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## Studying the Reality of Applying Re-Engineering of Operations and Business in the Palestinian Universities in Gaza Strip, Al-Azhar University in Gaza a Model

Mazen J. Al Shobaki<sup>1</sup>, Samy S. Abu Naser<sup>2\*</sup>

*Faculty of Engineering and Information Technology, Al-Azhar University, Gaza, Palestine*

*Email:* <sup>2</sup>mazen.alshobaki@gmail.com, <sup>1</sup>abunaser@alazhar.edu.ps,

### ABSTRACT

This study aimed to identify the reality of applying Re-Engineering of operations and business in the Palestinian universities in Gaza Strip. The study was applied on the Al-Azhar University in Gaza. The study used the analytical descriptive approach. The researchers used questionnaire as data collection method and used sample stratified random method. (150) questionnaires were distributed on the study population and (118) questionnaires were retrieved back with rate of 78.7%.

The study showed that the most important results are: there is approval by the respondents on the paragraphs of re-engineering operations and business in general. And there are no significant differences between the averages of the respondent's answers about the reality of applying re-engineering of operations and business attributable to demographic variables.

The study also concluded to a set of recommendations, the most important are: it is necessary to increase interest in human capabilities available for applying re-engineering of operations and business by working on the provision of specialized training programs for workers to help rebuild and bring about change and institutional development of the Palestinian universities, where it must focus on training as strategic element of re-engineering elements, so as to explain to workers the benefits of the new curriculum and the positive effects belonging to them, and train them on the systems and new concepts and approaches required to make substantial changes to the work. Use teams of workers who have been trained to participate in the re-engineering of the administrative processes. Clarify the importance of Al-Azhar University in Gaza in adopting the re-engineering because of its benefits in the universities, especially in the reduction of costs and the consequent features.

**Keywords:** Excellence Re-engineering of operations and business, Palestinian universities, Gaza strip, Al-Azhar University in Gaza

### 1. INTRODUCTION

The concept of re-engineering processes is spreading rapidly in the public and private sector institutions, and the style of applying re-engineering processes had a clear impact in achieving mixed results to the desired objectives ((Hammer & Champy, 1993). Many experiments of governmental and private organizations have shown that they suffer from difficulties when applying the Re-engineering method due to the natural differences that characterize the public sector for the private sectors when applying these concepts (Hutton, 1996). The success of the application depends on the availability of many critical factors and therefore takes into account these factors and sees what fits each sector from the other. It ensures the success of these organizations in the application and thus achieving the goals of those organizations (Al-Mishari, 2001).

The re-engineering represents a revolutionary change in business processes, and this is the most effective way to deal with the enormous changes experienced by the world. The managers, professional associations, workers began to realize just that the future for those who are able to make the change, as the shift or change is not easy, but the results showed that change is possible if the people have the well, knowledge, and power to achieve it (Kelada, 2004). The process of development is the focus of attention of the officials and leaders, especially senior management in all organizations. Thus, the development process must be continuous, so organizations can be in line with all-new,

and be able to survive and compete in a mobile environment; organizations have become a clear evidence of the power of human creativity.

It is noteworthy in this regard that the re-engineering is based on two features of human: the first is critical Proactive outlook, while the second is innovative thinking based on the ability to imagine alternative scenarios to reduce the stages of labor, time and cost and then evaluate them for their selection as and also to the extensive use of information technology, and these two features coincide perfectly with the intellectual capital properties (Azazi, and Yahyaoui, 2008).

### 2. PROBLEM STUDY

The topic of Re-engineering of business Process represents a modern curriculum in management. Researchers believes that adoption of this approach in the management of organizations makes it possible to solve part of the problems of low effectiveness and efficiency, and lead to an increased in its performance (Baghdadi and other, 2008).

Finding new and sophisticated methods and ways to deal with the changes taking place around us, the goal of every institution and organization that seeks to get to the efficiency, effectiveness and maintain its survival and continuity. Through the analysis of the environment of Al-Azhar University, there exist a gap between the whole results achieved, and the desired results achieved and hopes placed in it despite the introduction of many changes since the advent of the Palestinian National Authority in 1994

until now. In addition to the criticism that refers to the low quality of educational output, poor educational outcomes, and lack of proper educational output to the needs of the labor market which requires educational institutions to raise the quality of their systems, by adopting a gateway of administrative development, allowing the change tool effectively overcome the problems (www.moehe.gov.ps).

