Ghanian University. *Academic Journals*. Vol. 10(16), pp. 2331-2339.
- [15] Zeabi, Rahma (2014). The Impact of Strategic planning on the performance of Algerian Higher Education Institutions from the perspective of Balanced Scorecard, (*Unpublished Master Thesis*), *University of Mohamed Khider Biskra, Algeria*.