Palestinian Universities in the Gaza Strip is facing numerous difficulties and problems, most notably the proliferation of administrative bureaucracy and high centralization of decision-making, the weakness in the use of teamwork techniques, the weakness in the roles, powers and responsibilities (Al-Attar, 2006), the weakness in institutional work, the low level of authority and lack of attention to human resource development (Abdul Ilah, 2006), the weakness in giving confidence to workers (Abu Amer, 2008), the fear in accountability and frequency of each other in the exercise of the powers vested in them for fear of responsibility (Abu-Muammar, 2009), the lack of focus on workers in total quality management (Abu Amer, 2008), the priorities of the staff is the obligation to perform their duties according to the regulations only, the lower the level of cooperation between colleagues (Abdul Ilah, 2006), poor practices of internal administrative processes, lack of clarity of plans and policies, the weakness of the ongoing monitoring results and the need to improve performance through the adoption of modern management models (Banat, 2002). Re-engineering confirms that the low work performance is mainly because the work is done in traditional ways. Re-engineering based on the principle in which the educational systems and non-educational work succeed or fail according to the nature of their design (Al-Thbyti and Aqil, 2002).

The researchers concluded from the result of studies carried out on Palestinian universities that there is a desperate need to develop university-performance that commensurate with the world university development, where these studies, especially with regard to administrative and academic systems has shown how important the application of the foundations of the academic development of re-engineering based on the requirements and needs of administrative and academic university development and in proportion with the knowledge management systems to those of the development processes (Abu Naser et. al, 2016; Al Shobaki & Naser, 2016; Naser et. al., 2016; Al Shobaki, 2017).

**Based on the above the study problem can be formulated through the following main question:**

**What is the reality of applying re-engineering operations and business in Al-Azhar University in Gaza?**

### **3. THE STUDY HYPOTHESIS**

**There are statistically significant differences at the level of significance ( $\alpha \leq 0.05$ ) between the mean responses of**

**the respondents on the study of the reality of applying re-engineering of operations and business attributable to Demographic variables (gender, age, educational qualification, and years of service).**

### **4. OBJECTIVES OF THE STUDY**

- Highlight the importance of applying re-engineering of operations and business in Al-Azhar University in Gaza.
- Highlighting the concept and the importance of re-engineering operations and business, and its role in universities.
- To identify the fundamental components of re-engineering operations and business.
- Stand on the relationship of the demographic variables (gender, age, educational qualification, and years of service) in applying of re-engineering in Al-Azhar University in Gaza.
- Introduce proposals to help promote the application of re-engineering of operations and business in the Palestinian universities.

### **5. THE IMPORTANCE OF THE STUDY**

- This study may help the leaders of Al-Azhar University in Gaza to keep up with the modern management that can be applied such as re-engineering.
- The importance of the study lies in addressing the important concept of re-engineering operations and business, which is one of the important topics in modern management, being an important source of the survival of the organization and its sustainability, especially in organizations that adopt modern management that allows the participation of workers in decision-making strategy, and exploitation of opportunities and increase the capacity of their competitiveness and innovative.
- This study may add something new to the scientific research through what will be reached by the findings and recommendations, and draws the attention of those in charge of Al-Azhar University in Gaza on the subject of re-engineering operations and business.
- This study serves as a call to re-engineering in Al-Azhar Gaza, and interacts with modern information technologies, as it works to enhance performance efficiency, which reflected positively on the re-engineering.
- The importance of the study of the urgent need for the Al-Azhar University in Gaza and the universities of Palestine to raise the level of performance and the rationalization of financial and human capacities and improving their services and treat places of defect and the causes of wastage in the financial, human resources, effort,

time and with re-redesigning operations and business in an innovative line with the requirements of the age.

## 6. RE-ENGINEERING

The concept of re-engineering appeared in (1990) by the researcher Michael Hammer in his published article in the Harvard Journal of Business Review and then spread rapidly in academia, in business, and government. Hammer defined it as basic initial re-thinking and redesigning administrative processes drastically in order achieving super substantial improvements and not just marginal (incremental) in the decisive performance criteria such as cost, quality, service and speed (Hammer and Chambi, 1996). (Khalil, 2008) defined it as the redesign of the organization of value-added operations through conversion from fragmented and distributed operations of different isolated functions from each other combined with organizational vertical structure to full operational distributed work teams, so that each team lead the entire process, combined with reticulated organizational structure, with appropriate adjustments in each of the administrative systems and organizational culture, in order to maximize the value provided to the customer. (Kelada, 2004) defined it as a revolutionary change to the way of thinking, which is synonymous with innovation, and penetration. (Chan & Bradley, 1995) defined it as a method to achieve a radical development in the performance of companies in a relatively short time.

### 6.1 Characteristics and advantages of re-engineering

(Angus et.al, 1996) designated a number of characteristics that distinguishes re-engineering including:

- A radical re-design of administrative processes.
- Unnecessary use of information and communications technology as assistant in the re-engineering project.
- Focus on achieving strategic goals and results

The most important characteristic of the re-engineering properties as reported by (Khalil, 2008) are as follows:

- Re-engineering is the starting from scratch in the sense of radical change.
- Re-engineering varies from the traditional fundamental administrative development methods.
- Re-engineering focuses on the customer and on administrative processes rather than on activities.
- Re-engineering focuses on the use of essential and pressing systems and information technology.

It is clear to us the most important properties and characteristic of re-engineering and the pillars which underpin the definition by (Hammer & Champy, 1993), four basic pillars:

- **Fundamental:** The re-engineering starts without any solid or pre constants assumptions, nor does it

rely on concepts or rules of assertive, but ignores what is the object and focus on what it should be, Re-engineering rejects all methods and traditional practices in the current performance process, and looking for new and innovative methods for their performance.

- **Radical:** re-engineering seek radical solutions to business problems are not superficial and temporary solutions.
- **Dramatic:** re-engineering is not about relative and formal improvements, but aims to achieve tremendous and super mutants in the rates of performance, they are seeking to make huge improvements in the rates of important performance, such as cost, quality, service, speed of completion of the work, which leads to tremendous results of optimization in the various performance measures and not only a slight improvement of performance.
- **Processes:** characterized by its focus on re-engineering processes, not just manages or functions, through the development of new and innovative design within which to achieve the required root improvements, Re-engineering focuses on the process as a whole, without segmentation, where the owners trying to complete the process at once.

### 6.2 Foundations and principles of re-engineering

(Khalil, 2008) reshaping the foundations and principles to perform the work when the applying re-engineering, according to the concept of the Hammer as follows:

- The integration of several functions in one position by looking at the tasks and not the results.
- Completion of work in place and do not move from one place to another.
- A combination of centralized and decentralized.
- Reduce the need for matching information.
- Implementation of action steps according to their nature through the natural flow of the work.
- Access information from their sources.
- Reduced oversight and auditing standards and sufficiency ongoing oversight everyday on the job.

(Oghili, 2001) outlined the principles upon which the re-engineering was based:

- The re-engineering process is to re-design one operation from beginning to the end with its full stages and steps.
- Based on foundation of the Information Technology (information system) and the adoption of the modern system of decentralization in the process used.
- Re-engineering seeks to integrate completed subtasks in a single task.

- Authorize staff sufficient authority to do their duties efficiently after the re-engineering processes.
- Provide sufficient flexibility in the implementation stages of the process steps.
- Design a single process that can perform more than one job.
- Reduce the number of auditing to provide speed in performance.

### 6.3 The importance and benefits of application of re-engineering

Applying re-engineering on the deteriorating organizations with low level and numerous clients complaints, organizations that did not reach the deterioration level but their performance indicate they will reach a state of deterioration in the near future, and organizations that have reached the peak of excellence and success not fearing of falling, but motivated by ambition and expand the gap between it and its competitors. Applying re-engineering achieves many benefits the organization in terms of efficiency and effectiveness in a manner that preserves the survival of the organization in facing of new challenges. (Al-Lawzi, 2002) has stated that applying re-engineering has a lot of benefits as follows:

- Integrate dedicated jobs in one job in one place. Thus we save time, reduce costs and coordinate the work.
- Turns business from simple tasks to integrated tasks entails a shared responsibility between the team members.
- Increase the autonomy of individuals in the performance of tasks, thus initiative individuals can work with creativity and innovation.
- Encourage education in addition to training, so as to develop the skills and capabilities of individuals and expand their horizons.
- Reward individuals and dividing the product of their work based on the final results in a collective way.
- Working toward re-engineering is changing the organizational culture prevailing, so a good performance and customer care is becoming a priority of the workers.
- Help workers to make decisions without limiting it to managers.
- Implementing action steps naturally leads to the completion of several steps at a time, in addition to reducing the time between the action steps.

### 6.4 Re-engineering Objectives

Re-engineering aims to achieve many goals, according to (Mustafa, 2002), namely:

- Improve in-effective operations to improve the current situation in the market.

- Improve performance to cope with variables and world powers
- A radical and rapid change in business organizations.

The re-engineering comes for the following purposes as articulated by (Khalil, 2008):

- **Achieve a radical change in performance:** The change in the method of working, tools and results by enabling workers to design work to be done in accordance with the customers and the objectives of the organization's needs.
- **Customer Focus:** directing the organization to focus on customers by identifying their needs and work to achieve their desires by rebuilding of processes to achieve this purpose
- **Speed:** enable the organization to carry out their work at high speed through the provision of information needed to make decisions and to facilitate the process of obtaining them.
- **Quality:** improving the quality of services and products offered to suit the needs and desires of customers.
- **Cost reduction:** through the elimination of unnecessary operations and focus on value-added processes.
- **Superiority over competitors:** help the organization to outperform the competition organizations that may not be difficult to catch up with them, but are difficult to beat them, they cannot imitate them, or motivation to change so it was important to achieve a competitive advantage, such as cost pressure with increasing product value through improved use of existing resources and rationalize disappear operations and sales on better terms.

### 6.5 Application of re-engineering requirements

The application of re-engineering needs requirements to ensure a successful implementation of the re-engineering and clarified by (AL-Harby, 2008)) as follows:

- It is better for the institution or company to implement total quality management as a prerequisite for the implementation of re-engineering.
- There should be an urgent need and fully convinced management of the business re-engineering, when failure to achieve breakthroughs in performance through the adoption of quality management becomes an urgent need to re-engineering business.
- Need to focus on the processes and not the administrations, because what matters is the kind of customer service or item not related to the division which produces it.

- Focus on the quality and composition of the teams who performing the task and giving them a high degree of independence and flexibility.
- An attempt to reduce the resistance of workers and make them aware of the importance of this concept and the benefits that accrue to them.
- The need to support senior management.
- Focus on innovation and creativity as an approach to organizational processes.
- Get rid of the old methods of work and replace it with new.
- The need for scientific planning for the success of the application of re-engineering and the study of the regulatory environment to get to know all the variables.

### 6.6 Re-engineering levels

The authors and organizations use terms like work process engineering, business re-engineering process, and business reengineering interchangeably terms, and because of the confusion in these terms and expressions, the researchers suggest different levels of re-engineering, where Work Process Re-engineering (WPR) any process in the company describes sequence of activity, which is achieved through a major job. Business Process Re-engineering (BPR) interested in all of the company's operation which, describe the sequence of direct activities of the company, or indirect, business process consists of all business processes in the company. Business Re-engineering (BR) goes beyond (BRP) and deals with all aspects of running the business including management style, organizational structures, business philosophy, strategy, people management, information systems, and the strategy of overall business, and thus the BPR one aspect of the BR only, and Total Re-engineering(TR) is a synonymous with the BR which is directed towards TQM, and thus the difference between BR and TR that in the last term re-engineering activities associated with regular, direct, and clearly achieve the TQM-triple-goal (Kelada, 2004).

### 6.7 Re-engineering and its application in higher education institutions

In light of the challenges produced by globalization, the Higher Education requires restructuring and re-engineering in terms of guidance, its quality, its availability, its financing and its association with the economy over the Internet and information technology; and the development of studies, participation, lifelong education and training, but this must be based on the following principles (Qawe, 2007):

1. Effective and independent decisions to be taken away from bureaucratic practices.
2. Flexibility to allow the introduction of changes.
3. Quality control of all university activities.
4. Decentralize decisions and academic accountability.

5. Evaluate academic and research achievements.

There is a need for re-engineering university education as a result of the low educational product level with the intense competition in the global labor markets which requires the need to manage the radical and constant change as an urgent priority to stay and continue the competition, as well as a result of the failure to achieve the desired mutations in performance through the application of total quality management, so there is an urgent need for re-engineering work, also highlights the need for re-engineering as a result of the need to reduce the cost of educational services while maintaining quality in light of fierce global competition pressures (AL-Harby, 2008).

## 7. PREVIOUS STUDIES

(Abu Naser and Al Shobaki, 2016): This research aims to promote the use of decision support systems and Re-engineering of Operations and Business - Applied Study of the Palestinian universities in Gaza. This study was applied on Palestinian University in Gaza strip. The results highlighted that there is a statistically significant effect on the impact of decision support user systems type to promote the use of decision support systems in Re-engineering of Operations and Business at Palestinian universities in the Gaza Strip, and that there are statistically significant differences between the mean study sample estimates of the impact of the decision support systems Re-engineering of Operations and Business in Palestinian universities in Gaza due to the variable Gender in favor of males, and the existence of differences for the age variable relative to the field of "senior management support for the use of decision support systems" by the respondents, aged (45-55 years) and (55) years and over, and the presence of differences for the variable level of education relative to the field of "senior management support for the use of decision support" by the respondents, who hold master's degrees, and the existence of differences for the variable years for service to the field of "senior management support for the use of decision support systems" by the respondents, who have service between (15-20) years and 21 years and over.

(Abu Naser and Al Shobaki, 2016): This research aims to identify the use of decision support systems as an entry point for operations of re-engineering in the Palestinian universities in Gaza Strip. The study results showed that the most important ones are: there exists statistically significant impact at the level of significance ( $\alpha \leq 0.05$ ) for physical requirements, human requirements. Technical requirements and regulatory requirements. The results showed also, the presence of statistically significant differences between the averages of the study sample estimates on the use of decision support systems as an entry point for operations of re-engineering in the Palestinian universities in Gaza Strip due to the variable sex in favor of males requirements.

Study of (AL-Nakhalah, 2015), aimed to propose a vision for the development of the performance of heads of

departments in the Directorates of Education in the Gaza Strip in light of the re-engineering operations and business method. The results of the study, showed that there was a significant differences attributable to the (qualification) for the benefit of those who have master degree and above. There are no significant differences between the averages of the study sample estimates due to variable gender.

Study of (Beheiri, 2015), which aimed to identify the role of Re-engineering operations and business in improving management performance in the Palestinian Health Ministry in the Gaza Strip, and the availability of the basic requirements for the application of Re-engineering operations and business in the ministry, and its impact on improving management performance. The most important findings of the study were: that the basic requirements for the application of re-engineering operation and business in the Palestinian Health Ministry in the Gaza Strip are available. And that there was a Positive statistically significant relationship between the application of the principles of re-engineering operations and business in the Palestinian Health Ministry in the Gaza Strip and the improvement of administrative performance through better (quality of performance, simplify work, the size of the performance, fast delivery, performance efficiency).

1. Study of (Rehan, 2014), aimed to identify the obstacles to the application of re-engineering processes in government schools in Gaza Governorates and ways to reduce them, and the most important results of the study were: there are significant differences between the averages of the sample estimates and gender variable attributed to females, and years of service variable in the benefit of years of service (from 5-10 years), and that there were no statistically significant differences between the averages of the sample estimates and the Qualification variable.
2. Study of (Damanhour 2013) aimed to study the relationship between the application of Reengineering of Process and Business and some of the factors affecting the application in the Saudi Arabian Airlines. One of the most important findings of the study: Application of Reengineering and organizational change was moderately tended to be positive. And the existence of significant differences between several independent variables of the factors affecting the application of Reengineering under study and enables Saudi Arabian Airlines to achieve the commitment of senior management, and the work of organizational changes, and the creation of appropriate and effective organizational culture for the success of an effective application of the re-engineering.

Study (Al-Gosaimi, 2009) aimed to study the activation of re-engineering of business in perspective of the ICT - integrative entrance tasks, and the most important findings of the study was: that in order to ensure re-engineering to achieve its objectives it must rely on appropriate technology and in line with the nature of process to be re-engineered, and it is necessary to support the adoption of the use of information and communication in the re-engineering programs by senior executives, and the need to allocate a special item in re-engineering budget of information and communication technology, as well as the need to build support for the decision provides an opportunity for the organization to be used for infrastructure in the program of re-engineering.

## 8. METHODOLOGICAL FRAMEWORK

### First, the study method:

The researchers used the analytical descriptive approach, which describe and assess the reality of "Study the reality of applying re-engineering of operations and business in the Palestinian universities in the Gaza Strip" and the analytical descriptive approach is trying to compare, explains, and assesses hoping to reach meaningful generalizations that increases the stock of knowledge on the subject.

The researchers used two foundations sources of information:

1. Secondary sources: the researchers used the secondary data sources such as books, relevant references, periodicals, articles, reports, previous studies on the subject of the study, and reading various web sites.
2. Primary sources: to address the analytical aspects of the research topic, the researchers collected the preliminary data through a questionnaire as the research tool, specifically designed for this purpose, and then distributed to employees in the Palestinian universities in the Gaza Strip.

### The method and procedures

#### Population and the study sample:

The study population consists of Al-Azhar University staff. The researchers used random sampling method. (150) questionnaires were distributed to the study population and (118) questionnaires were collected back with the rate 78.7%. The distribution of the study sample illustrated according to the Demographic variables of individuals in which:

#### Statistical description of the study sample according to the characteristics and Demographic variables

The following are members of the distribution of the study population according to the characteristics and Demographic variables:

**Table 1:** Distribution of members of the study population according to demographic variables (n = 118)

Demographic variables		the number	percentage %
Gender	Male	104	88.1
	female	14	11.9
Age	Less than 25 years	3	2.5
	From 25 years - less than 35 years	45	38.1
	From 35 years - less than 45 years	32	27.1
	From 45 - less than 55 years	26	22.0
	From 55 years and more	12	10.2
Qualification	High school or less	5	4.2
	Intermediate Diploma	20	16.9
	BA	56	47.5
	MA	17	14.4
	Ph.D.	20	16.9
Years of service	Less than 5 years	15	12.7
	5 years - less than 10 years	25	21.2
	10 years - less than 15 years	40	33.9
	15 years - 20 years	23	19.5
	21 years and more	15	12.7

It is shown in Table 1 that (88.1%) of the study a sample is males, while (11.9%) is females. The researcher attribute that to the fact that the proportion of males are the largest percentage among university staff and this is due to the nature of the Arab societies in General, and the labor market in the Gaza Strip in particular, in terms of the low percentage of women's workers, this is consistent with all the studies that have been done in the Arabian environment, which showed that the ratio of workers of males is higher than in females.

It also is clear that the rate of (2.5%) of the study sample aged less than 25 years, (38.1%) ranging from 25 years to less than 35 years old, (27.1%) accounted for ranging from (35) years to less than (45) years old, (22.0%) ranging from 45 years to less than (55) years old, while (10.2%) of the proportion (55) years old and above.

Table 1 also shows that (78.9%) of the respondents hold at least a bachelor's degree. The researchers attributed that it is necessary to get a first university degree at least to assume a management position in the Palestinian universities in the Gaza Strip, and this indicates the caution of universities to choose qualified scientific staff that's able to keep up with administrative technological development. (12.7%) of the study sample their years of service is less than (5) years, (21.2%) ranging from 5 years to less than (10) years, (33.9%) ranging between 10 years to less than 15 years, (19.5%) ranging from 15 years to 20 years, (12.7%) of the study sample have a number of years of service (21) years and more. The researchers attributed that to the fact that Al-Azhar University is newly established.

#### The study tool:

A questionnaire was prepared about "studying the reality of the applying re-engineering operations and business in the universities in the Gaza, Al-Azhar University in Gaza a model", where the use of the five-Likert scale to measure respondents' responses to the questionnaire (see table 2):

**Table (2):** Degrees of Likert scale

Response	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Class	1	2	3	4	5

#### Questionnaire Validity:

The researchers presented the questionnaire to a group of specialists of the field to give their opinions on it. The researchers took the comments of the specialist and performed the necessary modification needed, and thus questionnaire was finalized. Furthermore, the validity of the questionnaire was ascertained through content validity and construct validity.

#### Stability of the questionnaire:

The most famous tests used to measure the stability of questionnaire is Alpha Cronbach Coefficient. The overall value of the questionnaire was (0.938) and this value is high and reassuring to the extent of the stability study tool.

It follows from the results of validity and stability that the questionnaire is valid for what it was developed to measure and it is steady with a high degree. Thus, it is qualified as a suitable and effective measuring tool for this study and can be applied with confidence.



### Normality Distribution Test

Kolmogorov-Smirnov (KS) test was used to test whether the data follow a normal distribution or not. It was found that the test value is equal to (0.827) and the p-value (Sig.) is equal to (0.501) which is greater than the significance level of 0.05 and thus the data follows a normal distribution, where parametric tests were used to analyze the data and test hypotheses.

### Statistical tools used:

The following statistical methods were used:

1. Percentages and Repetitions.

2. Mean, relative mean, and standard deviation.
3. Alpha Cronbach's test.
4. Kolmogorov - Smirnov K-S test.
5. T test in one sample case.
6. T test in the case of two independent samples.
7. ANOVA test of variance analysis.

### Data analysis and hypotheses testing

#### Analysis of the paragraphs of the questionnaire:

T test was used to see if the mean of the response has reached a degree of medium to approval (3) or not, as in the following table:

**Table (3):** The mean, standard deviation and the value of t test for all the paragraphs of the questionnaire

M	The field	Mean Value	Standard deviation	Relative Mean Value	T Test Value	Probability Value (Sig.)	Ranking
1.	Leadership is aware of the concept of re-engineering, ensuring progress and development.	3.54	1.11	70.86	5.29	*0.000	5
2.	Leadership exercise principle of subsidiarity in decision-making.	3.49	1.06	69.74	4.99	*0.000	8
3.	An analysis of the strengths, weaknesses, opportunities and threats facing the university is usually done.	3.32	1.10	66.50	3.20	*0.001	11
4.	The Strategic Plan of the University is clearly written.	3.22	1.23	64.44	1.96	*0.026	14
5.	Administrative policies in the university are clear and understandable.	3.33	1.10	66.67	3.28	*0.001	10
6.	Administrative policies in the university generate confidence among employees; reduce cases of doubt, and confusion.	3.15	1.14	63.05	1.46	0.074	17
7.	Administrative policies in the university guide the process of decision-making towards the development of performance.	3.20	1.13	64.07	1.96	*0.026	15
8.	Administrative policies in the university complicate the process of work.	3.27	1.09	65.42	2.70	*0.004	13
9.	There is an ongoing plan for the development of university staff.	3.03	1.20	60.68	0.31	0.379	18
10.	The organizational structure of the university helps in achieving the goals.	3.16	1.17	63.25	1.51	0.067	16
11.	The organizational structure of the university helps to speed the administrative contact.	3.27	1.22	65.47	2.42	*0.009	12
12.	Keep pace with technological developments in the surrounding environment.	3.49	1.04	69.83	5.11	*0.000	7
13.	The university used the Internet in their internal and external communications among its staff.	3.64	1.13	72.88	6.20	*0.000	3
	Information technology increased the use of the ability to coordinate operations in the faculties and various departments and divisions	3.80	0.95	76.07	9.16	*0.000	1

1.	Staff can manage information from any location through the use of computers.	3.66	0.97	73.28	7.38	*0.000	2
2.	There is adequate information and data in the university and easily dealt with leading to the performance of the business quickly and accurately.	3.55	1.03	71.02	5.83	*0.000	4
3.	Use of information technology at the university led to the ability to redesign administrative operations.	3.50	1.00	70.00	5.42	*0.000	6
4.	Laws and regulations describe the tasks and functions.	3.49	1.10	69.74	4.78	*0.000	8
	Re-engineering of Operations and business in general	3.40	0.77	67.99	5.62	*0.000	

\* Mean is statistically significant at the level 0.05.

Table 3 shows the arithmetic average of all the paragraphs of the re-engineering of operations and business is equal to 3.40, and the relative arithmetic average is equal to 67.99%, the test value is 5.62, and that the probability value (Sig) is equal to 0.000 and this means that there is approval by the respondents on the paragraphs of re-engineering of operations and business in general. The paragraph got "Information technology increased the use of the ability to coordinate operations in the faculties and various departments and divisions" the highest level of approval by 76.07%, while paragraph "There is an ongoing plan for the development of university staff" got the degree of approval by 60.68%.

The researchers attributed that the use of information technology increased the ability to coordinate operations at faculties, various departments, and divisions. Technology is working to create an environment conducive to the exchange of information, knowledge, and learning more quickly. Thus helps employees to increase the level of performance. The question "There is an ongoing plan for the development of university staff" in the last place, which calls for a clarification and development plan of the university and the development of employees through training.

This is consistent with the study of (Abu Naser and Al Shobaki, 2016a) recommended to keep pace with technological means and modern techniques. The study of (Abu Naser and Al Shobaki, 2016b) recommended that the development of infrastructure for information technology in the Palestinian universities in Gaza Strip in general, and also agrees with the study of (Al-Gosaimi, 2009), which

says to achieve re-engineering objectives, it must rely on appropriate technology and in line with the nature of the operation to be re-engineered, and it is necessary to support the adoption of the use of information and communication technology in the re-engineering programs by senior executives, and the need to allocate a special item in the re-engineering budget for information and communication technology, as well as the need to build decision support systems to provides an opportunity for the organization to be used for infrastructure in the re-engineering programs. The results of our study is consistent also with (Beheiri study, 2015), which assure that the minimum of those requirements (strategy, commitment and conviction of senior management, information technology, communication, empowering employees, willingness to change) should be available, but those requirements need to be supported and strengthened. Furthermore, our results agree with the results the study of (Damanhour, 2013), which stated that the application of re-engineering was largely tended to be positive.

## 9. TESTING THE HYPOTHESIS OF STUDY

There are statistically significant differences at the level of significance ( $\alpha \leq 0.05$ ) between the mean responses of the respondents on the study of the reality of applying re-engineering of operations and business attributable to demographic variables (gender, age, educational qualification, years of service).

To test this hypothesis, we have used "T test for two independent samples" and "variance" test. The results are shown in the following table.

**Table 4:** Study hypothesis test results

Demographic variables	Test name	Test value	Probability value (Sig.)
Gender	T test for two independent samples	0.625	0.533
Age	Variance	0.474	0.755

Qualification	Variance	0.690	0.600
Years of service	Variance	0.135	0.969

From the results shown in table (4), the probability value (Sig) is greater than the significance level ( $\alpha \leq 0.05$ ) for all variables and thus it can be concluded that there are no statistically significant differences between the averages of the answers of respondents about the reality of applying re-engineering operations and business attributed to demographic variables. The researchers attributed that the answers of respondents about the reality of applying re-engineering of operations and business is not affected by the variable gender due to the similarity of the working conditions in which both genders operates, as well as the non-discrimination in the treatment by their officials, they are subject to the same treatment and the same conditions, and the researchers believes that the harmony of the sample because their ages are close to each other. Thus, their responses were not affected by age, and most of jobs require at least first university degree as scientific qualification to be accepted for a job, and the respondents are subject to the same conditions, in addition, many of the jobs is a routine process, and this led to the absence of differences among persons over time at the university.

This is consistent with the study of (Abu Naser and Al Shobaki, 2016), which its results highlighted that there were no statistically significant differences between the average sample estimates in the impact of decision support systems and re-engineering of operations and business in universities in Gaza Strip due to the variable gender in favor of males and it conforms well with the study of (AL-Nakhalah, 2015) that confirmed there were no statistically significant differences between the averages of the study sample estimates are attributable to variable gender. It also agrees with the study of (Rehan, 2014), which confirmed that there were no statistically significant differences between the averages of the sample estimates to Qualification variable.

The results of the current study disagree with the study of (Abu Naser and Al Shobaki, 2016), which its results highlighted that there are differences to the level of a variant of the education for the field of "top management support for the use of decision support systems" by the participants, who hold master's degrees, and there are differences in the changing years of service the field of "top management support the usage of decision support systems" by the participants, who have service between (15-20) years and (21 years and older). It also differed with the study of (Abu Naser and Al Shobaki, 2016), which it results showed no statistically significant differences between the averages of the study sample estimates on the use of decision support systems as an entry point requirements for re-engineering of operations in the Palestinian universities in Gaza Strip because of the gender

variable in favor of males. And also it disagreed with the study of (AL-Nakhalah, 2015) which confirmed that there were no statistically significant differences due to (qualification) for the benefit of those who have master degree or more.

It also varies with the study of (Rehan, 2014), which confirmed that there are significant differences between the averages of the sample estimates, due to the variable gender in favor of females, and the variable number of years of service for the benefit of years of service (from 5-10 years). And that there were no statistically significant differences between the averages of the sample estimates of the variable qualification nor the variable number of training courses.

## 10. RESULTS

- The results showed that there is approval by the respondents to applying re-engineering of operations and business in general. The paragraph "increased use of information technology of the ability to coordinate operations at colleges and various departments and divisions," got the highest level of approval by 76.07%, while paragraph "no plan continuous development of university personnel" got a lower approval rate of 60.68%.
- The results showed that there were no statistically significant differences between the averages of the respondent's answers about the reality of applying re-engineering of operations and business attributable to Demographic variables.

## 11. RECOMMENDATIONS

- Illustrate the importance that the Al-Azhar University in Gaza to adopt the re-engineering because of its benefits, especially in reducing costs and the consequent style features.
- Senior management of the university should be convinced in the change and the process of re-engineering so that they, in turn, convince workers of that process.
- Staff participation in the planning process and contribute to the development of the vision and mission of the institution and the formulation of its objectives through promoting the principle of opinions.
- Al-Azhar University should increase attention to provide specialized training programs for workers to help bring about change and institutional development of the University, where the training should be focused on as a strategic element of the re-engineering elements, so as to explain to workers

the benefits of the new curriculum they will get, and train them on systems and concepts and new approaches required to make substantial changes to work.

- Work on the use of team of workers who have been trained to participate in the reconstruction of the administrative processes.
- Using information technology to bring about a fundamental change in the performance, and investing IT capabilities to enable them to constantly re-engineering of its operations.

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